PROJECT REPORT

CSIR PROJECT MANAGEMENT SYSTEM

AND

SOIL TESTING REPORT

FOR

COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH
COMPLEX PALAMPUR (H. P.)

VOLUME-I

SUBMITTED IN THE PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE

OF

MASTER OF COMPUTER APPLICATIONS

BY

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1989

C E R T I F I C A T E

This is to certify that the Project report entitled "CSIR PROJECT MANAGEMENT SYSTEM AND SOIL TESTING REPORT" contains the work done by MR. RAJINDER KUMAR under the guidence of SH. D.PRABHAKAR.

This work has not been submitted to any other Institution/University for the award of any degree.

D Prabhakar.

(D.Prabhakar)
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Palampur-176061 (H.P)

ACKNOWLEDGEMENTS

I am thankful to all those officials for their enthusiastic help on numerous occasions in the completion of my project work.

My sincere gratitude are towards my reverend guide Mr. D. Prabhakar, Technical Officer 'B' (Library), C.S.I.R. Complex, Palampur (H.P.) for allowing me to work under his able guidance.

I am also grateful to Prof. N.K.Jain, Co-ordinating Director & Dr. R.P. Sood Head Window division ,C.S.I.R. Complex, Palampur for allowing me to work here.

My thanks are also due to Mr. Inderjeet Singh & Mr. D.P Goyal, Lecturers, Deptt. of Electrical and Electronics Engineering, Thapar Institute of Engineering & Technology, Patiala, for their valuable suggestion during my project work.

I feel indebted to Prof. A.K. Sawhney, Head, Electrical & Electronics Engineering Department, Thapar Institute of Engineering & Technology Patiala for taking pain to arrange my project in C.S.I.R. Complex, Palampur.

At the last but not the least I am sincerely grateful to all my friends & colleagues in C.S.I.R. Complex for their really valuable suggestions and of course sincere co-operation.

RAJINDER KUMAR

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VOLUME I

VOLUME 2

1. INTRODUCTION

1.1 INTRODUCTION TO CSIR COMPLEX PALAMPUR

1.1 INTRODUCTION TO CSIR COMPLEX PALAMPUR:

Early in the seventies, the Government of Himachal Pradesh took the initiative of having a CSIR Laboratory in the State, perhaps the only state left out of the fold of the CSIR network in the country. The Laboratory proposed to exploit the natural potential of agriculture, forestry, horticulture and plantation crops in the region. As a gesture, the State Government placed 183 acres of land at the disposal of CSIR in 1979 to initiate the work of establishing a separate institution for Himachal Pradesh. Besides, provision of other facilities was also committed by the State Government for this set up.

An Expert Committee appointed by the CSIR under the Chairmanship of Prof. A.K. Sharma, visited Palampur and held several meetings to decide the issue and later on recommended that the state has vast potential of natural resources of exploration. Therefore, a National Institute could be set up at Palampur.

After further deliberations at different levels, Prof. Nulrul Hasan, the then Vice-President CSIR visited Shimla in 1981 and chaired a high level meeting with the State Government to discuss the issues with the concerned State Minister. Discussions were held in detail on major issues and it was agreed in principle to build a national laboratory at Palampur to work on major areas identified by the expert committee. This was followed by a formal request by the Chief Minister of Himachal Pradesh to the Vice-President CSIR in 1982 for initiating the matter, giving final shape to the proposal and offering basic

facilities like water for irrigation, temporary accommodation, electricity etc. for the new institution.

The CSIR finally agreed to the proposal of the State Government and gave its consent to set up a multidisciplinary Institute under the name of the CSIR Complex to take up R&D work based on the technical know-how in the CSIR laboratories. The objective of the C.S.I.R. Complex was concerned with the development of natural resources of the state and the provisions of technological support for its industrial growth.

The foundation stone laying ceremonny was performed on 2nd of July 1983 by Prof. Nurul Hasan, former Vice-President of CSIR with the Chief Minister of Himachal Pradesh chairing this function. The Coordinating Director was appointed in February 1984 and the first scientist joined him in June 1985.

After thorough discussion with experts of different disciplines as suggested by the DGSIR, the CSIR Complex at Palampur has decided to have, at present, the following seven divisions:

1. Hill Area Tea Science.
2. Wood Science and Wood Technology.
3. Floriculture for export.
4. Post Harvest Handling of Fruits.
5. Chemical Sciences.
6. Research Engineering.
7. C.S.I.R. Window for Transfer of Technology.

Though buildings and infrastructures are yet to be built up, work already taken up on various aspects in presented hereunder.

The Tea Division completed the survey on tea growing areas of Kangra. This Division has undertaken research works on different problems of tea cultivation.

Research work has already been started by the Post Harvest Fruit Handling, Floriculture and Wood Science Divisions. The Wood Science Division also carried out a survey on wood rotting fungi in adjoining areas of Palampur.

The Window Division organised a number of seminars and training programmes. The Division also took the following collaborative projects.

a) Entrepreneurship Development Programme for Women in collaboration with Small Industries Service Institute, Solan.

b) Training programme on flower dehydration and flower arrangement in collaboration with NBRI, Lucknow.

2. ANALYSIS

In this Section the system is studied at its structural level. What the acually problem is and how the existing system work has been discussed here. On lthe basis of the existing system the new system is proposed. The new system is designed so as to remove all the drawbacks of the present system. Here the designed work is initiated.

2.1 PROBLEM DEFINITION

2.1.1.INTRODUCTION TO PROBLEM

All the Laboratories of CSIR have to prepare five year project budgeting document. This interm will be submitted to the CSIR Head Quarter for Peer Review. This is for better management in planning monitoring and reviewing of the programmes, projects, and activities of the laboratories. The system of project budgeting is an integral part of the planning process, resource allocation, monitoring and evaluation with in the laboratories organisations. Even though there are PME cells in the CSIR laboratories preparation of this five year plan document is a time consuming one. During the preparation of this document most of the scientific activcities are at low ebb as many of the scientists are busy in preparation of their project document. Hence a computer based system which can help in preparation of this document will save the valuable time of busy scientists,thus saving money. This will also help for better monitoring and evaluation, cost accounting of the projects.

2.1.2 OBJECTIVES

The main objectives of this system are

1. To inculate cost consciousness and accountability among the project leaders/scientific community.
2. To enable the optimal utilization of resource various stages of implementation of projects.
3. To obtain cost data on each project.
4. To facilitate course corrections in the total cost estimates of the projects as well as dicisions concerning reallocation of resources.
5. To provide information to the management to monitor the flow of financial inputs in relation to physical out puts.
6. To realisatically project the future requirements of projects in the budgetary process.
7. To serve as an laid to CSIR for better management in planning, monitoring and reviewing of the programmes, projects and activities of the laboratories

2.2. THE EXISTING SYSTEM

Presently with the mannual system the following drawbacks are noted

1. It is a time consuming process.
2. There is lot of duplication in projecting the requirements for Major equipments.

3. There is lot of inaccuracy in calculating the salaries portion of the financial statements of the projects.eg the calculations are inaccurate to such an extent that the total expenditure of the entire laboratory for 1992-93 was more than 1993-94 in the eighth five year plan document prepared at CSIR Complex Palampur.
4. The Budget estimate projected in the plan document just remain on paper as there is no system, at present, to really monitor its implementation.
5. Other problem is the accuracy of the data.

Therefore, a computer based system is the only best solution to this problem.

2.3 THE PROPOSED SYSTEM

Considering the sensitive nature of processing involved the most optimum approach will be to use database management software technology. This facility will provide the requirement of easy access, data security, data expendability and optimisation of disk storage.

The configuration available for the purpose of running the system, as specified by the user is:

1. PC-AT, with a hard disk capacity of 40 MB
2. MS-DOS operating system version 3.20
3. dBASE III Plus package for the purpose of programmes to be developed.

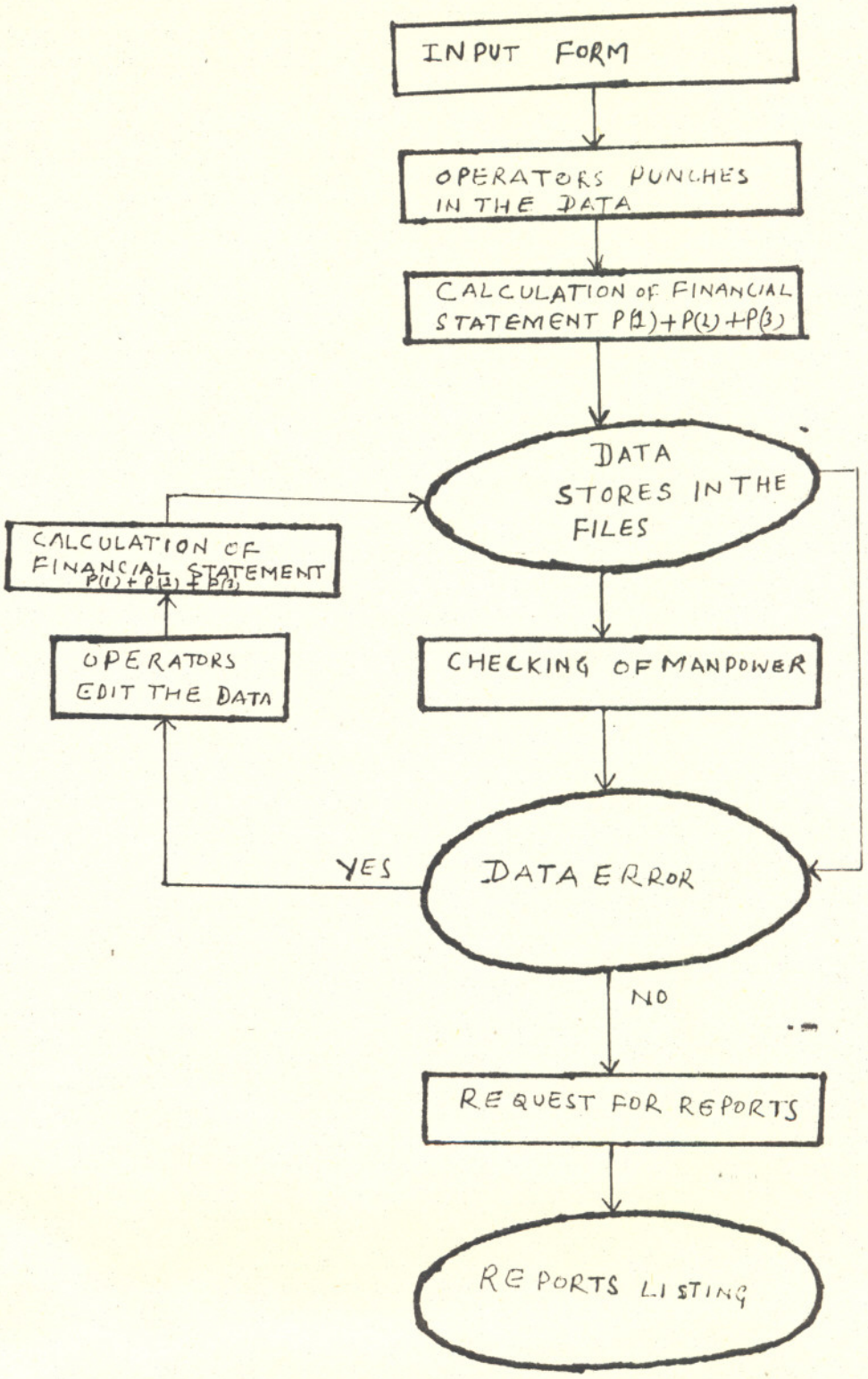
This proposed computerised system will give printed reports which otherwise would have taken lot of time, it brings lot of flexibility in the system in the way of editing which was mearly impossible with the mannual system.

2.3.1 BENEFITS OF THE PROPOSED SYSTEM

1. Report generation becomes very fast.
2. Flexibility in the system.
3. Validation of data.
4. Accuracy in data.
5. Better monitoring & management of the project.
6. It is an effecitve decision supporting system for planning and reviewing.
7. Standardization in data entry thus maintaining uniformity in the entire process.
8. Avoiding duplication in demanding of costly resources, thus saving money.

An overview of the system can be shown through a system diagram as given on the next page.

SYSTEM DIAGRAM



3. DESIGN

****
* 3.1 INPUT FORMAT *
* *
* 3.2 OUTPUT FORMAT *
* *
* 3.3 FILE DESIGN *
* *
****

This section includes the design work done to fully understand the system. First of all the input formats, and their full description is given. After that their output formats are given. In the next sub-section , different codes and terms used have been described with the definition wherever needed. At the end of this section the file design is given.

3.1 INPUT FORMAT

The input formats shown in the following pages are to be filled by the concerned Scientific & Technical persons of CSIR organisations. The system will asks to enter the option.

1. Project Budget estimates 1989-90 and 1990-91 and Eighth Five Year Plan project (1990-1995).
2. For R&D Projects completed in 1988-89 to be completed in 1989-90. And also R&D projects dropped in 1988-89. To be dropped in 1990-91.
3. Infrastructure

   If option 1 is selected proforma 1A displayed,if option 2 is selected proforma 1B displayed and if option 3 is selected infrastructure menu displayed.

If option (1) and (2) selected after this bar chart, characteristics of the projects including area of R&D, type of research menus will be displayed. Then time frame linkages and Financial Commitment with the other organisations screen will be displayed. After this additional manpower, manpower existing, Financial Statement data entry screen will be displayed for all the above three options. The total expenditure on salaries, year wise for a particular project will be calculated automatically

and updates the salary field of the Financial Statement. Project No. is the eight character key field throughout all databases. The input formats are shown on the next pages.

C.S.I.R. PROJECT MANAGEMENT SYSTEM: DATA ENTRY FORM

C.S.I.R COMPLEX PALAMPUR (H.P)

COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH ANNUAL PLAN

1990-91

PROJECT BUDGET ESTIMATE 1989-90 AND 1990-91 & EIGHTH FIVE YEAR PLAN PROJECTION (1990-1995)

1. PROJECT NO:
2. TITLE OF THE PROJECT:
3. INDICATE WHETHER THE PROJECT IS!ONGOING OR NEW:
4. SCIENTIFIC & TECHNICAL OBJECTIVES OF THE PROJECT A. TARGET : memo
5. SCIENTIFIC & TECHNICAL OBJECTIVES OF THE PROJECT B. EXPECTED RESULT: memo
6. INDICATE PROGRESS STATUS OF THE PROJECT AT THE END OF MARCH 1989 : memo
7. PROGRESS EXPECTED DURING 1989-90: memo
8. PROPOESD WORK FOR 1990-91 : memo
9. WHERHER THE PROJECT IS ON SCHEDULE (Y/N) : ?
10. IF NO,GIVE NEW SCHEDULE : ?

EXPECTED DATE OF COMPLETION : / /

REASON FOR CHANGE OF SCHEDULE :

11. IF THERE IS ANY DELAY IN THE COMPLETION OF THE PROJECT AND AND ANY CHANGE IN THE OBJECTIVE & PROGRAMME PLEASE INDICATE

WHETHER APPROVAL OBTAINED OF

1.RC (Y/N) : ?

2.MC (Y/N) : ?

3.COLLABORATOR/USER : ?

12. ANY SPECIFIC OBSERVATION ON THE

PROJECT BY RAC /EC/CC/GB :

13. JUSTIFICATION FOR TAKING UP THE

NEW PROPOSAL : memo

14. DO YOU NEED ANY MAJOR EQUIPMENT (Y/N): ?

15. WHETHAER THE ADDITIONAL MANPOWER

REQUIRMENT BE MET BY INTERNAL REDEPLOYMENT (Y/N): ?

(REFLECT PROPERLY IN THE MANPOWER STATEMENT)

16. WHETHER THERE IS ANY ORGANISATION OR INSTITUTION

DOING THE SAME OR RELATED WORK (Y/N) : ?

17. COLLOBORATE WITH OTHER INSTITUTION / ORGANISATION: ?

18. WHETHETR THERE ARE ANY USERS OF YOUR RESEARCH OUTPUT: ?

```
:    CURSOR                    DELETE                    RECORD
:       Character: Left Right     Character: Del          Prevlous Record: Pg
:       Word     :Home End        Field    : ^Y           Next Record    : Pg
:       Isert Mode:Ins            Record   : ^U           Done / Save    :^En
:                                                        Abandon        : Es
:                 NOTE:
:                      Data Entry To Memo Field
:                      Bring The Cursor To Memo Field Press ^PgDn
:
```

```
IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
:          C.S.I.R. PROJECT MANAGEMENT SYSTEM: DATA ENTRY FORM
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM

          FOR R&D PROJECT COMPLETED IN 1988-89 & TO BE
          COMPLETED IN 1989-90 AND ALSO FOR R&D PROJECTS
          DROPPED IN 1988-89& TO BE DROPPED IN 1990-91

     PROJECTNO:

     TITLE OF THE PROJECT:

     INDICATE WHETHER THE PROJECT IS

     COMPLETED OR DROPPED:  ?

     DURATION:

     DATE OF START:    /  /

     DATE OF COMPLETION /TERMINATION:    /  /

     ESTIMATE OF TOTAL COST UP TO THE

     COMPLETION OF THE PROJECT:      .

     BRIEF REPORT OF THE RESULTS ACHIEVED

     AND ITS SCIENTIFIC TECHNICAL & ECONOMIC

     SIGNIFICANCE(FOR COMPLETED PROJECT):  memo

     REASONS FOR DROPPED THE PROJECT IF ANY

     AND INDICATE WHETHER ANY OF THE FINDINGS

     COULD BE UTILISED(FOR DROPPED PROJECT):  memo

     OBSERVATION OF EC,RAC,CC,ON THIS PROJECT:  memo
IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
:
: CURSOR                   !    DELETE              !    RECORD
:    Character:Left Right  !       Character:Del    !       Previous Record:P
:    Word      :Home End   !       Field      :^Y   !       Next/Record     :P
:    Field     :Up Down    !       Record     :^U   !       Done/Save       :^
:    Insert Mode:Ins       !                        !       Abandon         :E
:                     *NOTE*
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
```

IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
: C.S.I.R. PROJETCT MANAGEMENT SYATEM: BAR CHART DATA ENTRY FORM
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
BAR CHART(Replace Year Quater With -)

PROJECTNO:

NAME OF THE ACTIVITY:

ACTIVITY NO:

YEAR QUATER 1989-90

1989-90(I):

1989-90(II):

1989-90(III):

1989-90(IV):

YEAR QUATER 1990-91

1990-91(I):

1990-91(II):

1990-91(III):

1990-91(IV):

YEAR QUATER 1991-92

1991-92(I):

1991-92(II):

1991-92(III):

1991-92(IV):

YEAR QUATER 1992-93

1992-93(I):

1992-93(II):

1992-93(III):

1992-93(IV):

YEAR QUATER 1993-94

1993-94(I):

1993-94(II):

1993-94(III):

1993-94(IV):

YEAR QUATER 1994-95

1994-95(I):

1994-95(II):

1994-95(III):

1994-95(IV):

```
IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
:                           !                        !
:                           !                        !
:  CURSER                   !   DELETE               ! RECORD
:     Character:Left Right  !      Character: Del    !    Previous Record: Pg
:     Word      :Home End   !      Field     : ^Y    !    Next Record    : Pg
:     Field     :Up Down    !      Record    : ^U    !    Done/Save      : ^E
:     Insert Mode:Ins       !                        !    Abandon        : Es
:                           !                        !
:   *NOTE*
:     Data Entry To Year Quater Replace The Field With -
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
```

```
C.S.I.R. PROJECT MANAGEMENT SYSTEM: CHARCTERISTICS DATA ENTRY FORM
```

CHARCTERISTICS OF THE PROJECT

1. PROJECT NO:

2. AREA OF R & D:

(PLEASE FILL IN RELAVENT CODE)

AREA OF R & D:

(PLEASE FILL IN THE NAME OF

THE SPECIFIC AREA)

3. CLASSIFICATION OF THE PROJECT

ONGOING : ?

NEW PROPOSED (Y/N) : ?

(START DURING 1990-91)

NEW TO BE TAKEN UP DURING:

(PLEASE FILL IN THE RELAVENT CODE)

4. GESTATION PERIOD

LONG TERM (Y/N): ?

SHORT TERM (Y/N): ?

5. SOCIO ECONOMIC AIM :

(PLEASE FILL IN THE RELAVENT CODE)

```
CURSOR                    | DELETE              | RECORD
  Character: Left Right   |   Character: Del    |   Previous Record: PgU
  Word     : Home End     |   Field    : ^Y     |   Next Record    : PgD
  Field    : Up Down      |   Record   : ^U     |   Done/Save      : ^En
  Insert Mode: Ins        |                     |   Abondon        : Esc
```

BASIC RESEARCH MENU 20/04/89

****

WHAT IS YOUR AIM

1.CAPABILITY BUILDING

2.TECHNIQUE DEVELOPMENT

3.GO TO NEXT MENU

ENTER CHOICE (1-3) 0

BASIC RESEARCH MENU 20/04/89 0

****

EMPHASES OF BASIC RESEARCH

1. TO ENHANCE THE FRONTIERS OF KNOWLEDGE
2. INITATE WORK IN NEW & EMERGING AREAS
3. TO EXPLORE ALTERNATIVE WAYS FOR DEVELOPMENT OF EXISTING PRODUCTS/PROCEES
4. TO DEVELOP IMPROVEMENT TECHNIQUES OF TESTING AND ANALYSIS
5. GO TO NEXT MENU

ENTER SCHOICE (1-5) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 01

****

USAGE OF RAW MATERIAL

1. IMPORTED

2. INDIGENOUS

3. GO TO NEXT MENU

ENTER SCHOICE (1-3) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 0

****

RENEWABLE USE OF

1. AGRICULTURE PRODUCTS
2. FOREST PRODUCTS
3. OTHER (PL SPECIFY)
4. GO TO NEXTMENU

ENTER SCHOICE (1-4) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 01

****

NON-RENEWABLE TYPE OF TECHNOLOGY

1. LABOUR INTENSIVE

2. CAP INTENSIVE

3. GO TO NEXT MENU

ENTER SCHOICE (1-3) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 01

****

EMPHASES

1. IMPORT SUBSTITUTION
2. EXPORT SUBSTITUTION
3. GO TO NEXT MENU

ENTER SCHOICE (1-3) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 0

****

NEED

1. MARKET FOR THE PRODUCT EXISTS
2. REDUCTION OF PRODUCTION COST
3. EXPLOITATION OF PRODUCTION
4. SAVING OF ENERGY
5. GENERATION OF EMPLOYMENT THROUGH UTILISATION OF RESULTS
6. SUBSTITUTION OF FOREIGN COLLABORATION
7. DEVLOPMENT OF S&T CAPABILITIES IN STRATEGIC AREAS
8. GO TO NEXT MENU

ENTER SCHOICE (1-8) 0

APPLIED RESEARCH MENU 20/04/89

****

WHAT IS YOUR AIM

1.DEVELOPMENT

2.DESIGN ENGINEERING

3.PILOT PLANT

4.GO TO NEXT MENU

ENTER CHOICE (1-4) 0

APPLIED RESEARCH MENU 20/04/89 01

****

EMPHASES OF APPLIED RESEARCH 1.

1. PRODUCT
2. PROCESS
3. TURNKEY
4. GO TO NEXT MENU

ENTER SCHOICE (1-4) 0

APPLIED RESEARCH MENU 20/04/89 01

****

EMPHASES OF APPLIED RESEARCH

1. NEW IN INDIA
2. PRODUCT/PROCESS EFFICIENTLY
3. IMPROVE OF QUALITY
4. RAW MATERIAL DEVELOPMENT
5. UTILISATION OF BY PRODUCTS/RESULTS
6. GO TO NEXT MENU

ENTER CHOICE (1-6) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 0

****

USAGE OF RAW MATERIAL

1. IMPORTED
2. INDIGENOUS
3. GO TO NEXT MENU

ENTER SCHOICE (1-3) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 01:

****

RENEWABLE USE OF

1. AGRICULTURE PRODUCTS
2. FOREST PRODUCTS
3. OTHER (PL SPECIFY)
4. GO TO NEXT MENU

ENTER SCHOICE (1-4) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 0

****

NON-RENEWABLE TYPE OF TECHNOLOGY

1. LABOUR INTENSIVE

2. CAP INTENSIVE

3. GO TO NEXT MENU

ENTER SCHOICE (1-3) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 20:2

****

EMPHASES

1. IMPORT SUBSTITUTION
2. EXPORT SUBSTITUTION
3. GO TO NEXT MENU

ENTER SCHOICE (1-3) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 01

****

NEED

1. MARKET FOR THE PRODUCT EXISTS
2. REDUCTION OF PRODUCTION COST
3. EXPLOITATION OF PRODUCTION
4. SAVING OF ENERGY
5. GENERATION OF EMPLOYMENT THROUGH UTILISATION OF RESULTS
6. SUBSTITUTION OF FOREIGN COLLABORATION
7. DEVLOPMENT OF S&T CAPABILITIES IN STRATEGIC AREAS
8. GO TO NEXT MENU

ENTER SCHOICE (1-8) 0

OTHER DATA BASE MENU 20/04/89 01

****

SURVEY & DATA COLLECTION

1. TESTING & RELATED ROUTINE WORK E/C
2. WIND TUNNEL
3. FATIGUE TESTING
4. BENIFICATION
5. ANY OTHER (SPECIFY)
6. GO TO THE NEXT MENU

ENTER CHOICE (1-6) 0

OTHER DATA BASE MENU 20/04/89 01

****

WHAT IS YOUR AIM

1. STATISTICAL FOR STUDIES
2. BUILDING OF INFORMATION SYSTEM
3. GEOLOGICAL DATA
4. ENVIRONMENTAL DATA
5. OCEANOGRAPHICAL DATA
6. METEOROLOGICAL DATA
7. POLLUTION DATA /ANY OTHER (SPECIFY)
8. GO TO THE NEXT MENU

ENTER SCHOICE (1-8) 0

OTHER DATA BASE MENU 20/04/89

****

EMPHASES OF SURVEY & DATA COLLECTION

1. ASSESSMENT OF RESOURCES OF THE REGION & R&D NEEDS
2. ASSESSMENT OF MARKET ! AND MARKET INTELLIGENCE
3. LOCATION OF SKILLS
4. INFORMATION ORGANISATION TO CATER TO THE NEEDS OF INDUSTRY & RESEARCH
5. GO TO THE NEXT MENU

ENTER CHOICE (1-5) 0

IMPACT OF APPLIED RESEARCH & L.T BASIC RESEARCH 20/04/89 0

****

NEED

1. MARKET FOR THE PRODUCT EXISTS
2. REDUCTION OF PRODUCTION COST
3. EXPLOITATION OF PRODUCTION
4. SAVING OF ENERGY
5. GENERATION OF EMPLOYMENT THROUGH UTILISATION OF RESULTS
6. SUBSTITUTION OF FOREIGN COLLABORATION
7. DEVLOPMENT OF S&T CAPABILITIES IN STRATEGIC AREAS
8. GO TO NEXT MENU

ENTER SCHOICE (1-8) 0

```
IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
:        C.S.I.R. PROJECT MANGEMENT SYSTEM: TIMEFRAME DATA ENTRY FORM
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
                              TIMEFRAME

             PROJECTNO:

             PLANNED DATE OF COMMENCEMENT:    /  /

             ACTUAL DATE OF COMMENCEMENT:    /  /

             REASONS FOR DELAY:  memo

             APPROVAL DATE OF COMPLETION:    /  /

             PRESENT DATE OF COMMENCEMENT:    /  /

             REASONS FOR DELAY:  memo

             APPROVED BY:

             STAGES OF WORK(1988-89):

             STAGES OF WORK(1989-90):

             STAGES OF WORK(1990-91):

IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
: CURSOR                        DELETE                  RECORD
:
:    Character:Left Right         Character:Del           Previous Record:Pg
:    Word     :Home End           Field    :^Y            Next Record    :Pg
:    Field    :Up Down            Record   :^U            Done/Save      :^
:    Insert Mode:Ins                                      Abondon        :Es
:                        *NOTE*
:  Data Entry To Memo Field Bring The Curser To Memo Field Press ^PgDn
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
```

LINKAGE PROJECT MENU 20/04/89 01

****

NATURE OF LINKAGE

1. UTILISATION OF RESULTS

2. FUNDING

3. SHARING OF R&D WORK

4. EXCHANGE OF SCIENTIST

5. UTILISATION OF FACILITIES

6. UTILISATION OF SPECIALISED MATERIAL OR
   TECHNIQUES DEVELOPED BY OTHER LABORATORIES

7. TRIALS & TESTING
8. OTHER (SPECIFY)
9. GO TO NEXT MENU

ENTER CHOICE(1-9) 0

```
   LINKAGE OF PROJECT MENU                                  20/04/89
**********************************************************************

      IS THE PROJECT

           1.SPONSORED

           2.CUNSULTANCY

           3.SUPPORTED

           4.TURNKEY

           5.GO TO NEXT MENU



ENTER CHOICE(1-5) 0
```

LINKAGE OF PROJECT MENU 20/04/89

****

NATURE OF ASSISTANCE

1.EQUIPMENT & MACHINERY

2.MATERIALS

3.VISIT TO ABROAD

4.FORGIEN EX

5.FELLOWSHIPS

6.TRAINING

7.GO TO NEXT MENU

ENTER CHOICE(1-7) 0

```
:C.S.I.R.COMPLEX PROJECT MANAGEMENT SYSTEM:FINANCIAL DATA ENTRY FORM
                                                    *(RUPEES IN LAKHS)*

        PROJECTNO:

        NAME OF AGENCY:

        TOTAL COMMITMENT OF FUNDS:          .

        FUNDS RECIEVED TILL MARCH (1988):          .

        FUNDS PROMISED DURING (1988-89):          .

        FUNDS RECIEVED SO FOR DURING (1988-89):          .

        FUNDS EXPECTED DURING (1989-95):          .
: CURSER                        DELETE                      RECORD
:    Character:Left Right       Character:Del               Previous Record:PgUp
:    Word      :Home End        Field    :^Y                Next Record    :PgDn
:    Field     :Up Down         Record   :^U                Done/Save      :^End
:    Insert Mode:Ins                                       Abondon        :Esc
```

```
IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
:   C.S.I.R. COMPLEX PROJECT MANAGEMENT SYSTEM: MANPOWRER DATA ENTERY FORM
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
                    MANPOWER STATEMENT DEPLOYMENT OF MANPOWER

        PROJECTNO:

        EMPLOYEENO:

        NAME:

        AGE AS ON:

        DESIGNATION:

        DEGREE WITH FIELD OF SPECIALISATION:

        AREA OF EXPERIENCE:

        MANMONTHS INVOLVEMENT IN THE PROJECT:

        FROM WHICH COMPLETED/DROPPED PROJECT/REDEPLOYED

        OF SO GIVE PROJECT NO. & MANMONTHS:



        OLD MANMONTHS:

        EXPECTED DATE OF RELEASE FROEM THIS PROJECT/INFRA:     /  /

        ANNUAL INCOME:

IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
:                                  ¦                              ¦
:  CURSOR                          ¦  DELETE                      ¦   RECORD
:     Character: Left Right        ¦     Character: Del           ¦      Previous Record:P
:     Word     : Home End          ¦     Field    : ^Y            ¦      Next Record    :N
:     Field    : Up Down           ¦     Record   : ^U            ¦      Done/Save      :^
:     Insert   : Ins               ¦                              ¦    Abondon
:                                  ¦                              ¦
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
```

```
IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
:  C.S.I.R. COMPLEX PROJECT MANAGEMENT SYSTEM: INFORMATION DATA ENTERY FORM
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
             INFORMATION ON THE REQUIRMENT OF ADDITIONAL MANPOWER

         PROJECTNO:

         EMPLOYEENO:

         ADDITIONAL DURING THE YEAR:

         DESIGNATION:

         NUMBER:

         FIELD/AREA SPECIALISATION:  memo

         MANMONTHS INVOLVEMENT:

         IF THE REQUIRMENT BE MEET BY

        INTERNAL REDEPLOYMENT INDICATE

        FROM WHICH PROJECT/INFRA NO (MANMONTH):
        ANNUAL INCOME:          .

IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
:    Character: Left Right  !      Character: Del   !      Previous Record: P
:    Word      : Home End   !      Field     : ^Y   !      Next Record     : P
:    Field     : Up Down    !      Record    : ^U   !      Done/Save       : ^
:    Insert Mode: Ins       !                       !      Abondon         : E
:                           !                       !
:
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
```

```
IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
: C.S.I.R. COMPLEX PROJECT MANAGEMENT SYSTEM: MANCALCULATION DATA ENTRY FOR
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM

                    PROJECTNO:

                    EMPLOYEE NO:

                    YEAR(1989-90):

                    MANMONTH INVOLVED:

                    YEAR(1990-91):

                    MANMONTH INVOLVED:

                    YEAR(1991-92):

                    MANMONTH INVOLVED:

                    YEAR(1992-93):

                    MANMONTH INVOLVED:

                    YEAR(1993-94):


                    MANMONTH INVOLVED:

                    YEAR(1994-95):

                    MANMONTH INVOLVED:

                    MONTHLY SALARY:
IMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
: CURSOR                        !  DELETE                    !  RECORD
:    Character: Left Right      !     Character: Del         !     Previous Record:
:    Word     : Home End        !     Field    : ^Y          !     Next Record    :
:    Field    : Up Down         !     Record   : ^U          !     Done/Save      :
:    Insert Mode:  Ins          !                            !     Abandone       :
:                               !                            !
HMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
```

```
:C.S.I.R.COMPLEX PROJECT MANAGEMENT SYSTEM:FINANCIAL STATEMENT DATA ENTRY FO
```

FINANCIAL STATEMENT

PROJECTNO:

CONTINGENCIES P4(ii): .

MAINTENCE P6 (iii): .

CHEMICAL & APPARATUS P7(iv): .

WORK & SERVICES P5(i)+P5(2): .

EQUIPMENT P5(3): .

FORNITURE P5(4)(i): .

LIBRARY BOOKS P5(4)(ii): .

VEHCILE P5(4) (iii): .

MODELS & EXHIBITS P5(4)(v): .

YEAR:

```
:CURSOR                          DELETE                          RECORD
:
:   Character:Left Right          Character:Del                   Previous Record:PgU
:   Word      :Home End           Field     :^Y                   Next Record     :PgD
:   Field     :Up Down            Record    :^U                   Done/Save       :^En
:   Insert Mode:Ins                                               Abondon         :Esc
:
```

```
C.S.I.R. COMPLEX PROJECT MANAGEMENT SYSTEM: INFRASTRUCTURE DATA ENTRY FORM
                    INFRASTRUCTURE PARTICULARS

    1.TITLE OF INFRASTRUCTURE:

    2.INFRA STRUCTURE NO:

    3.NATURE OF ACTIVITY:  memo

    4.ADDITIONAL FACILITIES REQUIRED TO BE
      CREATE GIVE FULL JUSTIFICATION:  memo

    5.MAJOR BOTTLENECKS, IF ANY:
:CURSOR                    !   DELETE              !  RECORD
:   Character:Left Right   !      Character:Del    !     Previous Record:PgUp
:   Word     :Home End     !      Field    :^Y     !     Next Record    :PgDn
:   Filed    :Up Down      !      Record   :^U     !     Done/Save      :^End
:   Insert Mode:Ins        !                       !     Abandon        :Esc
:                        *Note*
:   Data Entry To Memo Field Bring The Cursor To Memo field Press ^PgDn
```

3.2 OUTPUT FORMAT

The output reports which will be generated for the project Management System are explained below:

1. Council of Scientific & Industrial Research Annual plan 1990-91 Project Budget estimates 1989-90 and 1990-91 & Eighth Five Year Plan projection (1990-1995) Proforma 1A.

   This report includes the title of the project progress, targets, expected results and justification of the project, major equipment required and collaboration, if any.

2. For R&D projects completed in 1988-89 and to be completed 1989-90 and also, for R&D projects dropped in 1988-89 and to be dropped in 1990-91.

   This report includes the title of the project, duration, results achieved, total cost of the project.

3. Bar Chart

   This report includes proposed program of work activity wise, for the plan period.

4. Characteristics of the project.

   This gives the classification of the project i.e. Basic Research, applied research and other research etc.

5. Timeframe.

   It includes the planned date and actual date, commencement and completion of the project.

6. Linkages.

The linkage and the nature of linkages with other agencies.

7. Financial Commitment of the other organisation agencies.

This includes Financial assistance committed, received from other organisation during the plan period.

8. Manpower statement, deployment of manpower.

It gives the details of all the existing employees involved in the project.

9. Information on the requirement of additional Manpower.

Gives the details additional manpower demanded year wise for the particular project.

10. Financial statement

The budget head-wise, year wise, expenditure and budget estimate for the project during the plan period.

11. List of Major equipment required costing more than two lakhs.

It gives the list of Major equipment required for the entire Laboratory during the plan period.

12. Statement 6.

It gives the projects in progress, projects to be started and projects to be completed during the plan period.

13. Progress expected during plan period.

    It gives the titles of the project to be completed during the plan period (year wise).

14. Proforma II.

    It includes Infrastructure No., bottlenecks, nature of activity, additional facility required with full justifications.

15. Statement 3:

    It gives the yearwise, budget wise total budget estimate of the entire laboratory for the plan period.

16. Statement 1.3

    It gives year wise, project wise, budget headwise, budget estimates for the all the divisions of the laboratory during the plan period.

The output formats for all the above types of reports are given on the next pages.

C.S.I.R.COMPLEX,PALAMPUR
KANGRA(H.P)
STATEMENT 3: PROJECTION OF PLAN AND NON-PLAN EXPENDITURE
DURING 8th FIVE YEAR PALN PERIOD 1990-91 TO 1994-95

YEAR	RECURRING					CAPITAL							
	SALARIES P1+P2+P3(i)	CONTINGE-CIES P4(iii)	MAINTENA-NCE P4(iii)	CHEM.& APP. P7(iv)	TOTAL RECURRING	WORKS & SER-VICES P5(i)	EQUIPMENT P5(2)	FURNITURE P5(4)(i)	LIB.BOOKS P5(4)(ii)	VECHILE P5(4)(iii)	MODELS & EXH. P5(4)(V)	TOTAL CAPITAL	GRAND TOTAL
1990-91	3444455665	2444.00	2223.00	2233.00	3444462565.00	233344.34	554546.00	345656.70	90909.00	666669.90	8699.00	1899824.94	1906724.94
1992-93	45465665	223435.40	454565.65	5443.44	46149109.49	4434.00	343434.30	44343.43	56454.54	46565.00	66656.56	561887.83	1245332.32
1991-92	32535465	2132.00	323232.00	33232.00	32894061.00	3243.00	3232.00	6565.00	65465.00	656567.80	676532.00	1411604.80	1770200.80
1989-90	233333333	54555.00	2345.00	44444.00	233434677.00	35627.00	45678.90	868886.00	67677.67	68899.00	9990.00	1096758.57	1198102.57
*** Total ***													
	3755790128	282566.40	782365.65	85352.44	3756940412.49	276648.34	946891.20	1265451.1	280506.21	1438701.70	761877.56	4970076.14	6120360.63

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C.S.I.R. COMPLEX,PALAMPUR
KANGRA(H.P)
PROPOSED DEPLOYMENT OF PLAN + NON PLAN
RESOURCES FOR B.E. 1989-90

TITLE OF PROJECT/ AREA	RECURRING				TOTAL RECURRING	CAPITAL						TOTAL CAPITAL	
	SALARIES P1+P2+P3(i)	CONTINGECIES P4(ii)	MAINTENANCE P6(iii)	CHEM.&APP. P7(iv)		WORKS&SERVICES P5(i)	EQUIPMENT P5(2)	FURNITURE P5(4) (i)	LIB.BOOKS P5(4) (ii)	VECHILE P5(4)(iii)	MODEL&EXH P5(4)(V)		
	233333333	54555.00	2345.00	44444.00	233434677.00	35627.00	45678.90	868886.00	67677.67	68899.00	9990.00	1096758.57	2345314
*** Total ***	233333333	54555.00	2345.00	44444.00	233434677.00	35627.00	45678.90	868886.00	67677.67	68899.00	9990.00	1096758.57	2345314

C.S.I.R.COMPLEX,PALAMPUR
KANGRA(H.P)
INFORMATION ON THE REQUIREMENT OF ADDITIONAL MANPOWER

ODDITIONAL URING THE YEAR	DESIGNATION	NUMBER	FIELD/AREA SPECIALISATION	MANMONTH INVOLVEMENT	IF THE REQUIRMENT BE MET BY INTERNAL REDEPLOYMENT ,INDICATE FROM WHICH PROJECT/INFRA.NO.(MANMONTH)	ANNUAL INCOME
990-91	Scientist "B"	3	Plant Breeding & Plant pathology	12	12	123333.00
991-92	STA	2	Horticulture	12	12	12333.00
992-93	TA	11	Tea Sciences	12	12	123.00
993-94	12	12		12	1	2333.00
* Total ***		28		48		138122.00

e No. 1
04/89

C.S.I.R.COMPLEX,PALAMPUR
MANPOWER STATEMENT DEPLOYMENT OF MANPOWER
NAME OF THE PROJECT/INFRASTRUCTURE:

LOYEE BER	NAME	AGE AS ON	DESIGNATION	DEGRE WITH FIELD OF SPECI.	AREA OF EXPERIENCE	MANMONTHS INVOL.IN PROJECT	COMP.DROPP. PROJ.GIVE P.NO.	GIVE M MONTHS	EXP.DAT OF REL
	Mr.SHAYAM LAL	23	STA	M.Sc.	Plant Pathology	60	12	12	12/03/
	Mr. Ram Singh	24	Scientist "B"	M.Sc. Ph.D.	PLANT PATHOLOGY	2	12	12	12/03/
Total ***		47				62		24	

C.S.I.R.COMPLEX,PALAMPUR
KANGRA(H.P)
TIMEFRAME

ATE OF COMMENCEMENT			DATE OF COMPLETION			APPROVED BY	STAGES OF WORK** PROJ.WAS&WILL BE		
	ACTUAL DATE	REASONS DELAY	AT THE TIME OF APPROVAL	NOW	REASONS FOR DELAY		1989-90	1990-91	1991-92
2/12/86	12/01/87	Not Applicable	23/01/88	24/02/89	Not applicable	R.C	3	3	3
* Total ***							3	3	3

C.S.I.R.COMPLEX,PALAMPUR
KANGRA(H.P)
FINANCIAL COMMITEMENT OF THE OTHER ORGANISATION/AGENCIES
(RUPEES IN LAKHS)

NAME OF THE AGENCIES	TOTAL COMMITMENT	FUNDS RECEIVED TILL MARCH 1988	FUNDS PROMISED DURING 1988-89	FUNDS RECEIVED SO FOR DURING 1988-89	FUNDS EXPECTED 1989-95
NBRI	12233333.11	22222222.22	22222222.22	22222222.22	22222222.22
CDRI	22222222.22	22222222.22	22222222.22	22222222.22	22222222.20
IBRI	11111111.11	23334544.44	33344555.55	44566666.65	55555555.30
*** Total ***	45566666.44	67778988.88	77788999.99	89011111.09	99999999.72

PERFORMA IA

COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH
ANNUAL PLAN 1990-91
PROJECT BUDGET ESTIMATES 1989-90 AND 1990-91
& EIGHTH FIVE YEAR PLAN PROJECTION (1990-95) page 1

1. TITLE OF THE PROJECT:
TH-10 Investigation on spray irrigation and sub-irrigation-cum-drainge system for tea plantations in

2. PROJECT NO:
h20

3. INDICATE WHETHER THE PROJECT IS!ONGOING OR NEW:
NEW

4. SCIENTIFIC & TECHNICAL OBJECTIVES OF THE PROJECT:
A. TARGET:
Not applicable

B. EXPECTED RESULT:
Not applicable

5.1 INDICATE PROGRESS STATUS OF THE PROJECT AT
THE END OF MARCH 1989:
Not Applicagble

5.2 PROGRESS EXPECTED DURING 1989-90:
Selection of site for glass houses and polyhouses

5.3 PROGRESS WORK FOR 1990-91:
Selection of the shape of the glass houses

6.1 WHETHER THE PROJECT IS ON SCHEDULE:
.F.

6.2 IF NO,GIVE NEW SCHEDULE AND EXPEXTED DATE OF
COMPLETION. ALSO INDICATE REASONS FOR CHANGE
(PLEASE SEE APPENDIX V FOR CODES):
30/03/89

7.1 IF THERE IS DELAY IN THE COMPLETION OF THE
PROJECT AND ANY CHANGE IN THE OBJECTIVE &
PROGRAMME PLEASE INDICATE WHETHER APPROVAL
OBTAINED OF:
1233333

1. R.C
.T.

2. M.C
.T.

3. COLLOBORATOR/USER
.T.

7.2 ANY SPECIFIC OBSERVATION ON THE PROJECT BY
RAC/EC/CC/GB:
Not applicable

8. JUSTIFICATION FOR TAKING UP THE NEW PROPOSAL:
   Flower grown under glass houses

9. DO YOU NEED ANY MAJOR EQUIPMENT. IF YES,PLEASE
   INDICATE THE SPECIFICATION AND THE COST ALONG
   WITH THE JUSTIFICATIONS:
   .T.

10. WHETHER THE ADDITIONAL MANPOWER REQUIREMENT BE
    MET BY INTERNAL REDEPLOYMENT.
    (REFLECT PROPERLY IN THE MANPOWER STATEMENT):
    .F.

11. PLEASE NAME OTHER ORGANISATION/INSTITUTIONS
    WHERE SOME OR RELATED WORK IS BEING CARRIED OUT
    BRING OUT THE COMPARATIVE DIFFERENCES IN ASPECTS
    AND APPROACH:
    .T.

12. PLEASE LIST HERE THE MINISTRIES/FINANCIAL
    INSTITUTIONS/PUBLIC SECTOR UNDERTAKING/UNIVERSITIES
    OTHRE ORGANISATION WITH WHOM YOU WOULD LIKE TO
    COLLABORATE.ALSO INDICATE THE NATURE OF COLLOBORATION
    REQUIRED:
    .F.

13. NAME AND ADDRESS OF THE USER,IF ANY AND PLEASE INDICATE
    NATURE OF THE COMMITMENT:
    .T.

press any key to return to main menu...

PERFORMA IB

FOR R & D PROJECTS COMPLETED IN 1989&
TO BE COMPLETED IN 1989-90
AND ALSO
FOR R & D PROJECTS DROPPED IN 1988-89&
TO BE DROPPED IN 1990-91

1. TITLE OF THE PROJECT:
INVESTIGATION ON METHODS OF IRRIGATION

2. PROJECT NO:
TH-11.3

3. INDICATE WHETHER THE PROJECT IS COMPLETE OR DROPPED:
.T.

4. DURATION:
1989-90 1990-91

DATE OF START:
21/03/86

DATE OF COMPLETION/TERMINATION:
21/03/86

5. ESTIMATE OF TOTAL COST UP TO
THE COMPLETION OF THE PROJECT:
222.220

6.1 BRIEF REPORT OF THE RESULTS
ACHIEVED AND ITS SCIENTIFIC,
TECHNICAL & ECONOMIC SIGNIFICANCE
(FOR COMPLETED PROJECTS):
Not applicable

6.2 REASONS FOR DROPPING THE PROJECT
IF ANY, AND INDICATE WHETHER ANY
OF THE FINDING COULD BE UTILISED
(FOR DROPPED PROJECTS):

7 OBSERVATION OF EC,RAC,CC,ON THIS PROJECT:
Not applicable

PERFORMA II

INFRASTRUCTURE PARTICULAR 20/04/89 page 1

1. TITLE OF INFRA STRUCTURE: STORE

2. INFRA STRUCTURE NO: 13

3. NATURE OF ACTIVITY: Acquisition,processing and dissemination of information.

4. ADDITIONAL FACILITY REQUIRED TO CREATED GIVE FULL JUSTIFICATION: See Apendix 1.

5. MAJOR BOTTELNECKS,IF ANY: B12,B13,B1

3.3 FILE DESIGN

When the input and output formats are designed, the next step is to decide how the logical data structures, which have been defined, are to be physically stored on secondary storage devices. As the records are to be updated, accesses or retrieved at random, so the appropriate medium for them to be stored on disks or diskettes. This part is concerned with the file organisation used for this system.

A file may be defined as a collection of items of data organised into records in such a way that specific items of data records can be retrieved and accommodated in main storage when required for processing.

For integrated approach to fill design the data base has been choosen. A separate data base has been created wherever there is one to many relations Project No. has been made unique and given in all the data bases, so that a relation can be established between any two or more data bases.

In this system for each project item a separate data base file has been created, so as to easily handle the project separately, for generating the project wise report. Each database file has been given the separate name. But the system as a whole is menu based. So if you have to enter any information in middle you have to go from main data entry menu.

The purpose of these databses is defined below:

Database **Contents & Purpose**

PB1 : This file contains project number and all the information regarding to proforma 1A. Whenever any

processing in proforma 1A required, this database is used.

EQUIP : This file contains project number, equipment name, specifications, quantity & cost. When the report for list of equipment required more than 2 lakhs created, this file is used.

PRWORK : This file contains project number, Institute name and type of work carried out.

PCOLL : This file contains project number & collaborator name.

PUSER : This file contains, project number, name of user and address.

BAR1 : This file contains all the information regarding the Bar chart of the project. Bar chart generates in this database is used.

CLASSP : This file contains all the information for the characteristics of the project i.e. area of R&D. Any processing in the area of R&D required to use this file.

BRESEARC : This file contains the classification details of all the projects which are under basic research. Any processing done in basic research, required to use this data base.

ARESEARC : This database contains the classification details of all the applied research projects.

OTHDATA : This database stores all the information for research project.Other than applied and basic

research when any processing required in this other research area required to use this database.

FINANCIA : This database stores all the information regarding the financial commitment of other organisation/ agencies. Any processing in this item required to use this database.

LINKAGE : This database stores all the information regarding the linkage of the project with other agencies. Any processing in this item required to use this data base.

MAN : This database contains details of existing manpower involved in particular project. Any processing required in this item, uses this data base.

MANC : This database stores project no., employee no., year and manmonth of a person. This data base is used for calculate the total manmonth and salary of a person.

BCA ; This database stores the information regarding the proforma 1B. Any processing in this project item required to use this database.

MANI : This database stores the information regarding the "Information on the requirement of additional manpower" Any processing in this item required to use this database.

FINS : This database stores the infromation regarding the financial estimates of all projects. Statement 3 & statement 1.3 of financial statement of a parti-

cular project.

INFR : This database stores the all types of information regarding the infrastructure (proforma II) , Engineering Services, Administration and stores. While printing the reports for infrastructure, Engineering Services, administration and stores this database used.

This file structure of different database used is as follow:

Database: Pb1.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	INDTITLE	Character	100	
3	PROJNEW	Character	7	
4	TARGET	Memo	10	
5	RESULT	Memo	10	
6	STATUS	Memo	10	
7	PROGEXP	Memo	10	
8	PROPWORK	Memo	10	
9	PSCHEDULE	Logical	1	
10	NEXPECDATE	Date	8	
11	NESCHEDULE	Character	100	
12	JUSITFY	Memo	10	
13	RCODE	Character	10	
14	RC	Logical	1	
15	MC	Logical	1	
16	LUSER	Logical	1	

17	OBSERVAT	Character	100
18	NEQUIP	Logical	1
19	AMANP	Logical	1
20	RWORK	Logical	1
21	COLLOBRATE	Logical	1
22	USER	Logical	1
** Total **			403

Database: Equip.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	EQUIPNAME	Character	60	
3	SPECIFICAT	Character	50	
4	QUANTITY	Numeric	2	
5	COST	Numeric	8	
** Total **			129	

Database: Pwork.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	INSNAME	Character	60	
3	TWORK	Character	150	
** Total **			219	

Database: Pcoll.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	

2	COLLOBNAME	Character	100	
** Total **			109	

Database: Puser.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	NUSER	Character	60	
3	ADDRESS	Character	120	
** Total **			189	

Database: Bar1.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	NAMEA	Character	100	
3	ACNO	Numeric	2	
4	QUATER1	Character	1	
5	QUATER2	Character	1	
6	QUATER3	Character	1	
7	QUATER4	Character	1	
8	QUATER5	Character	1	
9	QUATER6	Character	1	
10	QUATER7	Character	1	
11	QUATER8	Character	1	
12	QUATER9	Character	1	
13	QUATER10	Character	1	
14	QUATER11	Character	1	
15	QUATER12	Character	1	
16	QUATER13	Character	1	

17	QUATER14	Character	1
18	QUATER15	Character	1
19	QUATER16	Character	1
20	QUATER17	Character	1
21	QUATER18	Character	1
22	QUATER19	Character	1
23	QUATER20	Character	1
24	QUATER21	Character	1
25	QUATER22	Character	1
26	QUATER23	Character	1
27	QUATER24	Character	1
** Total **			137

Database: Classp.dbf

Field	File Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	ARDI	Numweic	5	
3	ARDII	Character	40	
4	CPROJECT	Logical	1	
5	NPROPOSED	Logical	1	
6	NEWTOBTAKE	Logical	1	
7	BOEIHWXR	Numeric	2	
8	LTERM	Logical	1	
9	STERM	Logical	1	
10	SECONOMIC	Nunweux	2	
** Total **			63	

Database: Bresearc.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	BAIM	Numeric	1	
3	EBRS	Numeric	1	
4	USAGE	Numeric	1	
5	AGRI	Numeric	1	
6	FOREST	Numeric	1	
7	SPEC	Character	50	
8	Type	Numeric	1	
9	EMPH	Numeric	1	
10	NEED	Numeric	1	
** Total **			67	

Database: Arescarc.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	AAIM	Numeric	1	
3	EARES	Numeric	1	
4	RESULT	Numeric	1	
5	USAGE1	Numeric	1	
6	AGRI1	Numeric	1	
7	FOREST1	Numeric	1	
8	SPEC1	Character	50	
9	TYPE1	Numeric	1	
10	EMPH1	Numeric	1	

11	NEED1	Numeric	1	
** Total **			68	

Database: Othdata.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	TPROJECT	Numeric	1	
3	SPECIFF	Character	60	
4	AIM	Numeric	1	
5	SPECIFY	Character	60	
6	EMPHASES	Numeric	1	
7	NEED2	Numeric	1	
** Total **			133	

Database: Financia.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	NAGEN	Character	60	
3	TFUNDS	Numeric	11	2
4	FRECIEV	Numeric	11	2
5	FPROMISSED	Numeric	11	2
6	FRECIEVED	Numeric	11	2
7	FEXPECTEFD	Numeric	11	2
** Total **			124	

Database: Linkage.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	NLAB	Character	60	
3	SPEC	Character	60	
4	NLINK	Numeric	1	
5	NPROJECT	Numeric	1	
6	NASSISTANC	Numeric	1	
** Total **			132	

Database: Man.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	EMPNO	Character	10	
3	NAME	Character	60	
4	AGE	Numeric	2	
5	DESI	Character	40	
6	DEGRREE	Character	100	
7	AREA	Character	100	
8	MANM	Numeric	3	
9	REDP	Character	8	
10	OLDM	Numeric	3	
11	EXPECT	Date	8	
12	ANNUAL	Numeric	10	2
** Total **			353	

Database: Manc.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	EMPNO	Character	10	
3	YEAR1	Character	7	
4	MANMONT1	Numeric	3	
5	YEAR2	Character	7	
6	MANMONT2	Numeric	3	
7	YEAR3	Character	7	
8	MANMONT3	Numeric	3	
9	YEAR4	Character	7	
10	MANMONT4	Numeric	3	
11	YEAR5	Character	7	
12	MANMONT5	Numeric	3	
13	YEAR6	Character	7	
14	MANMONT6	Numeric	3	
15	YEAR7	Character	7	
16	MANMONT7	Numeric	3	
17	MONTSAL	Numeric	7	
** Total **			96	

Database: Bca.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	TITLEP	Character	100	
3	INDICATEW	Logical	1	
4	DURATIONP	Charater	15	

5	DATE1	Date	8
6	DATE2	Date	8
7	ESTIMATEP	Numeric	7
8	BRIEFP	Memo	10
9	REASONSP	Memo	10
10	OBSERVP	Memo	10
** Total **			178

Database: ManI.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	EMPNO	Character	10	
3	YEAR	Character	7	
4	DESIGN	Character	40	
5	NUMBER	Numeric	2	
6	FIELDA	Memo	10	
7	MANMON	Numeric	3	
8	OLDP	Character	8	
9	ANNUALI	Numeric	10	2
** Total **			99	

Database: Puser.dbf

Field	Field Name	Type	Width	Dec
1	PROJECTNO	Character	8	
2	NUSER	Character	60	
3	ADDRESS	Character	120	
** Total **			189	

Database: Fins.dbf

Field	Field Name	Type	Width	Sec
1	PROJECTNO	Character	8	
2	CONT	Numeric	6	2
3	MAINT	Numeric	6	2
4	CHEM	Numeric	6	2
5	WORK	Numeric	6	2
6	EQUIP	Numeric	6	2
7	FURNIT	Numeric	6	2
8	LIBB	Numeric	6	2
9	VECH	Numeric	6	2
10	MODE	Numeric	6	2
11	YEAR	Character	7	
12	SALR	Numeric	10	
** Total **			80	

Database: Infr.dbf

Field	Field Name	Type	Width	Sec
1	ITITLE	Character	100	
2	INO	Character	4	
3	NACTIVITY	Memo	10	
4	ADDITIONAL	Memo	10	
5	MAJORB	Character	10	
** Total **			135	

processing in proforma 1A required, this database is used.

EQUIP : This file contains project number, equipment name, specifications, quantity & cost. When the report for list of equipment required more than 2 lakhs created, this file is used.

PRWork : This file contains project number, Institute name and type of work carried out.

PCOLL : This file contains project number & collaborator name.

PUSER : This file contains, project number, name of user and address.

BAR1 : This file contains all the information regarding the Bar chart of the project. Bar chart generates in this database is used.

CLASSP : This file contains all the information for the characteristics of the project i.e. area of R&D. Any processing in the area of R&D required to use this file.

BRESEARC : This file contains the classification details of all the project which are under basic research. Any processing done in basic research, required to use this data base

ARESEARC : This database contains the classification details of all the applied research projects.

OTHDATA : This database stores all the information for research project.Other than applied and basic

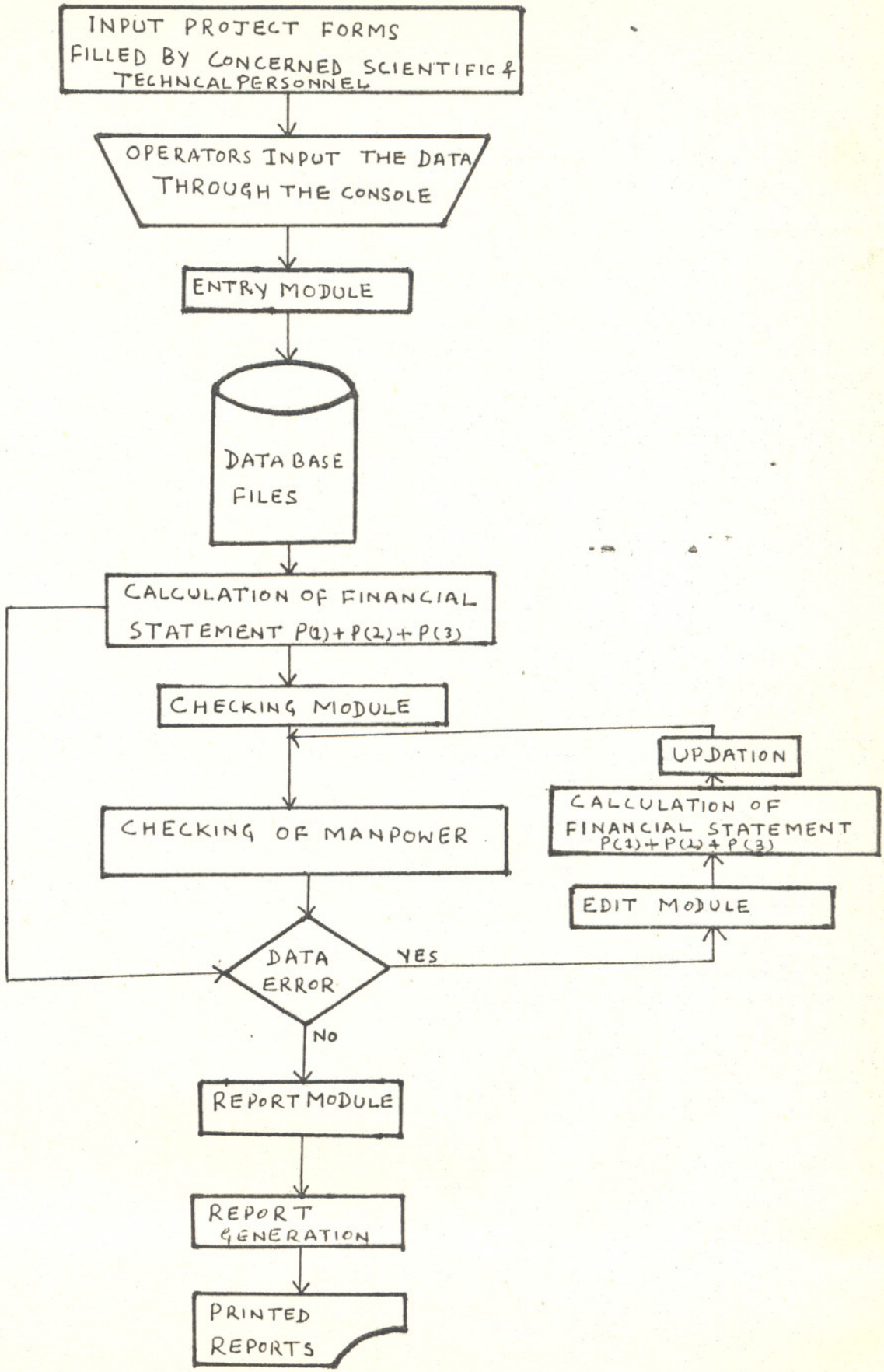
4. IMPLEMENTATION AND TESTING

Once the system has been designed in detail, the next thing is to turn the design into a working system and then to monitor the operation of the system to ensure that it continues to work efficiently and effectively. In this section the theoritical design work discussed in the previous section is shown to have been changed into a working system. The first section gives the processing logic of the system developed. The next section shows the system in the form of a tree. Each node of the tree is elaborated in detail by giving its input-process - output description.

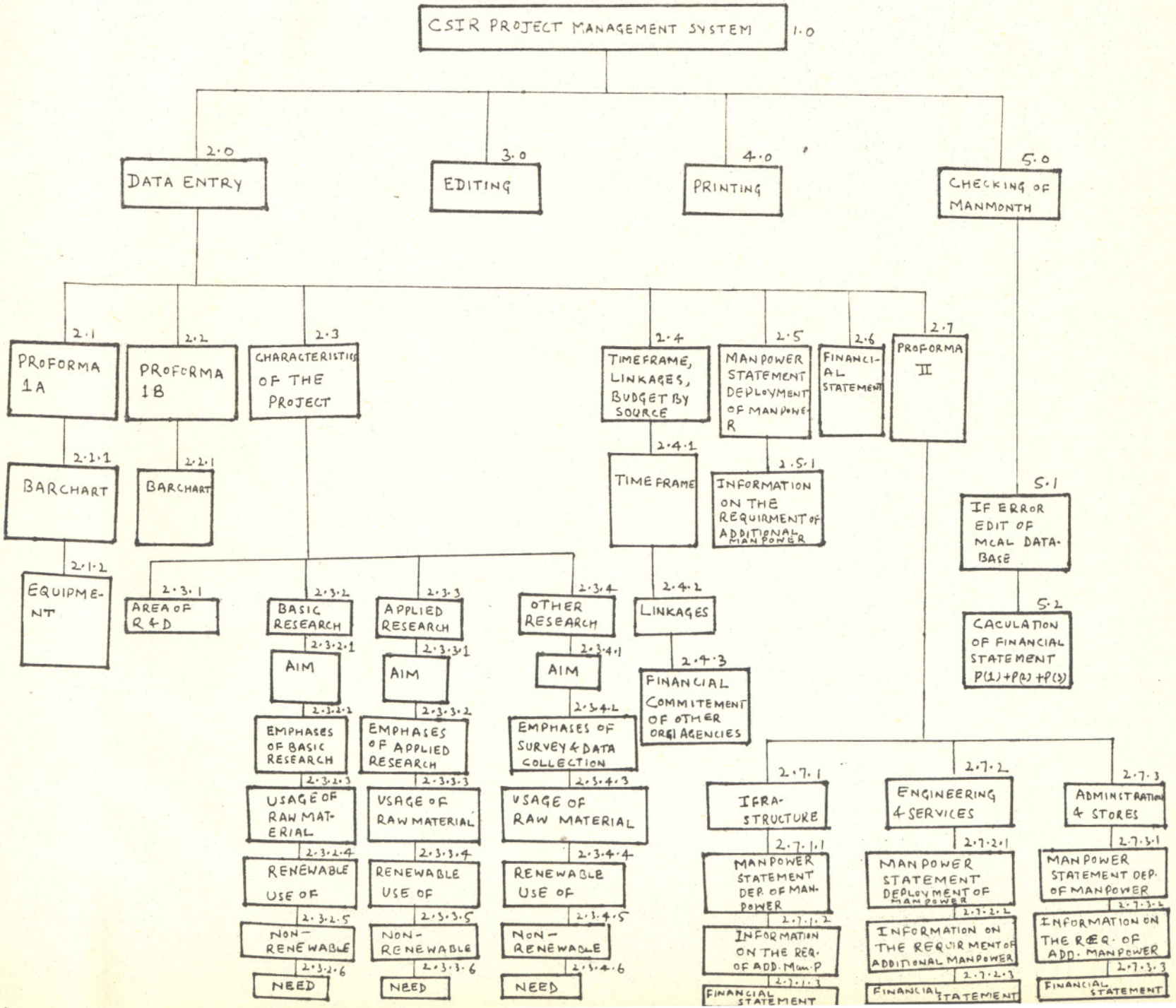
4.1 SYSTEM HIERARCY PLUS INPUT - PROCESSING - OUTPUT

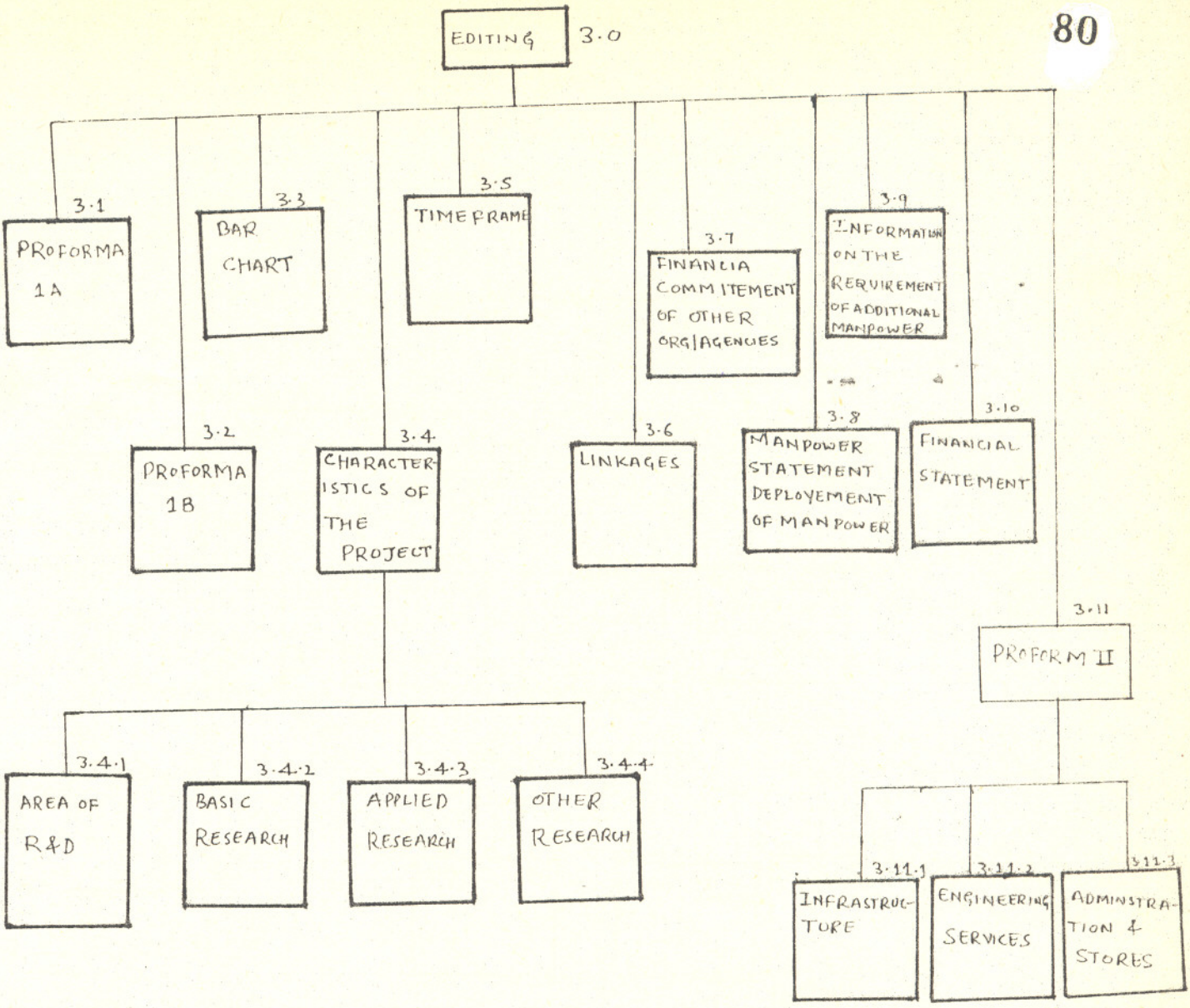
The system in the form of a tree structure has been given in this section. It is a form of representation which would be giving details from general to specific, that is through a top down approach. This approach is to view the system in a structured manner. Starting from the main program at the root level of the tree to bottom of the tree all the nodes have been considered separately giving the details of the input, processing, and out put being performed by them. Thus the over view of the system is given by starting the function performed by each of the program shown in the tree structure. For each node in the structure there may be more than one program written though all will be subprogram to one main program which represent the node. The charts that follow the tree structure give the visual description of input to be used and output be produced for each node of the tree structure.

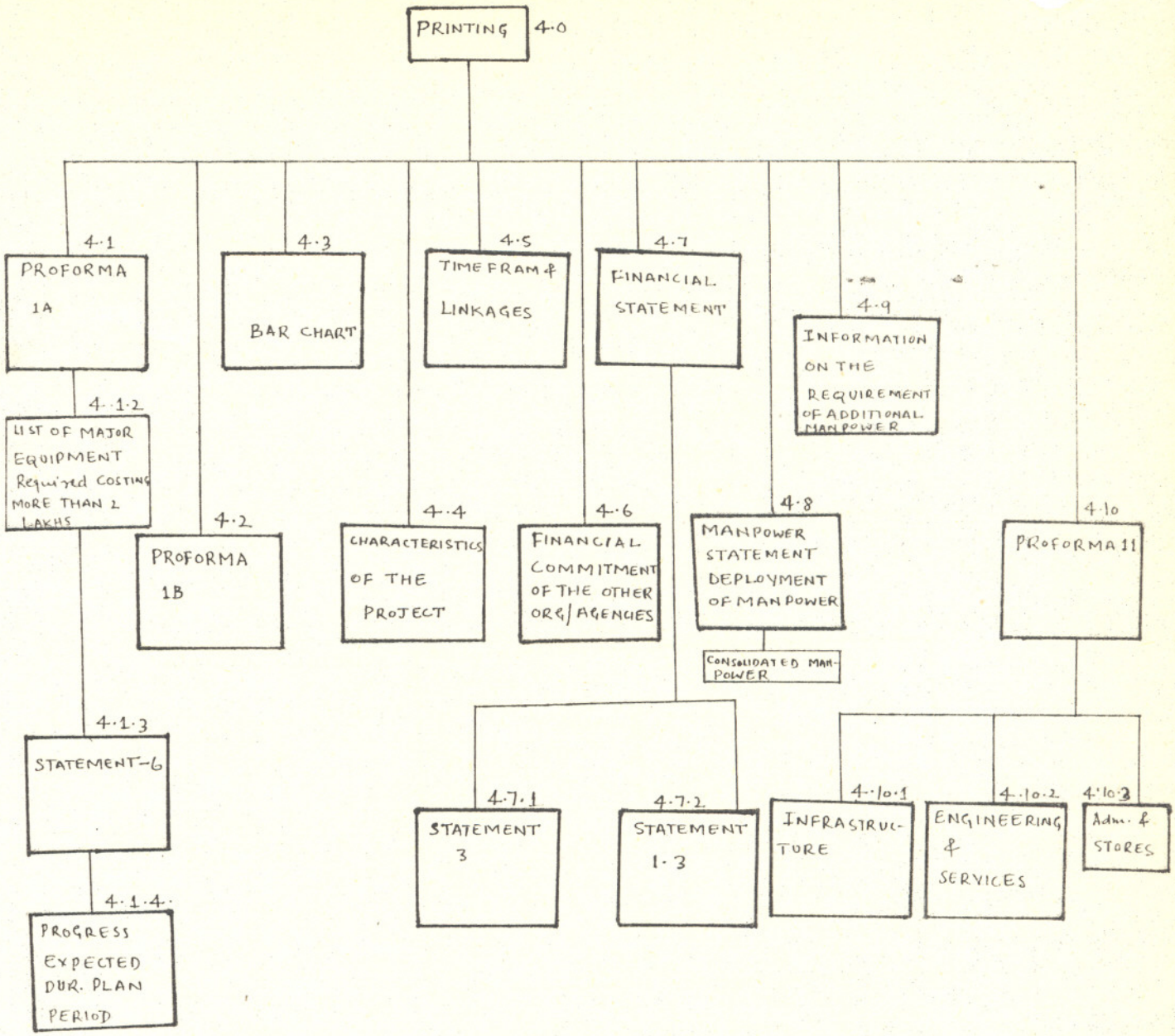
SYSTEM FLOW CHART



TREE STRUCTURE FOR THE SYSTEM



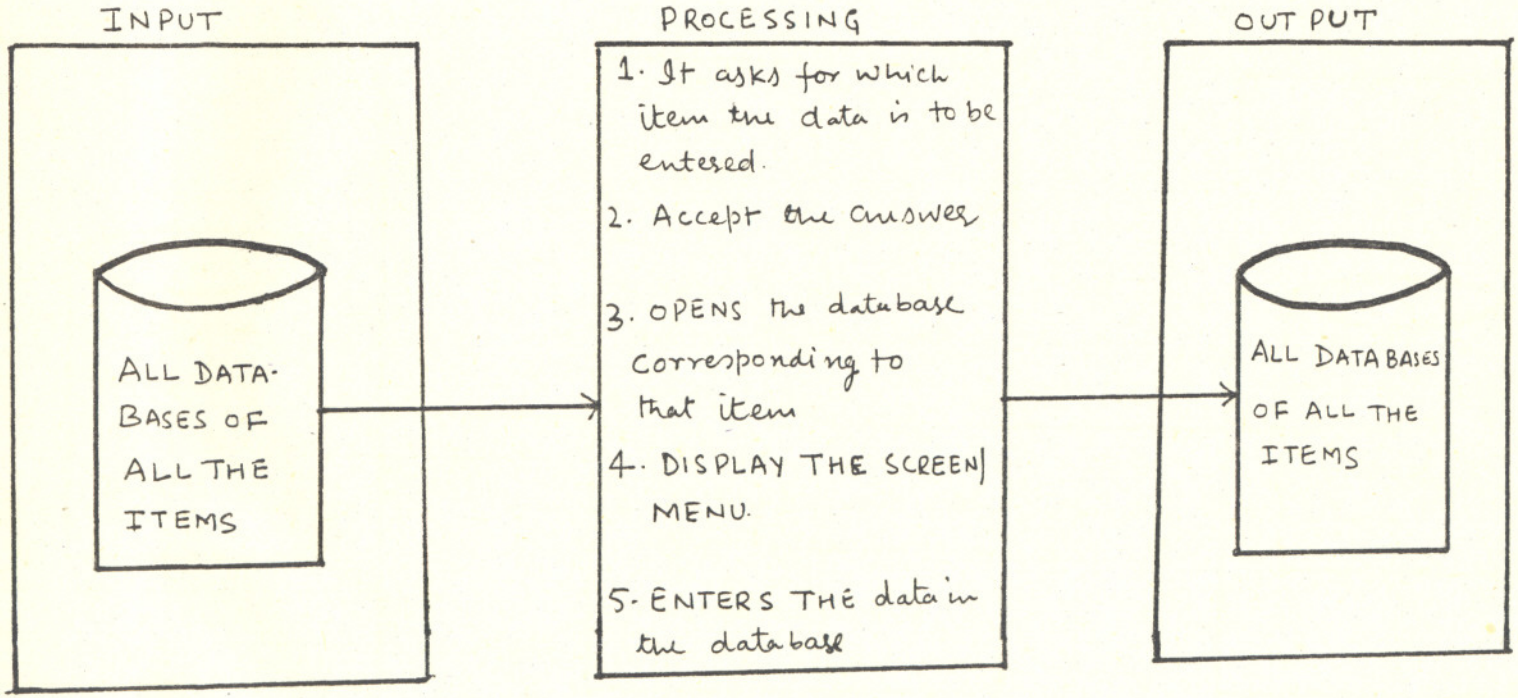

EDITING
3.0
3.1
PROFORMA 1A
3.2
PROFORMA 1B
3.3
BAR CHART
3.4
CHARACTERISTICS OF THE PROJECT
3.5
TIME FRAME
3.6
LINKAGES
3.7
FINANCIA COMMITEMENT OF OTHER ORG|AGENCIES
3.8
MANPOWER STATEMENT DEPLOYEMENT OF MANPOWER
3.9
INFORMATION ON THE REQUIREMENT OF ADDITIONAL MANPOWER
3.10
FINANCIAL STATEMENT
3.11
PROFORM II
3.4.1
AREA OF R&D
3.4.2
BASIC RESEARCH
3.4.3
APPLIED RESEARCH
3.4.4
OTHER RESEARCH
3.11.1
INFRASTRUCTURE
3.11.2
ENGINEERING SERVICES
3.11.3
ADMINSTRATION & STORES


PRINTING 4.0
4.1
PROFORMA 1A
4.1.2
LIST OF MAJOR EQUIPMENT Required COSTING MORE THAN 2 LAKHS
4.1.3
STATEMENT-6
4.1.4.
PROGRESS EXPECTED DUR. PLAN PERIOD
4.2
PROFORMA 1B
4.3
BAR CHART
4.4
CHARACTERISTICS OF THE PROJECT
4.5
TIME FRAM & LINKAGES
4.6
FINANCIAL COMMITMENT OF THE OTHER ORG/AGENCIES
4.7
FINANCIAL STATEMENT
4.7.1
STATEMENT 3
4.7.2
STATEMENT 1.3
4.8
MANPOWER STATEMENT DEPLOYMENT OF MANPOWER
CONSOLIDATED MAN-POWER
4.9
INFORMATION ON THE REQUIREMENT OF ADDITIONAL MANPOWER
4.10
PROFORMA 11
4.10.1
INFRASTRUC-TURE
4.10.2
ENGINEERING & SERVICES
4.10.3
Adm. & STORES

SYSTEM: CSIR PROJECT MANAGEMENT SYSTEM

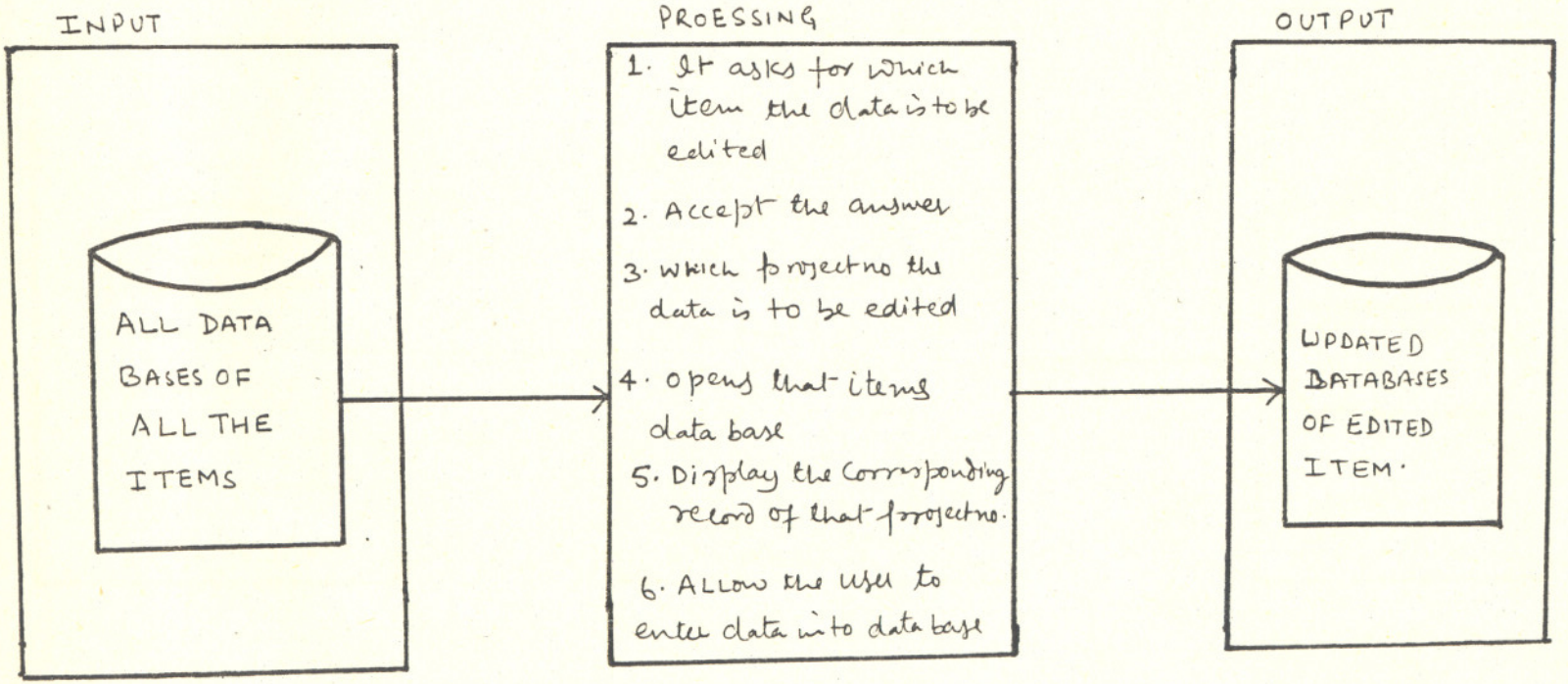
PROGRAM : 2.0

DATA ENTRY



SYSTEM : CSIR PROJECT MANAGEMENT SYSTEM

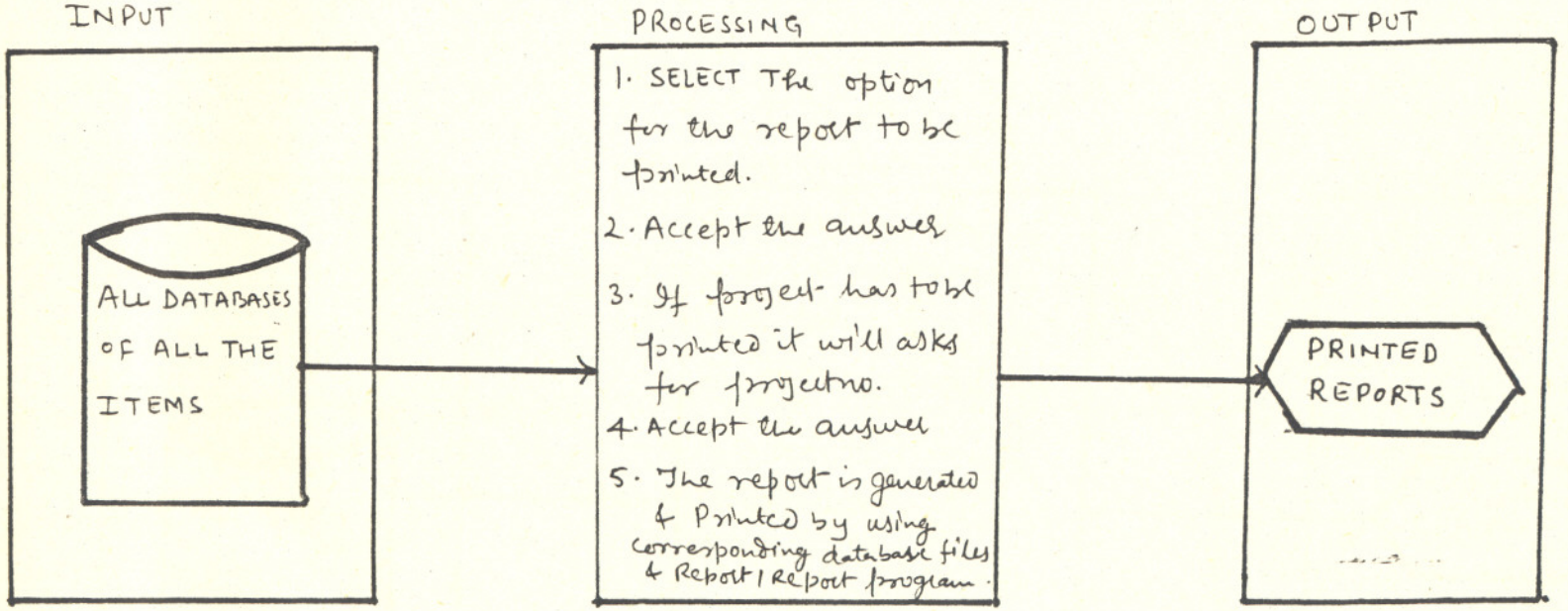
PROGRAM; 3.0
EDITING



SYSTEM: CSIR PROJECT MANAGEMENT SYSTEM

PROGRAM: 4.0

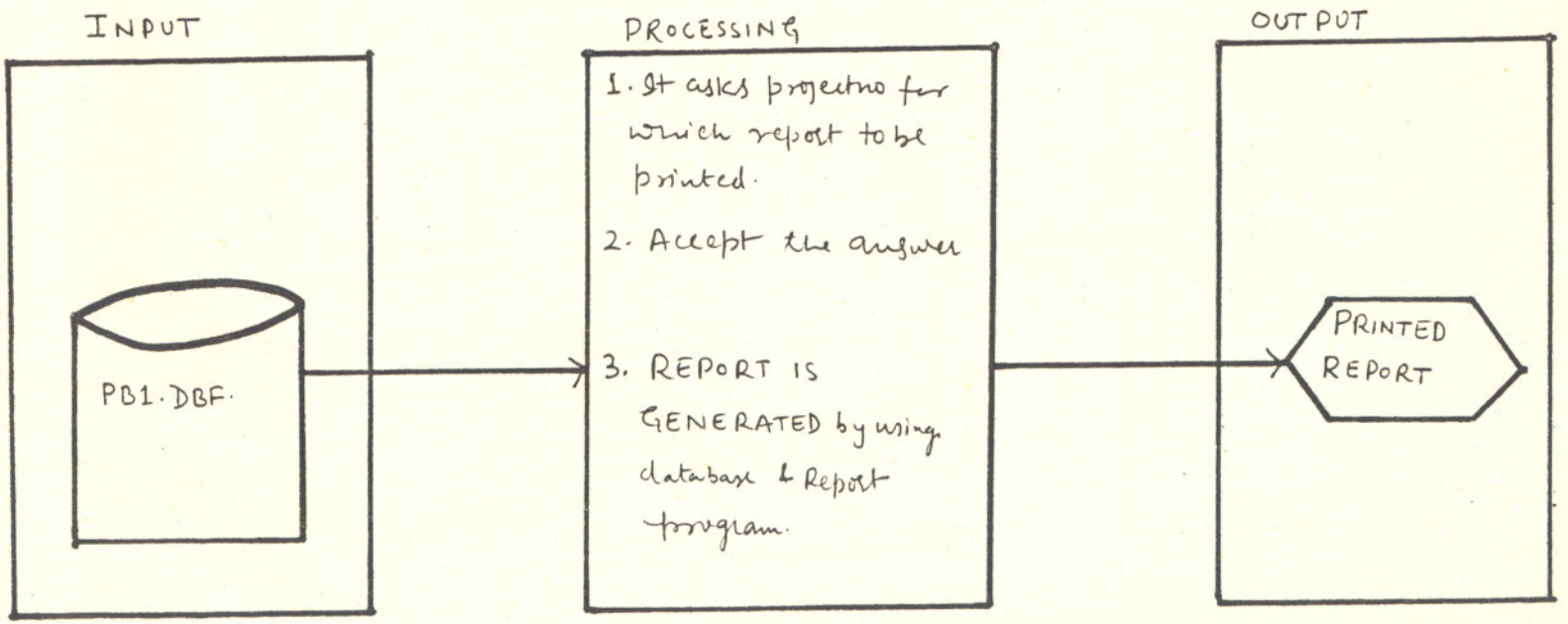
PRINTING



SYSTEM: CSIR PROJECT MANAGEMENT SYSTEM

PROGRAM: 4.1

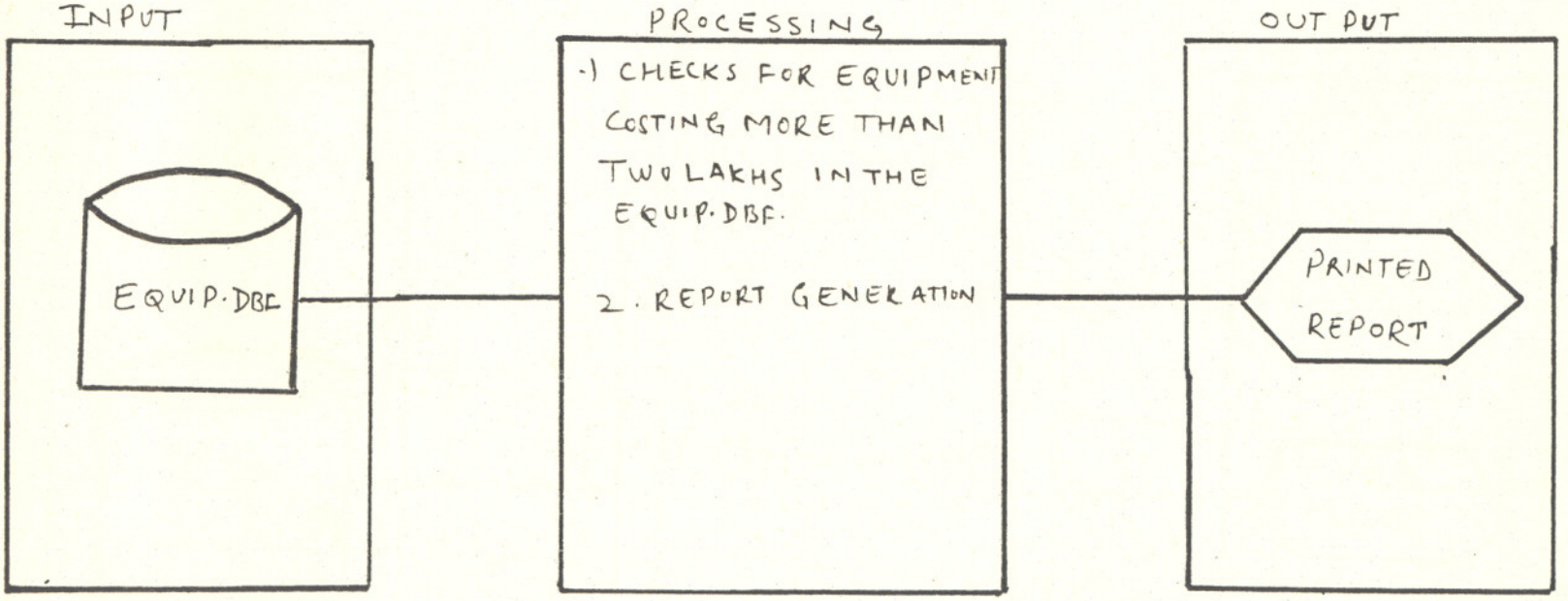
PROFORMA 1A



SYSTEM : CSIR PROJECT MANAGEMENT SYSTEM

PROGRAM : 4.1.2

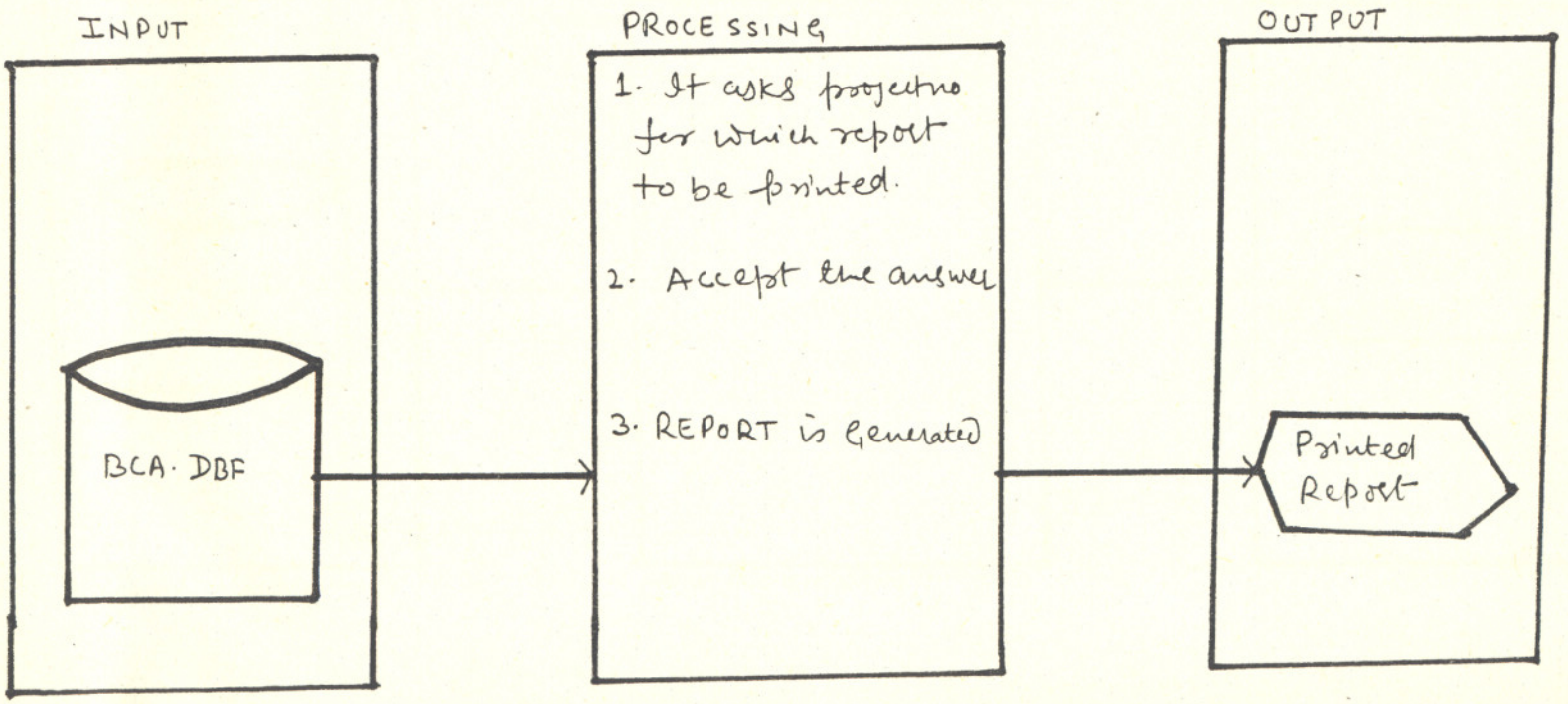
LIST OF MAJOR EQUIPMENT COSTING MORE THAN TWO LAKHS



SYSTEM : CSIR PROJECT MANAGEMENT SYSTEM

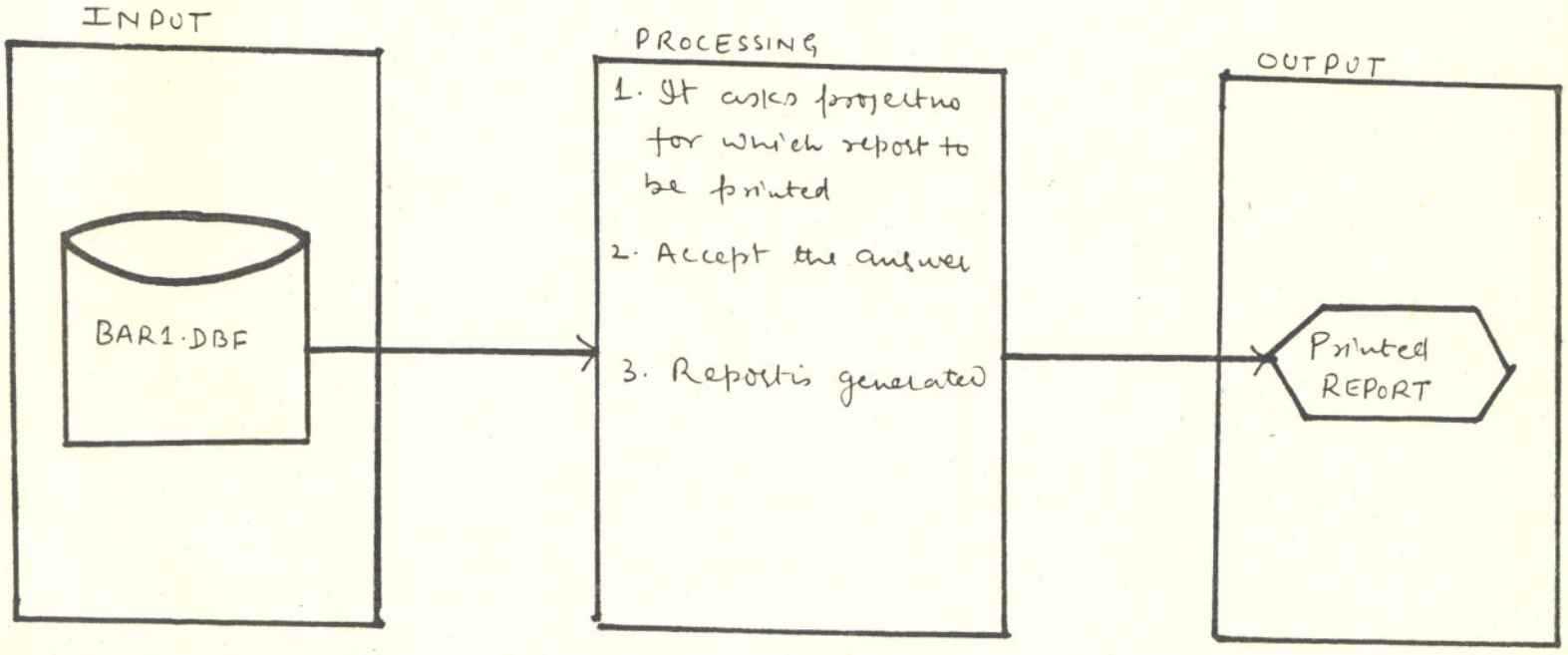
PROGRAM: 4.2

PROFORMA 1B



SYSTEM : CSIR PROJECT MANAGEMENT SYSTEM

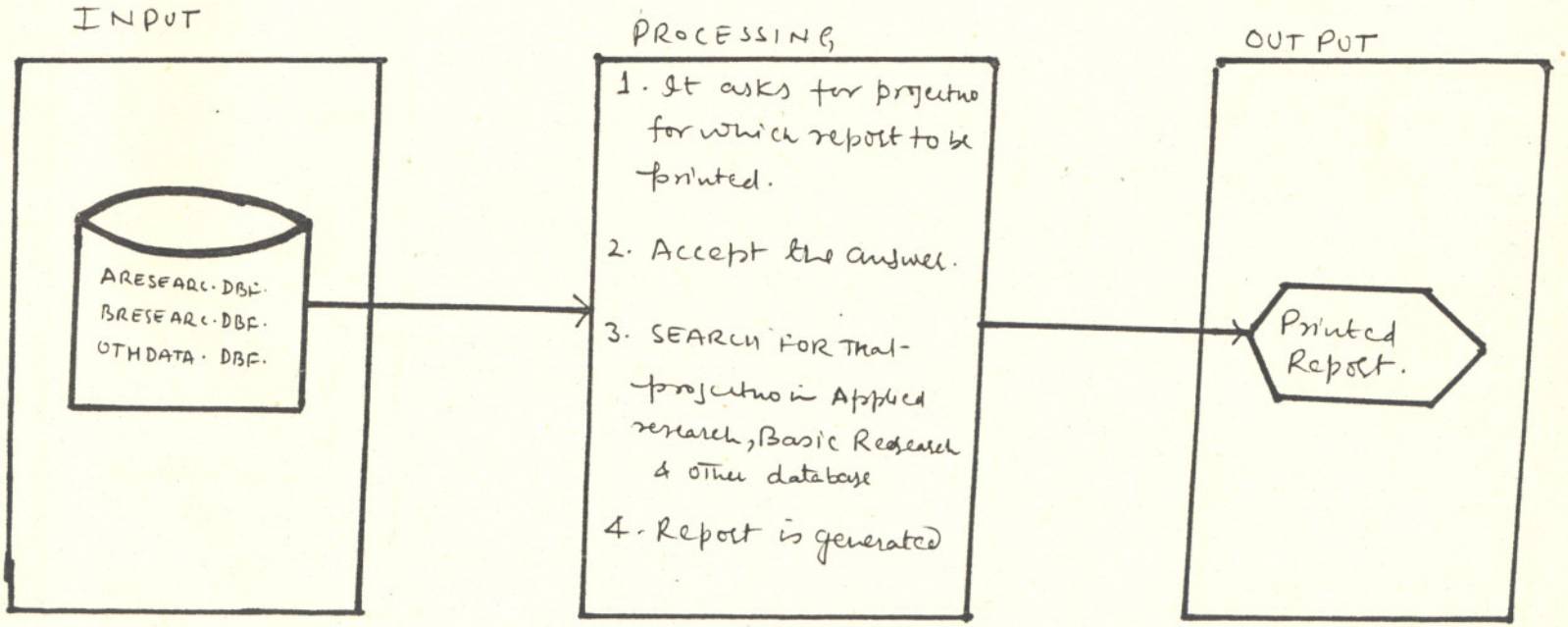
PROGRAM : 4.3
BAR CHART



SYSTEM :- CSIR PROJECT MANAGEMENT SYSTEM

PROGRAM: 4.4

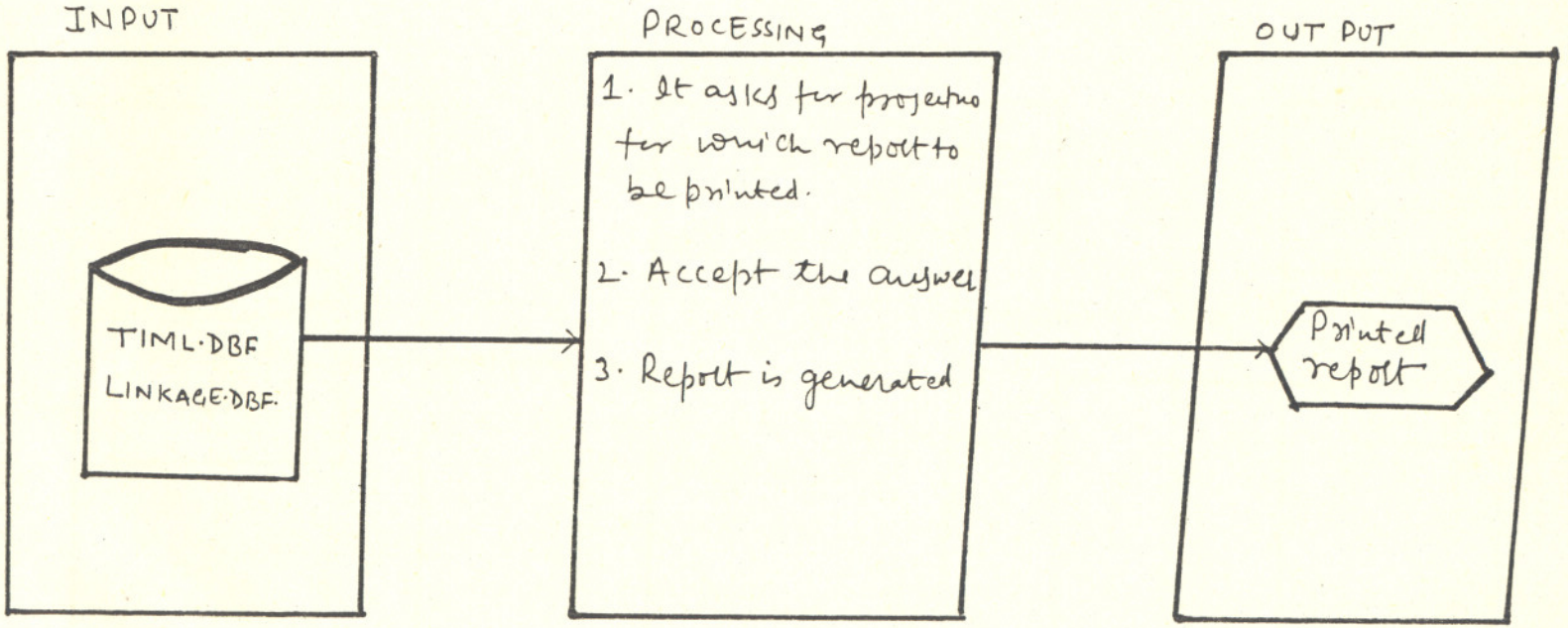
CHARACTERISTICS OF THE PROJECT



SYSTEM : CSIR PROJECT MANAGEMENT SYSTEM

PROGRAM: 4.5

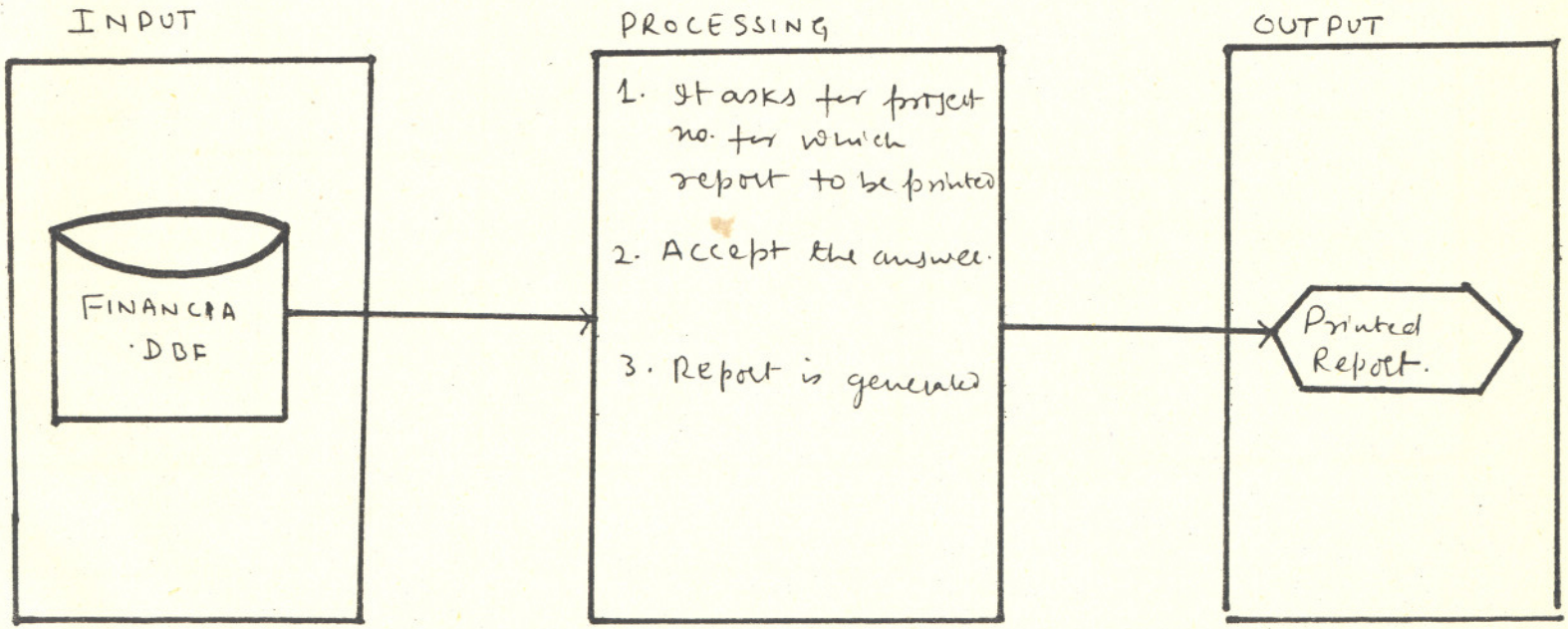
TIME FRAME & LINKAGES



SYSTEM : CSIR PROJECT MANAGEMEN SYSTEM

PROGRAM: 4.6

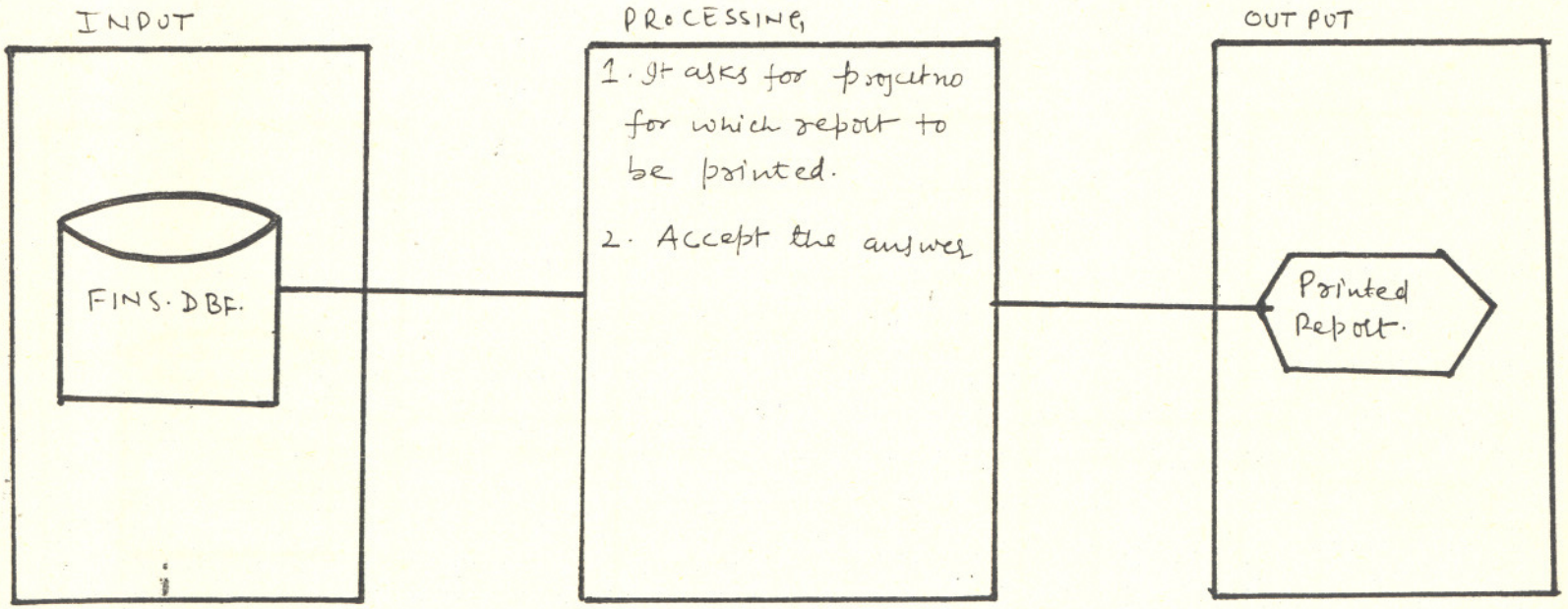
FINANCIAL COMMITMENT
OF OTHER ORG| AGENCIES



SYSTEM: CSIR PROJECT MANAGEME SYSTEM

PROGRAM : 4.7

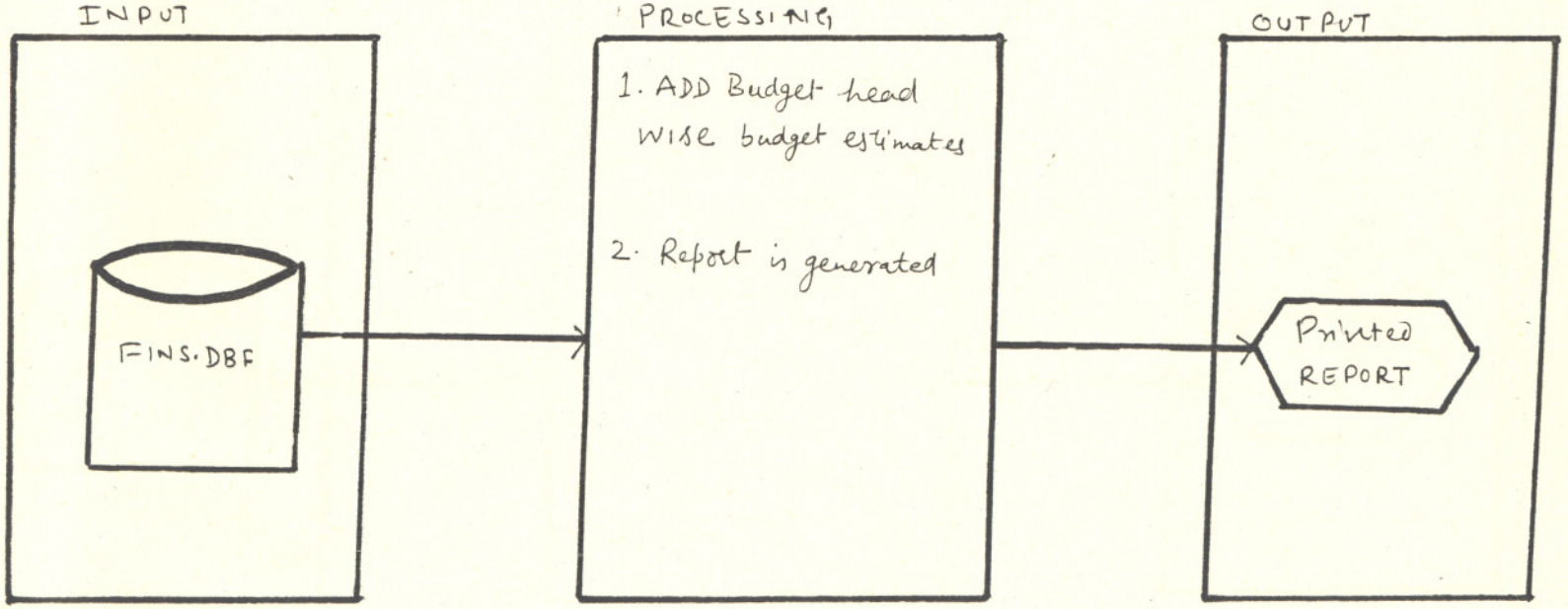
FINANCIAL STATEMENT



SYSTEM : CSIR PROJECT MANAGEMENT SYSTEM

PROGRAM : 4.7.1

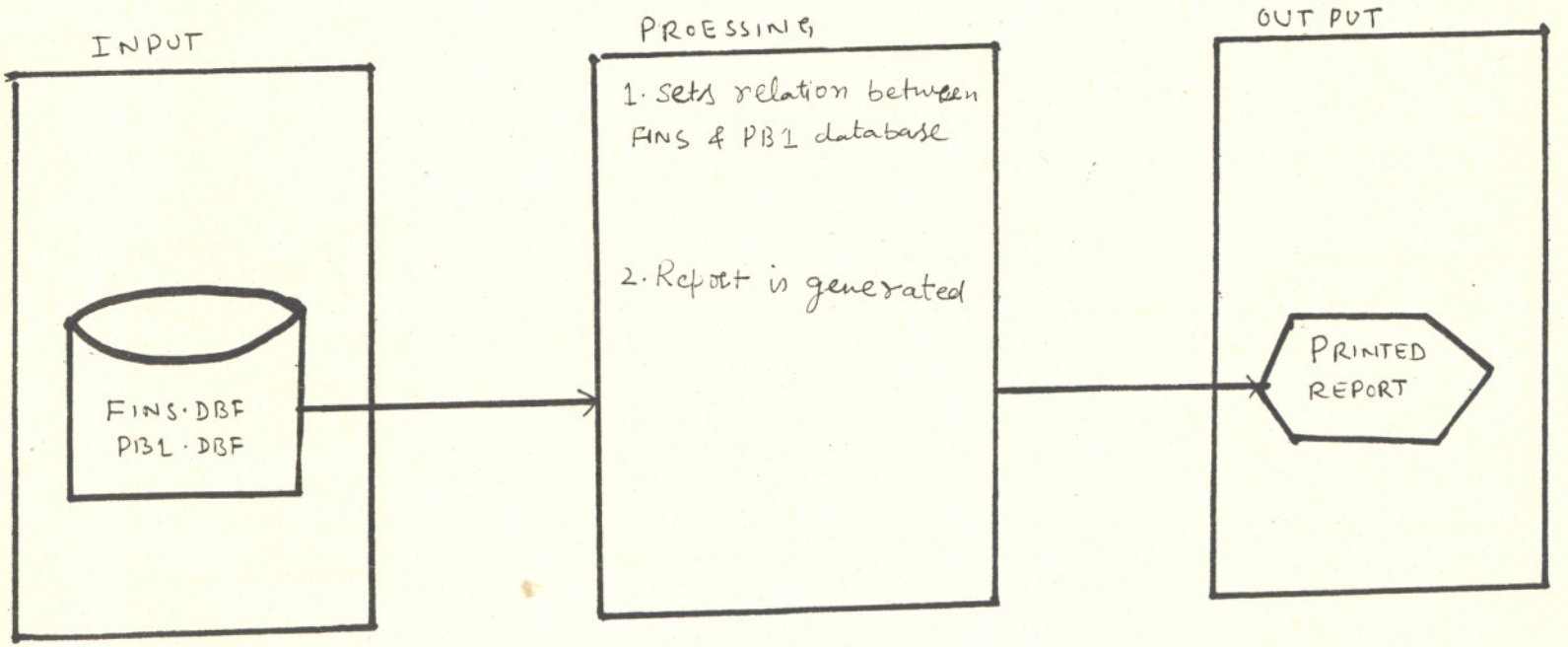
STATEMENT 3



SYSTEM: CSIR PROJECT MANAGEMEN SYSTEM

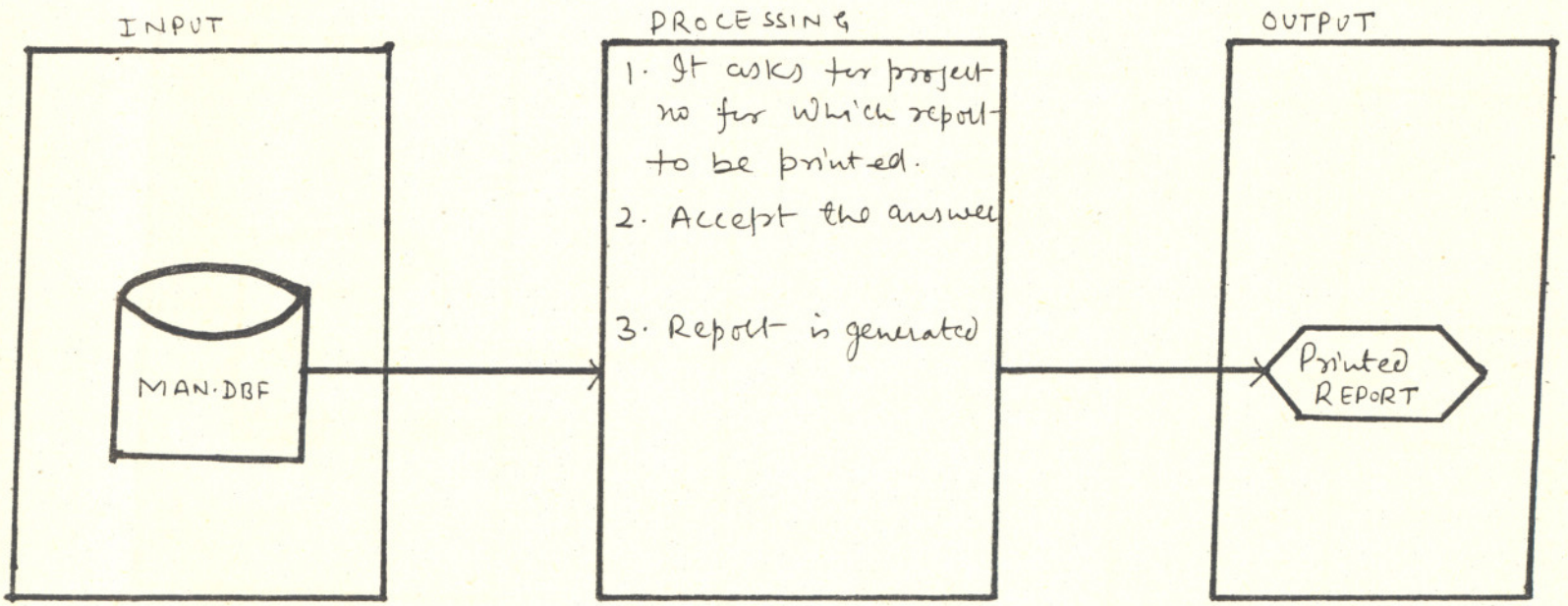
PROGAM : 4.7.2

STATEMENT 1.3



SYSTEM: CSIR PROJECT MANAGEMENT SYSTEM

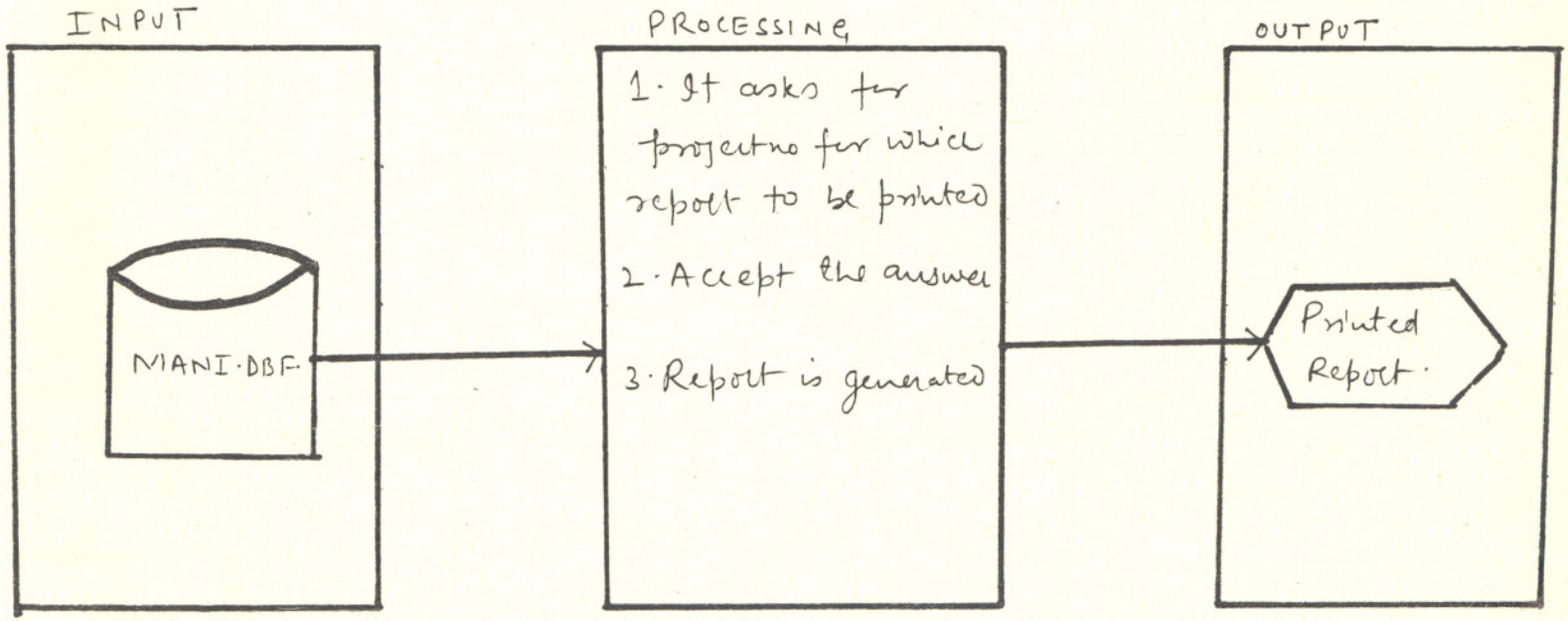
PROGRAM: 4.8
MANPOWER STATEMENT
DEPLOYMENT OF MANPOWER



SYSTEM : CSIR PROJECT MANAGEMENT SYSTEM

PROGRAM: 4.9

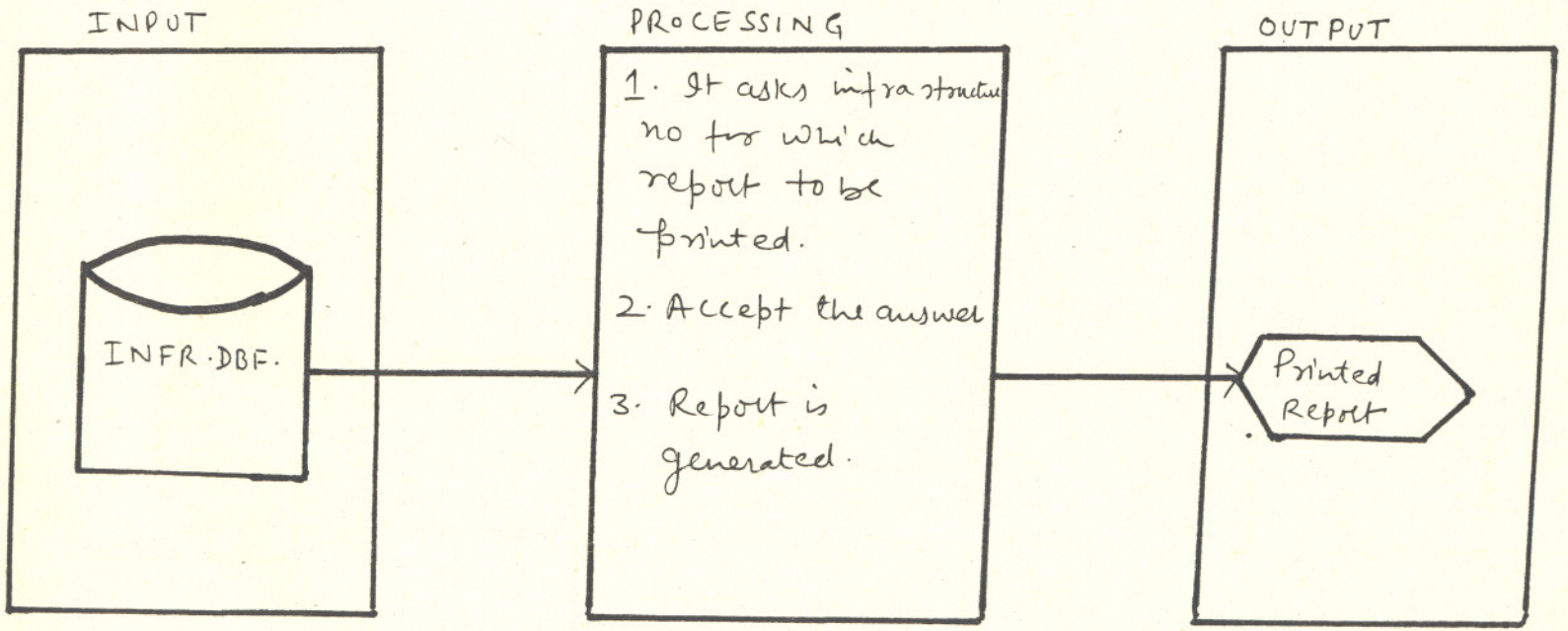
INFORMATION ON THE REQUIREMENT OF ADDITIONAL MANPOWER



SYSTEM: CSIR PROJECT MANAGEMENT SYSTEM

PROGRAM : 4.10

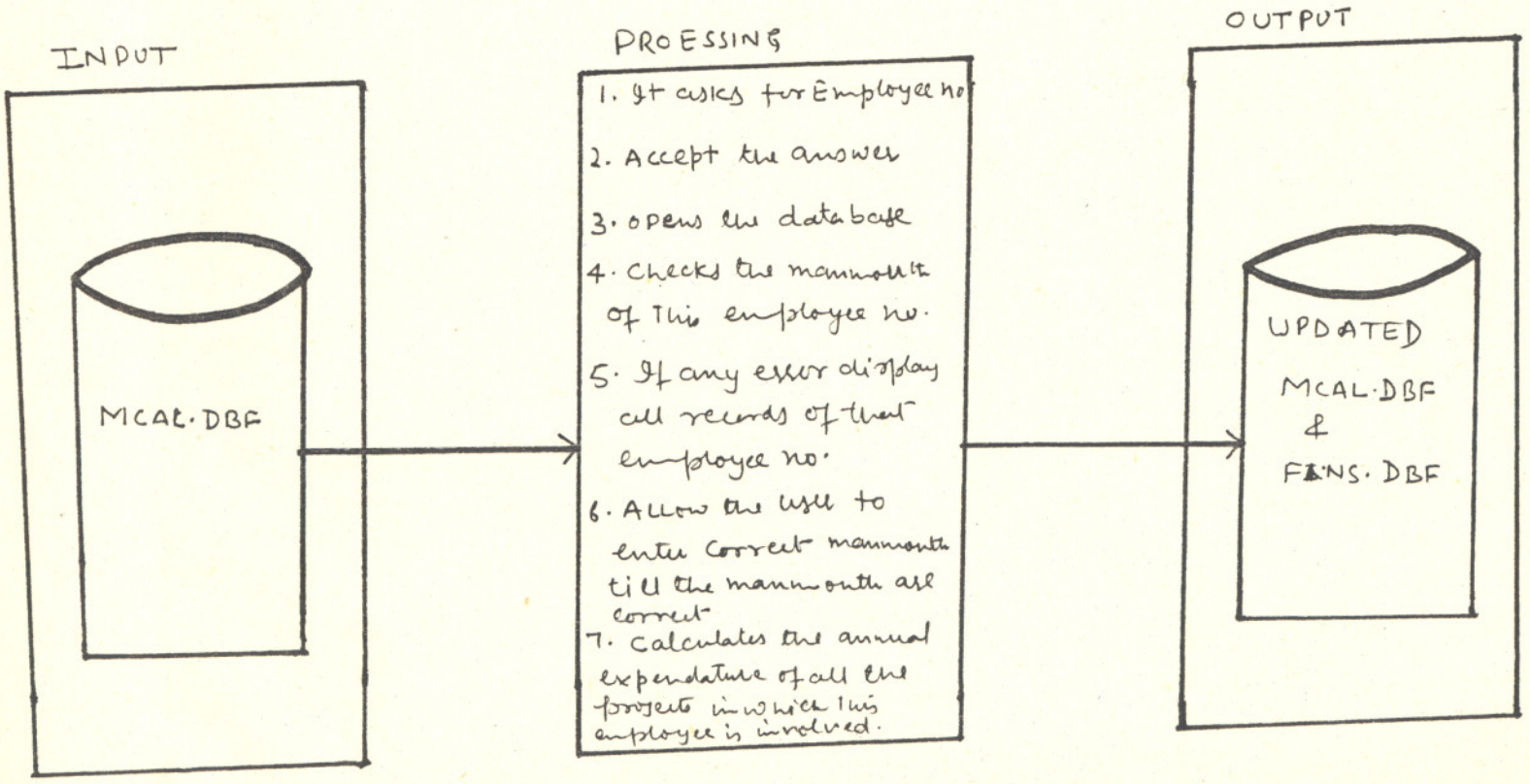
PROFORMA II



SYSTEM: CSIR 'PROJECT MANAGEMENT SYSTEM

PROGRAMA: 5.0

CHECKING OF MANMONTH



4.2 SYSTEM OPERATIONS:

How the system operates is described here in brief. As the system starts, the system will display the brief introduction to the system, then it ask for the password of six characters, if the given password is incorrect then it gives maximum of three tries after which it halts. If the password is correct main menu comes on the screen as shown in (fig.4.1). The main menu gives the choice of selecting all the main options of the system Various option of this are given below:

1. Data Entry : This option allows the user to enter data to all the items of the project.
2. Editing : If the entered data is incorrect this option allows the user to correct the data in the relevent items of the project.
3. Checking of manmonth : This option allows the user to check the total manmonth of a person in Manpower statement. If the manmonth are incorrect, then the screen displays and the user can correct the manmonth of that person.
4. Printing : This option print the report separately for all the items of the project.

Data entry:

This option is the 1st option of the "CSIR PROJECT MANAGEMENT SYSTEM MAIN MENU" when this option is selected fig (4.1) appears on the screen. Now with this menu user can enter the data in all the items of the project by selecting one by one option. After enter the data in all the items of the project, main CSIR Project Management System main menu again appears on thr screen.

Editing:

This option is the 2nd option of the " CSIR PROJECT MANAGEMENT SYSTEM MAIN MENU" when this option selected it displays the "Main Menu for editing as shown in fig (4.3) & (4.3.1) user can select any option from the menu for editing the data. When user selects any option from editing menu, system asks "PLEASE ENTER THE PROJECT NO". If the user enter the project No. which is not in the database system and displays "NOT FOUND", and again asks for the project No. If the Project No. entered is correct the system displays all the records corresponding to that project No. and allows the user to edit the data. When editing in this particular project is completed the system asks for the next project No. to be edited. If the user press enter or return the main editing menu appears.

Printing:

Printing Report is the 3rd option of the "PROJECT MANAGEMENT SYSTEM MAIN MENU" when the user selects this option, system displays the main menu for printing, "Project Management System" as shown in fig. 4.4 system allows for the user to select the

option for printing. If the user selects for printing item for a particular project, the system asks for the project No. When user enters the project No. and press enter or return system displays on the screen "Send to Printer (Y/N). If the user selects "Y" the selected report will be printed. If the user select "N" system displays the corresponding reports on the screen. And then asks user to press any key to continue. After this system again asks for next project No., if any to be reported. If the user press enter. The main printing menu appears again.

Checking of Manmonth:

Checking of manmonth is the 4th option of the "CSIR PROJECT MANAGEMENT SYSTEM MAIN MENU" when this option selected from the main menu, system asks "Please enter the employee No". If the user enter the wrong employee number, which is not present in the database the system displays on the screen "Not found". If the user enters the correct employee No. the system checks the manmonth of that employee, if there is any error the system will displays all the records of that employee No. for editing. This process goes on till the manmonth of that employee No. are correct. After that system will recalculate the salaries portion of the Financial Statement of all the projects in which this employee is involved and updates the Financial Statement data base. Again system will asks for the next employee No. to be checked whose manmonths have to be checked.

4.3 ENVIRONMENT:

4.3.1 Hardware Environment:

The configuration of the system used for the implementation of this package is as follows:

One IBM Compatible PC-AT with a hard disk capacity of 40 MB and a floppy disk drive, and an EPSON. FX-1000 Printer. The whole programming was done on the hard disks and regular backups were taken on floppy diskettes.

4.3.2 Software Environment:

The software package has been developed in dBase III Plus and has been implemented in a MS-DOS version 3.20 environment wordstar has been used as a editor for dBase III Plus. The choice was in accordance with the user request.

Some Features of DBase III Plus: Data base File:

Number of Records	- 1 billion Maximum
Number of bytes	- 2 billion Maximum
Record size	- 4 K bytes in d.b.f. file and 5 K byte in Prg. file.
Field	- 128 Maximum
Field size	
Character Size.	- 254 bytes Maximum.
Date field	- 8 bytes
Logical field	- 1 byte
Memo field	- 5 K bytes maximum or the capacity of the word process.
Numeric fields	- 19 bytes maximum.

File operation:

15 open files of all types

10 open database files. A database file counts as two files if memo fields are used.

7 open index files per active database file

One open format file per active database file

Numeric Accuracy:

15.9 digits. Note that the decimal point does not count as a digit in determining accuracy.

Accuracy in 13 digits when comparing non-zero numbers.

Memory Variables:

Number of active memory variables: 256 maximum

Number of bytes available for memory variables:6000 default

Command line:

Maximum length - 254 characters

Types of Files used in developing the system:

DATA BASE FILES: A database file store data in records and fields. Each record is intended to contain a set of unique information. The dBase III PLUS database files can hold upto one billion records. Each record can contain upto 4000 bytes, which must be contained within a maximum of 128 data files.

INDEX FILES: Index files provide the means to use the database in a logical order rather than the physical order.

Physical order is one in which the records are entered. Logical order is in the order base on the field type. Index file relate a key to a database. The key can be one or more files.

COMMAND & PROCEDURE FILES: Command files contains sets of dBase III instructions that have been stored as programmes. The as ASCII files & may be created with either MODIFY COMMAND or with any other word processing programme that creates ASCII text files.

4.3.3 OTHER ENVIRONMENT:

All the details of the development work done for the system will be given to a man who is famliar with programming and computer operation, so that in case of any modification he will be able to modify the system. An operater has been trained for entering data in to the system.

5. SUGGESTIONS AND RECOMMENDATIONS

****
* 5. SUGGESTIONS AND *
* RECOMMENDATIONS *
****

5.1 SUGGESTIONS AND RECOMMENDATIONS:

The present system is just a beginning of the computerisation of the planning process of the CSIR laboratories.

Further programmes have to be developed for cost accounting & monitoring of these projects. These programmes should be developed in dBase III Plus so that there will interaction between the present system with the new system developed.

CSIR Project Management System should be sent to the CSIR Head Quarters for futher testing and modifications so that it will be used in all the forty two laboratories.

```
PROJECT MANAGEMENT SYSTEM MAIN MENU                              19/04/89
********************************************************************************

            ************
            * MAIN MENU*
          **********************
          *  1. DATA ENTRY     *
          *                    *
          *  2. EDITING        *
          *                    *
          *  3. PRINTING       *
          *                    *
          *  4. CHECKING OF    *
          *     MANMONTH       *
          *                    *
          *  5. EXIT           *
          **********************

ENTER CHOICE(1-5) 5
```

```
DATA ENTRY PROJECT MANAGEMENT SYSTEM MAIN MENU                 19/04/89           1
*******************************************************************************

            ***********************
            * DATA ENTRY MAIN MENU*
        *********************************
        *      **RESEARCH PROJECT**     *
        *   1. PROFORMA 1A & PROFORMA 1B *
        *   2. AREA OF R&D              *
        *   3. BASIC RESEARCH           *
        *   4. APPLIED RESEARCH         *
        *   5. OTHER RESEARCH           *
        *      ************             *
        *   6. INFRASTUCTURE            *
        *   7. ENGINEERING SERVICES     *
        *   8. ADMINSTRATION,STORES ETC. *
        *   9. RETURN TO MAIN MENU      *
        *********************************


 ENTER CHOICE (1-9)  0
```

```
EDITING PROJECT MANAGEMENT SYSTEM MAIN MENU                 19/04/89
*****************************************************************************

                 *******************
                 * EDITING MAIN MENU*
            ******************************
            *  1.REAEARCH PROJECT        *
            *                            *
            *  2.INFRASTRUCTURE          *
            *                            *
            *  3.ENGG. SERVICES ETC.     *
            *                            *
            *  4.ADMINSTRATION,STORES ETC.*
            *                            *
            *  5.RETURN TO MAIN MENU     *
            ******************************


ENTER CHOICE (1-5)  0
```

```
  EDITING RESEARCH PROJECT MENU                                    19/04/89
*****************************************************************************

    ***RESEARCH PROJECT EDITING***
       1. PROFORMA 1A
       2. PROFORMA 1B
       3. BAR CHART
       ** CHARACTERISTICS OF THE PROJECT**
       4. AREA OF R & D
       5. BASIC RESEARCH
       6. APPLIED RESEARCH
       7. OTHER RESEARCH
       ********************
       8. INFORMATON ON THE REQUIREMENT OF ADDITIONAL MANPOWER
       9. TIMEFRAME
      10. LINKAGEES
      11. FINANCIAL COMMITMENT OF OTHER ORGANISATIONS/AGENCIES
      12. FINANCIAL STATEMENT
      13. MANPOWER STATEMENT DEPLOYMENT OF MANPOWER
      14. RETURN TO EDITING MAIN MENU
 ENTER CHOICE (1-14)  0
```

```
PROJECT MANAGEMENT SYSTEM REPORT PRINTING MAIN MENU        19/04/89
************************************************************************************

                  ******************
                  * REPORT PRINTING *
  ***********************************************************
  * 1.PROFORMA 1A                                            *
  * 2.PROFORMA 1B                                            *
  * 3.BAR CHART                                              *
  * 4.CHARACTERISTICS OF THE PROJECT                         *
  * 5.TIMEFRAME                                              *
  * 6.LINKAGEES                                              *
  * 7.FINANCIAL COMMITMENT OF THE OTHER ORGANISATION/AGENCIES*
  * 8.FINANCIAL STATEMENT & STATEMENT 3:                     *
  * 9.MANPOWER STATEMENT DEPLOYMENT OF MANPOWER              *
  *10.INFORMATION  ON THE REQUIREMENT OF ADDITIONAL MANPOWER *
  *11.INFRA STRUCTURE                                        *
  *12.ENGINEERING SERVICES                                   *
  *13.ADMINSTRATION,STORES ETC.                              *
  *14.RETURN TO EDITING MAIN MENU                            *
  ***********************************************************
ENTER CHOICE (1-14)  0
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SOIL TESTING REPORT

6. INTRODUCTION

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*                                    *
*  6    INTRODUCTION                 *
*                                    *
*                                    *
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6 INTRODUCTION

Indian economy is majorily dependant on agriculture since more than 80% of the population is living on agriculture for their livelyhood. To improve the productivity and prosperity of this sector,various national institutions like ICAR, putting their efforts. Scientist, technologists and politicians are working together to make this dream real. Still lot more to do to uplift this sector. Transfer of technology to agricultural community is a challenge to the technocrats. Farmers have reached to the level of accepting new technology now a days. We have to educate them properly. This is our task.

Among the various faculties in the agricultural sciences, Soil Science is the one that is having direct link with farmer and his land. At present there are about 400 soil test laboratories working all over the country to improve the productivity of the land. Still it is not enough because only a fraction of land mass is assed properly merely because of conventional methodology followed by these laboratories currently. Computerisation is one way of improving the efficiency of the laboratories by saving time and labour of the laboratory staff.

Soil analysis for agricultural purposes is time bound and the report should reach the farmers prior to the season of sowing or fertilizer application. The time lag between analysis and dispatch of report should be minimised. Use of agro-chemicals

like fertilizers etc., based on soil test reports will minimize the excessive use of these chemicals thereby reducing the cost of inputs as well as improving the soil health is quite possible.

7. ANALYSIS

****

* 7.1 PROBLEM DEFINITION *
* 7.1.1 INTRODUCTION TO PROBLEM *
* 7.1.2 OBJECTIVES *
* 7.2 EXISTING SYSTEM *
* 7.3 PROPOSED SYSTEM *
* 7.3.1 BENEFITS *

****

In this section the system is studied at its structural level. What actually the problem is and how the existing system works has been discussed here. On the basis of the existing system the new system is proposed. The new system is disigned to remove all the drawbacks of the present system.

7.1 PROBLEM DEFINITION

7.1.1 INTRODUCTION TO PROBLEM

Soil Testing for agricultural proposes is a routine work from season to season. After receiving soil samples (thousands of samples in a year) they should be analysed in time and the report alongwith recommendations should reach farmers within the prescribed time otherwise the whole efforts are mere waste. After analysis,lot of clerical job is involved in decision making for recommendations of various amendment materials. This exercise has to be performed by the concerned soil chemist only which consumes lot of time. This is one of the problem every laboratory facing .

7.1.2 OBJECTIVES

The purpose of this program is to save the valuable time and labour of soil chemists who are engaged in advisory soil testing particularly with reference to tea crop.

The information stored in the files can be utilised for statistical information at the end of the each year to prepare maps area wise or season wise etc.

After entering the soil test values,it should be possible to print recommendations along with the rating in a format manner so that it can be dispatched to the farmer in time.

7.2 EXISTING SYSTEM

Every laboratory in India currently using traditional method of soil testing report i.e pooling the soil test values referring standard information,then filling up of forms which is very time consuming process and it needs lot of labour.

If any system that solves the problem of filling up the forms,referring tables in decision making is a real help to the concerned department.

7.3 PROPOSED SYSTEM

Keeping in view of the obove problems this system has been designed to enhance the efficiency of soil chemists which inturn helping the farming community.

The configuration available for the purpose of running the system as specified by the user is:

1.PC/AT,with the hard disk capacity of 40 MB.

2.MS-DOS operating system version 3.20

3.dBase III plus for the purpose of programs to be developed.

This propsed system is quite helpful for the soil chemist in decision making.

7.3.1 BENEFITS OF THE PROPOSED SYSTEM

The benefits of the proposed system are:

1.Saves the time and labour of the soil chemists.

2.Minimises the printing and stationary charges.

3.Printed address enables the form to send by post to farmers in less time.

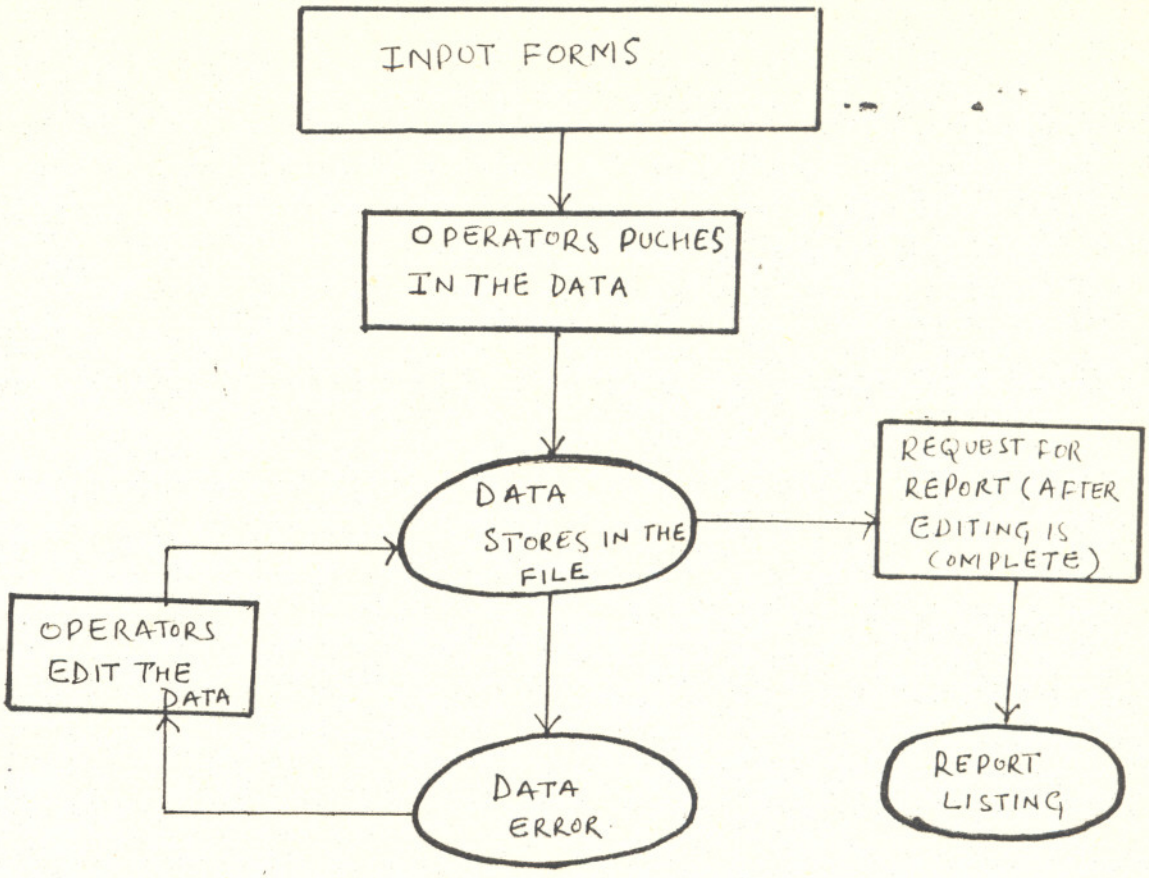
4.Errors in recommendations are minimised.

5.Data retrieval for future statistical needs or for preparing land area wise or season wise etc.,is quite easy.

6.Easy information storage facilitates quick references .

An overview of the system can be shown through a system diagram as given on the next page.

SYSTEM DIAGRAM



8. DESIGN

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* 8.1 INPUT FORMAT *
* *
* 8.2 OUTPUT FORMAT *
* *
****

In this section designed work done in soil test report is given to fully understand the system. Input format is given first, after this output format is given.

8.1 INPUT FORMAT

The input format shown on the next page will be filled by Scientific & Technical persons. Name of tea estate is the 20 character key field in this database.

SOIL TEST REPORT C.S.I.R.COMPLEX,PALAMPUR: DATA ENTRY FORM

SOIL TEST REPORT

NAME OF TEA ESTATE/PLANTER:

PLANTER NAME:

STREET NAME:

VILLAGE:

HOUSE NO:

DISTT.:

STATE:

PIN:

DATE OF SAMPLE RECEIPT: / /

DATE OF ANALYSIS: / /

PLOT NO/BLOCK NO:

DEPTH OF SAMPLING :

ANY OTHER INFORMATION:

AREA AC/HA:

ELEVATION MTR: .

REACTION(pH): .

E.C.(m.mhos/cm): .

ORGANIC MATTER(%): .

AVAILABLE NITROGEN(kg/ha): .

AVAILABLE P(ppm): .

AVAILABLE P2O5(ppm): .

AVAILABLE K(ppm): .

AVAILABLE K2O(ppm): .

Database: Tea.dbf

Field	Field Name	Type	Width	Dec
1	NAMET	Character	20	
2	NAMEP	Character	15	
3	STREETN	Character	10	
4	VILLAGE	Character	15	
5	HNO	Numeric	5	
6	DISTT	Character	15	
7	STAE	Character	20	
8	PIN	Numeric	7	
9	DATESR	Date	8	
10	DATESA	Date	8	
11	PLOTNO	Character	4	
12	DEPTH	Character	8	
13	AREA	Character	6	
14	EC	Numeric	5	2
15	ELEVATION	Numeric	7	2
16	REACTION	Numeric	5	2
17	ORGANICM	Numeric	6	2
18	AVAILN	Numeric	6	2
19	AVAILP	Numeric	6	2
20	AVAILP1	Numeric	6	2
21	AVAILK	Numeric	6	2
22	AVAILK1	Numeric	6	2
23	CAL	Numeric	7	2
24	MAG	Numeric	7	2
** Total **			209	

8.2 OUTPUT FORMAT

The output report which is generated for soil test report is explained below:

It includes the address of the concerned farmers, Area of Land, Plot No./Block No., Soil parameters, Depth of soil sample, values of analysis and rating viz. low, medium Analytical results is an option. It also includes Analysis date of the sample and the space for the signature and stamp of concerned incharge.

Output format for the soil test report given on the next page.

HATS DIVISION
C.S.I.R.COMPLEX,PALAMPUR

NAME OF TEA ESTATE / PLANTER: PAROR

TO
RAM LAL
ARTH
LAHLA
KANGRA
HIMACHAL PRADESH
176055

PLOT NO/BLOCK NO: 2/1
AREA: 10
DEPTH OF SAMPLING: 5

SOIL TEST REPORT

			RECOMMENDATION
SOIL REACTION (pH):	2.00	EXTREMELY ACIDIC	lime 2 ton/ha
E.C. (m.mhos/cm) :	2.00	INJURIOUS	consult scientist
ORGANIC MATTER (%):	1.00	LOW	FYM 5 ton/ha
AVAIL. N (Kg/Ha) :	3.00	LOW	NITROGEN 90 kg/ha
AVAIL. P (ppm) :	4.00	LOW	PHOSPHORUS 90 kg/ha
AVAIL. P (ppm):	2.2000	LOW	PHOSPHORUS 90 kg/ha
AVAIL. K (ppm) :	2.00	LOW	POTASH 90 kg/ha
AVAIL. K (ppm):	2.4900	LOW	POTASH 90 kg/ha

SAMPLE ANALYSED ON: 11/10/88

SIGNATURE

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9. SYSTEM OPERATIONS

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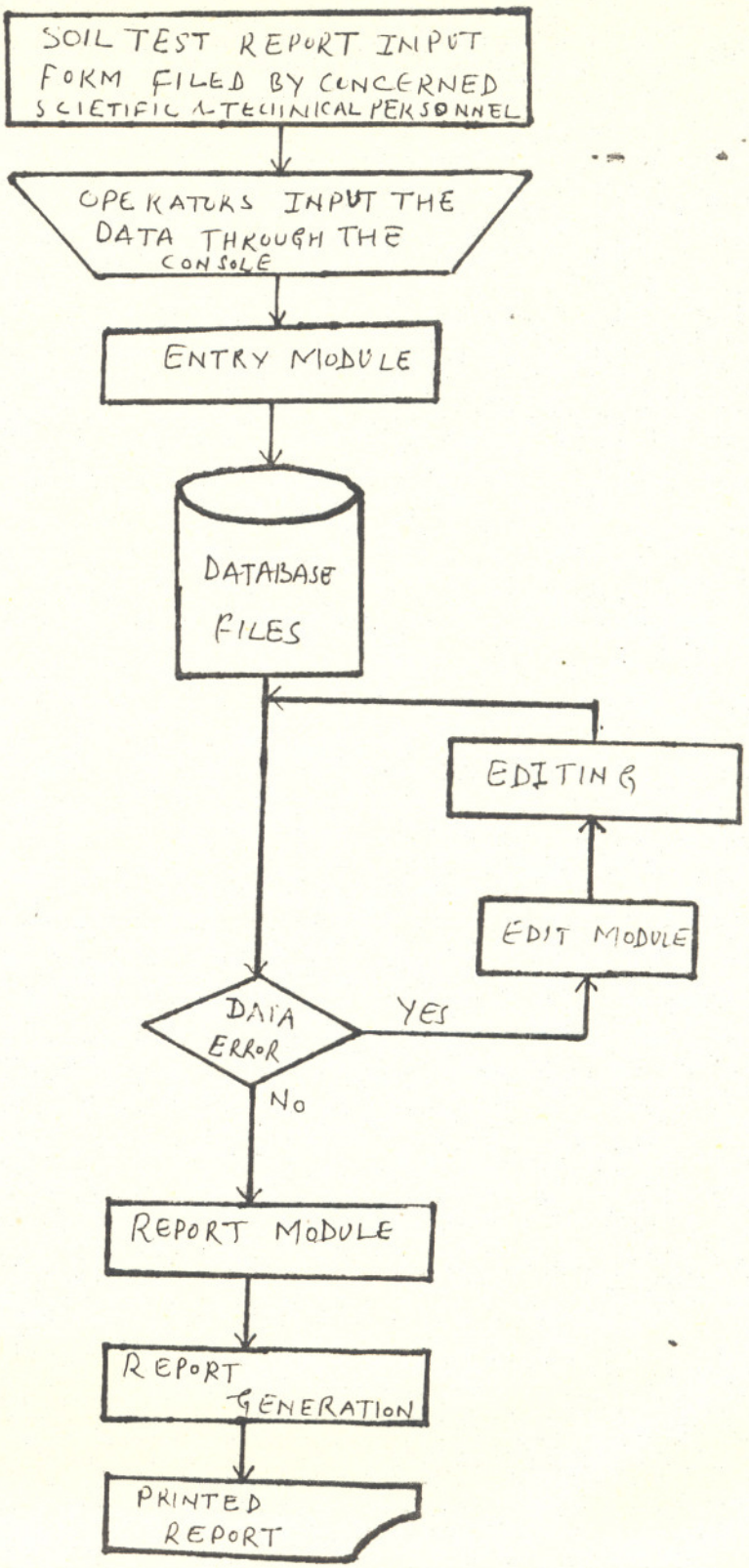
* 9. SYSTEM OPERATIONS *
****

SYSTEM FLOW CHART



Once the system has been designed in detail, the next thing is to turn the design into a working system and then to monitor the operation of the system to ensure that it continues to work efficiently and effectively. In this section the theoritical design work discussed in the previous section is shown to have been changed into a working system.

9 SYSTEM OPERATIONS:

How the system operates is described here in brief. As the system starts, the system will display the brief introduction to the system, then it ask for the password of six characters, if the given password is incorrect then it gives maximum of three tries after which it halts. If the password is correct main menu comes on the screen as shown in (fig.4.1). The main menu gives the choice of selecting all the main options of the system Various option of this are given below:

1. Data Entry : This option allows the user to enter data to the soil test report input form
2. Editing : If the entered data is incorrect this option allows the user to correct the data in the soil test report input form.
4. Printing : This option print the soil test report.

Data entry:

This option is the 1st option of the " SOIL TEST REPORT MAIN MENU" when this option is selected fig (8.1) appears on the screen. Now with this menu user can enter the data in soil test report input form after enter the data main soil test report menu appears on the screen

Editing:

This option is the 2nd option of the " SOIL TEST REPORT MAIN MENU" when this option selected the system asks "PLEASE ENTER THE NAME OF TEA ESTATE".if the user enter the name of tea estate which is not in the database ,system displays "NOT FOUND", and again asks for the name of tea estate. if the name entered is correct the system displays all the records corresponding to that name of tea estate and allows the user to edit the data. When editing in this particular tea estate is complete the system asks for the next tea estate name to be edited. If the user press enter or return the main menu appears.

Printing:

Printing Report is the 3rd option of the "SOIL TEST REPORT MAIN MENU" when the user selects this option,system asks for the name of tea estate. When user enters the name of tea estate &

press enter or return, system displays on the screen "Send to Printer (Y/N). If the user selects "Y" the soil test report will be printed. If the user select "N" system displays the report on the screen. And then asks user to press any key to continue After this system again asks for next name of tea estate,if any to be reported. If the user press enter. The main menu appears again.

SOIL TEST REPORT MAIN MENU 20/04/89 13

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**********
* MAIN MENU*
**********
*  1. DATA ENTRY  *
*                 *
*  2. EDITING     *
*                 *
*  3. PRINTING    *
*                 *
*  4. EXIT        *
**********
```

ENTER CHOICE(1-4) 4

10. SUGGESTIONS AND RECOMMENDATIONS

****
* 10. SUGGESTIONS AND *
* RECOMMENDATIONS *
****

10 SUGGESTIONS & RECOMMENDATIONS

This program is having wide range utility for soil test laboratories.Though at present computers are not used in most of soil testing laboratories,in future central & state Govt. may implement computerisation.

There is every need to improve this program to make it universal. To achieve this one has to study the soil recommedation in detail.