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Rev. 1

PROJECT DATA BANK

FOR THE OFFICE
OF ECONOMIC
DEVELOPMENT

BELMOPAN
BELIZE



PART I
BACKGROUND AND TERMS OF REFERENCE

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JOINT ECLAC/ILPES PLANNING UNIT FOR THE CARIBBEAN
REPORT OF MISSION TO THE OFFICE OF ECONOMIC
DEVELOPMENT FOR IMPLEMENTING A PROJECT DATA BANK WITHIN
THE TERMS OF REFERENCE OF THE PROJECT BZE/84/001:
SOCIO-ECONOMIC DEVELOPMENT PLANNING, AND UNDER THE
AUSPICES OF UNDP/SAN SALVADOR

I. Identification of the mission

The Mission was carried out in Belmopan, Belize from 16-21 February, 1987 at the Office for Economic Development. Its nature was to commence activities that would culminate in the establishment of a computerized Project Data Bank.

II. Immediate objective

The immediate objective was to acquaint the staff of the Office of Economic Development with the capabilities of the microcomputer, discuss the data elements needed in a database on project information, and introduce the software that would be appropriate to the accomplishment of the tasks of archiving, editing, retrieving and searching of the database.

III. Development of the mission

The Mission commenced on 16 February at the Office of Economic Development. I met with Mrs. Yvonne Hyde and discussed the mission in the context of the project activities. My next activity was to give an introduction to microcomputers to the staff. This I did by tracing the short history of microelectronics and later discussing some of the capabilities of the microcomputers. A subsequent session involved the staff members who are more directly concerned with the project monitoring exercises. At this session we discussed data banking in general and the needs of the Office in the area of data capture on proposed and on-going projects in particular. The need to have readily available data that would assist in the assessment of project performance and saturation of activity in any given area was readily appreciated. In the light of the discussions, we designed a file structure that would contain the required information. In order to increase the probability of complete and universal understanding of what was to be recorded, a set of definitions and explanatory notes on each of the items was prepared.

One of the tasks was to choose the software that would be appropriate for the job. We selected dBaseIII PLUS for its power and convertibility to spreadsheet format that would be able to afford easier analysis and graphic presentation in parts. The choice of software was also influenced by the desirability of incorporating tables generated by the database package into text as prepared on a word processing package.

The officers themselves, under my supervision, entered data into the file structure until a very small but useful exercise file was constructed. I then demonstrated what we had been discussing earlier in the week through several listings of selected data, searches, sorts, indexings and presentations of hard copy. We continued to look critically at the file, adding data elements in the light of the discussions, until we had identified the data set that would be able to yield the required information upon query.

As the file structure was evolving, it became clear that the data had not previously been captured so as to yield the information in a manner that would allow easy transfer to machine-readable form. I therefore designed a data capture form which was accepted and which will be used to capture the data for subsequent transfer to the data base. I believe that the data gathering exercise using this form has already begun and that in a relatively short time the office will be ready to input data to the computer.

IV. Names of persons consulted in Belize

Mrs. Yvonne Hyde - Chief, Office of Economic Development
Mr. Clarence Borland - Officer, Office of Economic Development
Mr. Orlando Puga - Officer, Office of Economic Development
Mr. John Briggs - Officer, Office of Economic Development
Mr. Leopold Perriot - Chief, Computer Centre

V. Follow-up action and recommendations to ECLAC/ILPES

a. On-going tasks

During the course of the exposition of the data management techniques, it became desirable for me to prepare a manual of procedures that would ensure the ability of the officers to work with the data in the absence of an advisor. I have begun this with a view to producing a simple and clear set of instructions, and should complete it in the early part of March. The manual is output-oriented and makes use of other software in addition to dBASEIII PLUS.

b. Expected tasks

More tutoring is needed in this area. This will be done in a subsequent phase of the project when the second week of training is held. It was previously agreed that the first mission could have been as long as three weeks in duration, but it was thought better to break after the first week, allow the data collection exercise to be done, and derive greater benefit from a second round of training a few weeks later. The estimate of the Office of Economic Development for completion of the data-gathering exercise was in the vicinity of one month. I would make myself available for the second part of the training which will involve the construction and searching of the data base.

Lancelot A. Busby
Economic Affairs Officer
(Statistics)

REPORT ON WORK DONE IN
MISSION OF 4-8 May 1987

PROJECT DATA BANK

On this leg of the mission we looked at the data collected on the form as designed in the first mission in February, and we made two alterations to the manual prepared. These were:

- We agreed to use the modified <1> International Standard Industrial Classification of all economic activities (ISIC) minus the Government sector classification to activity within which the project activity falls. A copy of this classification will be appended to the manual which was prepared by me, and which should still be considered to be a draft. The sector and subsector fields of the database will make use of this classification.
- We also agreed that the executing agency should be more defined to the Ministry with responsibility for the implementing of the project. The draft manual already has a list of the Ministries.

In one discussion of the reports that need to be generated, we identified two. They are

- (i) A dump of the entire contents of the database; and
- (ii) A selective printing of information from the database for a monthly reporting.

We agreed that the monthly report would contain the following information:

Project Name
Project Number
Sector
Subsector
Executing Agency
Financing Agency
Objective
Activities
Total Cost
Expenditure to Date
Duration
Starting Date
Ending Date
Status
Qualifying Comments
Reasons
Last Update

<1> Modified to suit the needs and circumstances of Belize.

In order to ensure that the staff of the Office of Economic Development would be able to operate the database, we spent some time manipulating the database via searches and listings, edits and browsings. We created the monthly report format and printed it as well as a dump of the database's contents, using the SIDEWAYS utility.

In printing the reports we had to use the translate utility of LOTUS 1-2-3. In order to feel certain that there was an appreciation of the capability of LOTUS 1-2-3, we spent some time looking at the rudiments of spreadsheet creation and manipulation, and performed analysis of some of the data elements in a manner that would effectively describe the information. We utilized the graphics capability to produce pie, line and bar charts. I made it clear that those sessions were merely a "quick fix", but that there was need for LOTUS 1-2-3 to be studied and practiced until proficiency in its use was attained. It is equally clear that practice with dBASE III is needed to ensure the acquisition of dexterity in the use of the software.

The Chief of the Computer Centre, Mr. Perriott, has begun to customize some screens that should make it easier to operate the database. He should find the time to finish these screens, and attempt a report generating procedure that would yield the same information that we have been able to yield through the use of LOTUS 1-2-3. I wish to state that this is not absolutely necessary, but it would make the database a bit more friendly.

I believe that from this stage the quality of the output would depend on the accuracy with which the data entry is made. The manual should be studied and used. Practice with the software will yield perhaps faster ways of doing things. Discovery should be encouraged and new routines, if found, should be discussed with the Chief of the Computer Centre before being implemented.

Lancelot A. Busby
Economic Affairs Officer
(Statistics)

PART II
METHODOLOGY FOR DATA ENTRY AND
QUERY OF THE PROJECT DATABASE FILE

PROJECT DATA BANK
for the
Office of Economic Development
Belmopan, BELIZE

Manual for the design and data entry
into a project database

1. What is a Database?

A database is essentially a set of information stored in one geographical location, in such a manner that it can be drawn on to answer queries or to inform decision-making. In order to maximize the utility of the database, there must be some order in the manner in which the entries are made. Databases are usually specific to some defined area of interest, and so lend themselves to structuring in some uniform manner, and in a manner that would facilitate grouping or disaggregating according to some hierarchical design. The database may contain character or numerical type data.

A computerized database differs from the stock of knowledge stored in the human brain in that it must be formally structured to be useful. This formal structuring becomes possible only after a clear idea of the purpose of the construction of the database is had. There is an old adage that "things are not always as they seem". Differences in interpretation are all too common. The meaning of each question or data bit in a database must be unequivocal to all persons. It is highly desirable that a manual that explains all the data requirements be prepared.

For any one item, there may be several bits of information that may be used to qualify it. Each of these bits should be able to be retrieved or sorted. Each bit must therefore be stored in a separate area or "Field". The set of fields that describes the variable or item being stored is called a record, and the set of records makes up the file or database.

One would note the use of the terms "Database" and "Data Bank". There is a very slight difference between the two, and that difference is use. The archived data are referred to as database. Its productive use makes it a data bank. Another example would be that of a large sum of money merely being stored in one location. That would be a "money base". If that money were being used in transactions, a more apt description would be a "bank".

In the present case, the problem or job at hand is to construct a database of on-going and proposed projects at various stages of implementation in Belize. The constructors of the database must decide what are the elements of information that must be tapped, and organize them in such a manner as to provide access to each element very directly. There are several major elements of information about project activity that must be stored in any database that addresses itself to the capture of such data. These elements are referred to and stored in "Fields".

2. Guidelines and suggestions for the establishment of fields

The project name identifier:

This field should contain the name of the project. It would be the field or information bit to which the other bits of information are linked. The formal name of the project appears on the project document.

The project number:

This is the number assigned by the funding agency.

Sector/subsector:

This refers to the branch of economic activity excluding the government and household sectors, that is the area directly affected by the project. Thus, although Government might be involved in construction through the Ministry of Works, any project being done by that Ministry involving construction will be put in the Construction sector. Apart from the clarification, the sector classification utilized is the Belize Industrial Classification which broadly follows the International Standard Industrial Classification of all economic activities (ISIC). Appended at Annex I is a listing of the Classification.

The executing agency is the agency responsible for the logistics involved in the management of the project. This agency must see to the provision of resources and logistical support necessary to the success of the project. For purposes of this exercise, record here the Ministry responsible for the project.

The financing agency, as the description implies, is the agency that provides the funds for the project.

Type of funding:

This would distinguish the funding as being a loan, a grant or partly a loan and a grant.

The development objective:

This should state what is the goal, the achievement of which would be the result of the project activities. It could be, for instance, the development of cultural and managerial capabilities among small farmers. If the project is aimed at achieving more than one development objective, the order of importance of these development objectives, in relation to the project, should be indicated.

The activities (or immediate objectives):

These outline the various actions that must be taken to bring about the achievement of the development objective. The designer should identify those activities which will be carried out by the project staff in order to produce the envisaged outputs. Each activity and its sub-activity should be identified.

The expected results:

These are also referred to as "outputs". The designer must identify and describe the outputs which must be produced by the project through its activities in order to achieve the immediate objectives. Technical or other reports to be produced should be identified here and not under the section that deals with the status of the project. The description should specify clearly the type and scope of the outputs expected.

Actual results:

These refer to a listing of the elements under the heading "the expected results" that have in fact taken place at the time of writing. This, compared with the development objective and the immediate objectives, can be used to measure the success or failure of the project.

Beneficiaries:

This relates to the group of persons or section of the community that will benefit directly from the project activities.

Total cost:

This would include the amount provided by the funding agency plus the national input in cash, plus a valuation of the national input in kind. The total cost figure should be in Belize dollars.

Agency input:

This should be the Belize dollar value of funding agency contribution.

Local input:

This should be the Government inputs in cash and in kind, in local currency.

Donor currency:

This refers to the currency in which the donor component is being given.

Rate of exchange:

This is needed to record the rate of exchange. It should be expressed in terms of the number of foreign monetary units required to purchase one unit of local currency at the date of signing of project document.

Duration of project:

Enter here the number of months that will elapse before the project comes to an end.

Starting date:

Enter the estimated (in cases where the project has not yet begun) or actual starting date in mm/dd/yy format.

Ending date:

Enter here the estimated date of completion of the project, in mm/dd/yy format.

Status of project:

This item seeks to report on the actual situation of the project. Progress can be classified in any of the following expressions.

- Idea
- Prefeasibility
- Feasibility
- Pre-investment
- Investment
- Operational
- Complete

Comments:

This is a statement in coded language, of progress on projects that actually began. This field would portray the following information in a field code named QUALIFY.

- Decile description of progress
- Completed before schedule
- Completed on schedule
- Completed after schedule
- Abandoned
- Extended
- Incomplete

Reasons:

This column seeks to explain aberrations from schedules. It would explain the strike (say) that caused a set-back in the achievement of the objective. Economy in the use of words is illustrated by the following examples that cover most of the reporting that would be needed for the item.

- Pending approval
- Insufficient funds
- Postponed
- No funds
- Being revised

It must be remembered that what is needed from the database is a succinct indication of the main features of the projects. Words must therefore be minimized in the interest of file space and ease of understanding.

Authority:

This refers to House Resolution. Put House Resolution number here.-----

Data of House Resolution:

Enter the date of the House Resolution in mm/dd/yy format.

File reference:

Each project is ultimately connected to a file. Enter the number of that file.

Date of last update:

Enter the date when the latest updating of the information on the particular record was made. For example, if on 18 February you went into the file and changed data for a particular project, before saving the data, you must change the date to read the 18 February 1987. This will be 02/18/87.

THE USE OF CODED LANGUAGE

What follows is a suggestion for the use of coded names to describe fields to be included in the record.

Natural language code	Coded name
Project name	PRONAME
Project number	PRONUM
Sector	SECTOR
Subsector	SUBSECTOR
Executing agency	EXECAGEN
Financing agency	FINAGEN
Type of funding	FUNDTYPE
Development objective	OBJECTIVE
Activities	ACTIVITIES
Expected results	EXPECTRES
Actual results	ACTUALRES
Beneficiaries	BENEFITWHO
Total cost	TOTALCOST
Agency input	AGINPUT
Local input	LOCINPUT
Donor currency	FOREIGN\$
Rate of exchange	XRATE
Duration of project	DURATION
Starting date	START
Ending date	FINISH
Status of project	STATUS
Comments on status	QUALIFY
Reasons	REASONS
Authority	AUTHRTY
Date of House Resolution	AUTHRDATE
File reference	FILEREF
Date of latest update	LASTUPDATE

The following is a list of descriptors and codes that describe the status (STATUS) of the project.

Descriptors	Codes
Idea	Idea
Pre-feasibility	Prefeas
Feasibility	Feas
Pre-investment	Pre-inv
Investment	Invest
Operational	Operational
Complete	Complete

The following is a list of descriptors and codes that describe the comments (QUALIFY) field.

Descriptors	Codes
Decile description of progress	<10%,...<100%, 100%
Completed before schedule	CBS
Completed on schedule	COS
Completed after schedule	CAS
Abandoned	Aband
Extended	Extnd
Incomplete	Incompl

Ministry codes:

The various Ministry names should be abbreviated in order to save column space. The following represents the abbreviations suggested:

Codes	Ministry
M/FIN DEF	- Ministry of Finance and Defence
M/HOAFF	- Ministry of Home Affairs
M/FOR ECDEV	- Ministry of Foreign Affairs and Economic Development
M/NATRES	- Ministry of Natural Resources
M/AGRIC	- Ministry of Agriculture
M/HEALTH	- Ministry of Health
M/WORKS HOUS	- Ministry of Works and Housing
M/EDUC CU YOSP	- Ministry of Education, Culture, Youth and Sports
M/COMM IND TO	- Ministry of Commerce, Industry and Tourism
M/ELEC CO TR	- Ministry of Electricity, Communication and Transport
M/LAB SOSERV	- Ministry of Labour and Social Services

File Structure:

Field name	Type	Width	DEC
PRONAME	Character	50	
PRONUM	Character	12	
SECTOR	Character	20	
SUBSECTOR	Character	20	
EXECAGEN	Character	12	
FINAGEN	Character	15	
FUNDTYPE	Character	12	
OBJECTIVE	Character	75	
ACTIVITIES	Character	75	
EXPECTRES	Character	75	
ACTUALRES	Character	75	
BENEFITWHO	Character	50	
TOTALCOST	Numeric	10	0
AGINPUT	Numeric	10	0
LOCINPUT	Numeric	10	0
FOREIGN\$	Character	10	
XRATE	Numeric	10	4
START	Date	8	
FINISH	Date	8	
STATUS	Character	12	
QUALIFY	Character	12	
REASONS	Character	30	
AUTHRTY	Character	8	
AUTHRDATE	Date	8	
FILEREF	Character	12	
LASTUPDATE	Date	8	

METHODOLOGY FOR DATA ENTRY AND QUERY
OF
THE PROJECT DATABASE FILE

1. Turn on computer. Get into dBASE III PLUS.
 2. Press (Escape) key. This brings up the dot prompt. You will see a dot.
 3. Type CREATE PROJDAT. (Projdat is the name of our database file).
 4. The screen will be ready for you to structure your file. Enter the various field names (as appear higher up in this document). e.g. PRONAME. Hit the (enter) key. The cursor goes to the second column. If you want to store words and symbols, type C. The cursor runs on to the third column. This asks how many characters would you assign to the column. Enter the number as per the field design. (Check the Field design for this number).
- * File Structure appears on pg. 8.
5. The cursor goes to a new line. Enter the second field name (PRONUM). Follow the steps as at (4) above.
 6. Continue to enter your field names. If the information to be stored is numeric, type N in the second column. The word "Numeric" will appear. Type in the maximum number of digits you wish to store in this column, and enter the number of decimal places, if any, you wish. If you wish none, hit (Enter) and move on to the next field. If the next field is a date, write the Field name (e.g. START) and press (Enter). When the cursor goes to the second column, type D (D = date). Immediately, eight (8) digits will be allocated to that field.
 7. When you have finished entering fields, type (Enter) or hit the (Return) key. A message appears, asking you to hit the (Return) key to confirm that you wish to end the file structure. Hit the (Enter) key.
 8. A message asks "Input data records now? (Y/N). If you say no (N) the computer will save the file structure and return to the dot prompt. If at this stage, you make a typographical error in the command being written in, this message appears:

*** Unrecognized command verb

and will probably add:

Do you want some help (Y/N).

<To get help on a specific command, type HELP followed by the command you need help with>.

e.g. HELP DISPLAY (Enter)>.

Hit Y and begin to enter data.

9. At the end of one record, another screen will pop up at you. Fill it with data, like above.
10. If you wish to stop entering data, when the screen for a new record comes up, hit (Enter).

The screen clears and the dot prompt appears. Your data have been saved in your file. To verify this, type LIST and hit (Enter). The dot prompt returns after the listing.

11. Type QUIT to quit dBASE.

TO ADD MORE RECORDS TO THE DATABASE

1. Get into dBASE and hit (Escape). You will see the dot prompt.
2. Type USE PROJDAT and (Enter). Another dot prompt appears.
3. Type APPEND and hit (Enter). The screen for a new record appears. You may now enter your next project data record. When you have finished your data entry, hit (Enter). This returns you to the dot prompt.

TO BROWSE THROUGH THE FILE

You may want to browse through the file.

1. Type browse (Enter). The file appears and you can use the up arrow (^) to browse from last to first record in the file. The down arrow will help you to browse down. The (Control) (right -> arrow) will help you to browse to the right and the (Control) (left <- arrow) will allow you to browse to the left.
2. When you have finished browsing, press (Control) (End). You are now back to your dot prompt.

TO SEARCH THE DATABASE

By now you are either in a file and at a dot command, or you can get there. At the dot prompt, you wish to search for a particular record with certain characteristics in common. Let us assume we want to look only at the projects in the Agriculture sector.

You can search by using either of two commands:

LIST FOR and LOCATE

Searching with LIST FOR:

1. At the dot prompt, type, LIST FOR (Fieldname) = "Agriculture" (Enter).
In our example, this would be,

```
LIST FOR SECTOR = "Agriculture " (Enter).
```

All the records with Agriculture being the sector of project activity will appear. Remember always to leave a space after Agriculture, before putting the final inverted commas.

You may wish to search for all the records that DO NOT involve the Agriculture sector. Type at the dot prompt,

```
LIST FOR SECTOR # "Agriculture " (Enter).
```

This will yield all the records of Projects in sectors other than the Agriculture sector.

*You can search on the basis of any Field name.

You may use LIST FOR to list selectively. Suppose you only want PRONAME, PRONUM and START in Agriculture projects only, you can type

```
LIST FOR SECTOR = "Agriculture " PRONAME, PRONUM, START (Enter).
```

You can vary the ordering of the Fields with this command.
For example:

```
LIST FOR SECTOR = "Agriculture " PRONUM, START, PRONAME (Enter),  
and see the result.
```

Searching with LOCATE:

At the dot prompt, type,

```
LOCATE FOR (Fieldname) = "Agriculture " (Enter).
```

The screen will say

```
<Record = 1 (say)>
```

Type

```
DISPLAY (Enter)
```

The screen will yield

```
Record # Field  Field  .... Field  
1      ...    ...      ...
```

We can type

```
CONTINUE (Enter) to continue the display, until there are no more  
records to be displayed in the search.
```

Let us assume that we want to look at all the projects that would be of benefit to Managers, regardless of what the nature of the project is and regardless of what sector the project addresses.

We can type

```
LOCATE FOR "MANAGERS " $BENEFITWHO (Enter).
```

Then type

```
DISPLAY (Enter).
```

We can combine search conditions as much as we wish. Supposing we wanted to locate records of projects that EITHER benefited Managers OR were executed by CDB, we would type:

```
LIST FOR "Managers " $BENEFITWHO. OR. "CDB " $EXECAGEN (Enter).
```

We will get a listing of all the projects executed by CDB, as well as all projects whose beneficiaries include Managers.

Sorting the DATABASE:

There are two commands to rearrange the data stored. They are:

```
SORT and INDEX
```

Sorting with SORT:

When we use the SORT command to sort files, dBASE requires us to create a new database to store the sorted records. Once the sorting is done, we can copy the sorted database back into the original file and overwrite it.

1. Open a file from the dot prompt by typing,

```
USE PROJDAT (Enter). This loads PROJDAT.
```

In order to sort on the basis of SECTOR, type

```
SORT ON SECTOR TO TEMP (Enter). TEMP is a temporary file.
```

The screen will show

```
<100% sorted >< Records sorted> Type:
```

```
.USE TEMP  
LIST (Enter)
```

(Sorted file appears).

Type

```
.COPY TO PROJDAT (Original file) (Enter).
```

The screen will say:

```
<PROJDAT.DBF already exists, overwrite it (Y/N)>
```

Answer

```
Y. The file is overwritten with the sorted file.
```

*Sorting with sort requires large amounts of disk space to play with, since at least twice the size of the original database must be available.

A sort can be performed on any field.

Sorting with INDEX:

The INDEX command is faster and more efficient in its sorting capabilities. The command grammar is similar to SORT, but the approach is different. The following is an example; using a file called INDEXFIL to do the indexing. The sort will arrange executing agencies in alphabetical order.

Type:

```
INDEX ON EXECAGEN TO INDEXFIL (Enter).  
LIST (Enter).
```

<Indexed file appears>. The sort is made, but the chronological order of entry is indicated by place numbering. The place numbers need not be in sequence. The file created, (INDEXFIL), is an index file (INDEXFIL.NDX). The index file contains only last names. The original file maintains its original record numbering, but through the intervention of the Index file, shows the sort.

The INDEX command allows you to add new records and change information on the database, then view the records in sorted order immediately, without re-sorting or going through the INDEX on procedure again. Optionally you can use the database with the existing index files, then use the REINDEX command to re-create the index files. The following routine illustrates:

```
.USE PROJDAT INDEX INDEXFIL, EXECAGEN (Enter).  
.REINDEX (Enter).
```

The REINDEX command restores or recreates the index file.

Editing and modifying the database:

To edit the database

1. Call up the file
.USE PROJDAT (Enter).
2. LIST FOR PRONAME = "(Put project name) " (Enter).
<Display of record appears>.
3. EDIT 6 (say) (Enter).
(6 above is the number of the record).

The operator should become familiar with the Edit keys.

After the edits have been made, ^End (or ^W) saves changes and returns to the dot prompt.

*There are several Edit keys. Consult your dBASE text and learn them.

EDITING WITH BROWSE

The BROWSE command may be used to edit the contents of the database. This command utilizes the same control keys that EDIT uses.

GLOBAL editing with

CHANGE and REPLACE

We may wish to make the same change to numerous records in the database. This is called "global editing". If for example, we wished to change XRATE for COUNTRY, we type;

.CHANGE FIELD XRATE FOR COUNTRY = "BELIZE " (Enter).

Test:

<The screen shows the field to be changed, allowing for stepping through the file>.

A quicker means of making the global change is through the use of the command "REPLACE".

For example:

.REPLACE ALL SECTOR with "Agriculture " for SECTOR = "Agric."
(Enter).

This command says "Anywhere you see "Agriculture" as the sector, replace it with "Agric."

To see the amendment, type

LIST

* Extreme care must be taken with this command, because if we exclude the condition (FOR SECTOR = "Agriculture "), every project will register "Agric." in the sector column. Clearly, that would not be what we would have wished.

DELETING from the database with

DELETE PACK and RECALL

The DELETE command is used to mark records for deletion, and the PACK command is used to permanently delete records.

If, after we have marked a record for deletion, we do not wish to go through with the deletion, we can recall it.

We type,

RECALL RECORD 9 (say) (Enter).

The PACK command copies the file PRODATA to a new file PRODATA while it deletes the record(s) to be deleted, then it erases the old PRODATA file.

PRINTING

There are two major types of printed report required.

1. A printout of the entire database, and
2. A formatted report which prints out exactly what the officer wants to print.

The following describes how printing is done in each of these cases.

CASE I - Entire database contents:

A printout of the entire database

At the end of your data input, the database will be saved on disk.

1. Copy the file PROJDAT.DBF to a formatted diskette in floppy drive A:

To do this, put the computer into DOS, put the formatted diskette in drive A:, and go into the dBASE III sub-directory.

2. Type COPY PROJDAT.DBF (Space) a: and hit (Enter). The file will be copied to drive A: (and the screen will tell you "1 file copied").
3. Put the computer into the lotus 1-2-3 sub-directory by typing:

cd (space) c:\lotus (Enter).

Then the screen will show

C>

Then type

lotus (Enter).

The introductory menu appears.

Put the cursor on "Translate".

The screen asks you

"What do you want to translate FROM?"

Move the cursor to dBASE III, and hit (Enter).

The screen asks

"What do you want to translate TO?"

Place the cursor to 1-2-3 2.01 and hit (Enter).

A note for you to read appears.

Hit (Escape) to continue.

A screen comes up saying:

```
Translate FROM: dBASE III      Translate TO:1-2-3 2.01
Source File: c:\LOTUS *.DBF [for example]
```

Follow screen instruction to change source file

Enter the name of the file you want to translate,

e.g.

A: PROJDAT.DBF and (Enter).

The name of the file appears highlighted.

e.g.

PROJDAT.DBF (If the file is on a diskette in drive A: the file name would be A: PROJdat.DBF) (Enter).

The screen will say

```
Translate FROM:dBASE III Translate TO:1-2-3 2.01
Source File:A:\PROJDAT.DBF
Destination:A:\PROJDAT.WKL. (Enter).
```

A verification asks:

"Proceed with translation"

[YES] No Quit

You want to proceed, so hit (Enter).

The translation process is started. At the end, the screen says:

```
-----  
Translation successful  
-----
```

*You have just translated a dBASE III file to a lotus 1-2-3 file. This will enable you to print the entire file using Sideways. You will not have to cut and paste.

Press (Escape) twice.

A screen asks you:

```
-----  
Do you want to leave Translate?  
No Yes  
-----
```

Use the right arrow to put the cursor on Yes and press (Enter).

You are now back out in the 1-2-3 menu. Put the cursor on (Exit) using the right arrow then hit (Enter).

You are now back out into the Main Lotus Menu.

Type

SW123

The Sideways screen comes up.

Press (Enter) to begin:

A lotus worksheet screen comes up.

Press

/ then letter "O" (for options).

This brings up an options screen. Using the right arrow, put the cursor on Character and (Enter) or (press C) to modify the character set. This brings up a screen with the word Font highlighted. Hit (Enter).

Decrease is then highlighted. Hit (Enter) to vary the size of the type until you get the size you want, and then move the cursor to QUIT. Hit (Enter). If you wish to increase the font size, put the highlight on Increase and hit (Enter) until you obtain the required size.

Hit

Q

A new screen appears.

Hit

F then R

Then indicate the name of the file. In this case it will be

A:PROJDAT.WK1

The worksheet will come up on the screen.

Hit

/

A new screen comes up with R highlighted. (Enter).

A highlighted range appears.

Hit (Enter) and a new screen appears.

Move the cursor to Go, or simply hit (G). This starts the printing.

At the end of printing, hit (Q).

CASE 11 - printing formatted reports in dBASEIII Plus

On occasion, special formatted reports will be needed. We can use the dBASE III PLUS built-in report generator:

The report form:

Whenever we create a report format, we must give it a file name so that dBASE can easily find it later. The names used for report forms can be as many as eight characters in length (no spaces, no punctuation marks allowed).

From the dot prompt, type

```
.USE PROJDAT (Enter)
.MODIFY REPORT REPORT1 (Enter)
```

The report options screen comes up.

Answer the prompts. With the highlight bar on "Page title", Hit (Enter). A wide highlighted response area appears. Type in the page title and hit Enter. The response area disappears. Move the cursor down by hitting the down arrow. Hit (Enter) if you want to change any of the options. When you have finished answering all the questions on that first screen, hit the right arrow to go to Groups. If you want no group or sub-group totals, hit the right arrow again to go to contents. The Contents line is highlighted. Hit (Enter). A pointer appears. Hit (F10) to see what choices of field names you have open to you. Move around in those choices with the down arrow. After selecting a field name, hit (Enter) to transfer it to the format and (Enter) again to move on. Use the down arrow to move to "Heading". Type (Enter) and what heading you would like to put to your column in the report. After you have done so, hit (Pg Dn) once or twice to clear the response area for another column designation. The cursor is again on CONTENTS. Hit (Enter). A pointer appears. Hit (F10) to see your choice. Choose another field with the down arrow and hit (Enter) twice. Move the cursor to the highlight and hit (Enter) to bring up the response area for the Heading. Type in a heading and hit (Pg Dn) twice. Continue until you have designed the entire report. Hit the right arrow to move to LOCATE. This tells you which fields were selected as columns in the report. Move the right arrow to Exit in order to save the file on disk. With the highlight bar on SAVE, hit (Enter). The screen goes blank and the dot prompt appears.

To VIEW THE DATA ON THE FORMATTED REPORT, type:

REPORT FORM REPORT1 (one) Enter)

The formatted report appears on the screen.

TO PRINT THE FORMATTED REPORT, type

REPORT FORM REPORT1 TO PRINT (Enter)

In preparing a text report which incorporates data from the PRODATA file, you can import into the text, the file REPORT1. Having imported it to the desired place in the text, you may continue to write the textual report.

INDUSTRIAL CLASSIFICATION

SECTION 1

CODE

AGRICULTURE, FORESTRY, HUNTING AND FISHING

Agriculture, livestock - production	001 - 032
Agricultural services	041 - 049
Hunting, trapping and game propagation	051 - 052
Forestry and logging	061 - 069
Fishing	071 - 072

MINING, REFINING AND QUARRYING

101 - 129

MANUFACTURING

Food	201 - 212
Beverages	217 - 229
Tobacco manufacturing	231 - 232
Textile and wearing apparel manufacture	241 - 249
Tanneries and leather products (excluding footwear)	251 - 259
Manufacture of footwear	261
Manufactures of wood and cork except manufacture of furniture	271 - 279
Manufacture of furniture and fixtures (excluding metal furniture)	281 - 289
Manufacture of paper and paper products	291 - 299
Printing, publishing and allied industries	301 - 309
Manufacture of rubber products	311 - 319
Manufacture of chemicals and chemical products	321 - 339
Manufacture of products of petroleum and coal (except refining)	341
Non-metal mineral products	351 - 369
Manufacture of metal products (except machinery and transport equipment)	371 - 379
Manufacture and repair of machinery and transport equipment	381 - 389
Miscellaneous manufacturing industries and repairs	391 - 405

ELECTRICITY, GAS, WATER AND SANITARY SERVICES

411 - 414

CONSTRUCTION AND INSTALLATION

511 - 519

COMMERCE - WHOLESALE AND RETAIL

Wholesale	611 - 619
Retail trade general stores	621 - 629

	CODE
TRANSPORT, STORAGE AND COMMUNICATION	
Transport	631 - 639
Services incidental to transport	641 - 649
Storage and warehousing	651
Communication	661 - 663
FINANCING, INSURANCE AND REAL ESTATE	731 - 739
GOVERNMENT	811 - 819
COMMUNITY SERVICES	
Education	821 - 826
Medical and other health services	827 - 829
Non-profit institutions (serving households)	831 - 839
OTHER SERVICES (INCLUDING PERSONAL)	
Business and research services	841 - 849
Recreational services	851 - 859
Hotels, restaurants and clubs	861 - 865
Personal services (i.e. services generally involving the care of the person or his apparel)	871 - 879
MISCELLANEOUS SERVICES	881 - 889
N.E.C. NOT ADEQUATELY CLASSIFIED	990
NOT STATED	998
NO INDUSTRY, NOT APPLICABLE, NONE	999

1980 POPULATION CENSUS
INDUSTRIAL CLASSIFICATION
SECTION 11

	CODE
AGRICULTURE, FORESTRY, HUNTING AND FISHING	
Sugarcane growing	001
Rice growing	002
Banana and plantain growing	003
Tobacco growing	004
Ginger growing	005
Irish potato growing	006
Sweet potato growing	007
Corn growing	008
Soya bean growing	009
Other field and root crop growing n.e.c.	010
Coffee growing	011
Cocoa growing	012
Citrus growing	013
Coconut growing	014
Cotton growing	015
Sisal growing	016
Nutmeg growing	017
Pimento growing	018
Pineapple growing	019
Melon growing	020
Hot pepper growing	021
Other tree crop growing n.e.c.	022
Egg production	023
Poultry production n.e.c.	024
Dairy farming	025
Cattle rearing	026
Pig rearing	027
Horse and mule breeding	028
Other livestock n.e.c. (sheep, goats)	029
Horticulture	030
Mixed farming	031
Other agriculture n.e.c.	032
AGRICULTURAL SERVICES	
Operating land drainage and irrigation schemes	041
Husking and threshing of agricultural products	042
Agriculture service organizations	043
Other agricultural services n.e.c.	049
HUNTING, TRAPPING AND GAME PROPAGATION	
Hunting and trapping	051
Turtle rearing	052

	CODE
FORESTRY AND LOGGING	
Planting and conservation of forests	061
Gathering of uncultivated materials, e.g., balata, gums and resins, sapodilla gum, wild rubber, etc.	062
Charcoal burning	063
Timber cutting and logging	064
Firewood cutting	065
Other forest activities n.e.c.	069
FISHING	
Trawler fishing	071
Other fishing n.e.c.	072
MINING, REFINING AND QUARRYING	
Pitch mining	101
Oil, crude petroleum and natural gas production	102
Bauxite mining	111
Stone quarrying	112
Sand quarrying	113
Gypsum quarrying	114
Gold mining	115
Diamond mining	116
Other quarrying	117
Alumina production	110
Ore mining, processing n.e.c.	119
Petroleum refining	121
Asphalt roofing and paving materials production	122
Petroleum by-products n.e.c.	129
MANUFACTURING	
FOOD	
Slaughtering, preparing and processing of meat	201
Manufacture of dairy products	202
Canning and preserving of fruits, vegetables and their juices	203
Canning, preserving and processing of fish and other sea foods	204
Manufacture of vegetable and animal oils and fats	205
Rice milling, wheat milling	206
Coffee processing	207
Processing and milling of other crops	208
Manufacture of bakery products	209
Manufacture of sugar, molasses	210
Manufacture of cocoa products and chocolate confectionery	211
Manufacture of sugar confectionery	212

	CODE
BEVERAGES	
Distilling, blending and bottling of rum	217
Blending and bottling of other spirits	218
Wines, cordials and liqueurs manufacture	219
Beer and stout manufacture	220
Carbonated beverages manufacture	221
Manufacture of other beverages (including cane juice and other local drinks)	229
TOBACCO MANUFACTURING	
Manufacture of cigarettes	231
Manufacture of cigars and pipe tobacco	232
TEXTILE AND WEARING APPAREL MANUFACTURING (EXCLUDING SHOES)	
Spinning and weaving (cloth and yarn)	241
Finishing of cloth n.e.c. (including printing and dyeing)	242
Manufacture by knitting of cloth garments	243
Manufacture by cutting and sewing of wearing apparel except shoes	244
Manufacture of straw materials and goods (goods of coir, sisal, rope)	245
Tailoring and dressmaking	246
Manufacture of textile and textile goods n.e.c.	249
TANNERIES AND LEATHER PRODUCTS (EXCLUDING FOOTWEAR)	
Tanning	251
Leather bags and accessories	252
Other leather products	259
MANUFACTURE OF FOOTWEAR	
Manufacture and repair of footwear (including footwear of leather, canvas, plastic)	261
MANUFACTURES OF WOOD AND CORK EXCEPT MANUFACTURE OF FURNITURE	
Sawmilling and wood processing	271
Prefabricated buildings	272
Wooden boxes, cases and crates	273
Wooden barrels, casks and coopering	274
Cork and cork products	275
Other wooden and wood products n.e.c.	279

	CODE
MANUFACTURE OF FURNITURE AND FIXTURES (EXCLUDING METAL FURNITURE)	
Manufacture of wooden furniture	281
Manufacture of wooden fixtures (e.g. windows and doors)	282
Upholstering	283
Manufacture of mattresses	284
Other manufacture of furniture and fixtures n.e.c. (e.g. of cane furniture)	289
MANUFACTURE OF PAPER AND PAPER PRODUCTS	
Toilet and wrapping paper	291
paper bags and envelopes	292
Containers and boxes of paper	293
Other paper products (e.g. drinking straws)	299
PRINTING, PUBLISHING AND ALLIED INDUSTRIES	
Newspaper publishing (daily and weekly)	301
Magazines (fortnightly, monthly, quarterly, etc.)	302
Job printing	303
Sign painting	304
Other printing, publishing and allied industries	309
MANUFACTURE OF RUBBER PRODUCTS	
Rubber mats and belting	311
Rubber heels	312
Rubber clothing and accessories	313
Tyres	314
Tyre retreading and vulcanizing	315
Other rubber and rubber products	319
MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS	
Dyes, bleaches and inks	321
Plastic and plastic resins	322
Carbon dioxide and dry ice	323
Acids, alkalis and salts n.e.c.	324
Oxygen and acetylene	325
Fertilizers	326
Manufacture of disinfectants and room deodorants	327
Manufacture of paints, varnishes and lacquer	328
Manufacture of toilet preparations (including perfume)	329
Manufacture of pharmaceutical products (drugs and medicines)	330
Manufacture of soap and soap products	331
Manufacture of foam rubber	332
Manufacture of plastic goods	333
Manufacture of other chemical products n.e.c. (e.g. glue and insecticide)	339
Manufacture of products of petroleum and coal (except refining)	341

	CODE
NON-METALLIC MINERAL PRODUCTS	
Cement	351
Premixed mortar	352
Structural concrete products (including concrete pipes and blocks)	353
Bricks, tiles and pipes of clay	354
Pottery, ceramics and china ware	355
Manufacture of gypsum products	356
Manufacture of mica films and blocks	357
Alabaster working	358
Manufacture of glass and glass products	359
Marble working (including tombstones)	360
Lime kiln burning (white lime)	361
Other non-metallic mineral products n.e.c.	369
MANUFACTURE OF METAL PRODUCTS (EXCEPT MACHINERY AND TRANSPORT EQUIPMENT)	
Metal furniture	371
Aluminum ware (including guttering and kitchen utensils)	372
Metal awnings	373
Structural parts of metal (including gates, grillwork, doors and windows)	374
Manufacture of galvanized products	375
Manufacture of hand tools	376
Manufacture of other metal products and works n.e.c.	379
MANUFACTURE OF MACHINERY AND TRANSPORT EQUIPMENT	
Manufacture of industrial machinery, parts and repairs	381
Manufacture of agricultural machinery, parts and repairs	382
Manufacture of electrical machinery, parts and repairs	383
Manufacture of bicycles and parts	384
Manufacture of repair of railway equipment and parts	385
Manufacture of motor vehicles and motor cycles and parts	386
Manufacture and repair of aeroplanes and aircraft parts	387
Ship building and repairing (including boat building)	388
Other manufacture of machinery and transport equipment n.e.c.	389
MISCELLANEOUS MANUFACTURING INDUSTRIES AND REPAIRS	
Manufacture and repair of professional, scientific, measuring and controlling instruments	391
Manufacture of photographic and optical goods	392
Manufacture of watches and clocks	393
Fabrication of precious and semi-precious stones and metals into jewellery and other products	394
Manufacture of musical instruments	395
Manufacture and repair of medical and dental instruments	396
Manufacture and assembly of batteries	397
Manufacture of neon signs	398
Manufacture of brushes and brooms	399

	CODE
Miscellaneous manufactures (zippers, buttons, brake-lining, rubber stamps, crown corks, etc.	401
Manufacture of radio, television sets and records	402
Manufacture and repair of refrigerators	403
Manufacture of electrical appliances n.e.c.	404
Miscellaneous manufacturing industries n.e.c.	405
 ELECTRICITY, GAS AND WATER	
Electric light and power	411
Gas manufacture and distribution	412
Water	413
Sanitation services (garbage and sewerage disposal)	414
 CONSTRUCTION AND INSTALLATION	
Construction and maintenance - house and buildings	511
Construction and maintenance - roads, bridges, water mains reclamation works, etc.	512
Electrical engineering (including air conditioning installation)	513
Painting	514
Demolition - buildings, etc.	515
Other construction and installation n.e.c. (including dredging)	519
 COMMERCE - WHOLESALE AND RETAIL	
Wholesale	
Food and drink wholesale merchants	611
Chemical and drugs wholesale merchants	612
Textile apparel, leather wholesale merchants	613
Scrap metal dealers	614
Exporters of agricultural products (agricultural produce dealers and bulk buyers)	615
Fuel wholesale merchants	616
Other wholesale trade n.e.c.	619
 Retail Trade	
Meat and agricultural produce stores	621
General food and beverage stores	622
Building materials, hardware, furniture, household appliances	623
Clothing, boots, shoes, books and stationery and similar dry goods (including department stores)	624
Drug stores	625
Motor vehicles	626
Petroleum and gas fuel	627
Other retail activities (flower shops, etc.)	629

	CODE
TRANSPORT, STORAGE AND COMMUNICATION	
Transport	
Railway transport	631
Bus operations	632
Taxi cabs and car rental	633
Other road transport (including lorries, trucks)	634
Ocean transport	635
Inland and coastal water transport	636
Air transport	637
Other transport n.e.c.	639
Services Incidental to Transport	
Travel and steamship agencies	641
Operation of docks, piers, wharves and warehouses	642
Supporting service to land transport (including car rental and parking, toll roads and bridges)	643
Supporting services to air transport	644
Other services n.e.c.	649
Storage and Warehousing	
Cold storage (offered as independent service)	651
Communication	
Post and telegraph services	661
Telephone services	662
Cable and wireless	663
FINANCING, INSURANCE, REAL ESTATE	
Banking institutions	731
Life and Mutual Insurance	732
General Insurance	733
Real estate agents	734
Real estate developers	735
Building societies	736
Other long-term financing	737
Short-term financing (including hire purchasing)	738
Financial establishments n.e.c.)	739
GOVERNMENT	
Armed forces	811
Central administration	812
Legal and judiciary	813
Police and prison	814
Fire services	815
Foreign governments (including diplomatic missions)	816
International organizations	817

	CODE
Sanitary and public health services	818
Other government services n.e.c.	819
COMMUNITY SERVICES	
Education	
Primary schools	821
Secondary schools	822
Technical, vocational and commercial schools	823
Universities	824
Research and scientific institutions	825
Other educational services n.e.c. (driving schools)	826
Medical and other Health Services	
Government medical institutions	827
Private medical institutions	828
Other medical, dental, health and veterinary services	829
Non-profit Institutions (Serving Households)	
Religious institutions and organizations	831
Welfare institutions (Red Cross, Y.M.C.A., Orphanages, Day Nurseries)	832
Trade Associations, Political Parties, Professional and Labour Organizations	833
Civil, Social and Fraternal Associations, (Friendly Societies)	834
Other institutions not operating to realize profits (Health, Education, etc.)	839
OTHER SERVICES (INCLUDING PERSONAL)	
Business and Research Services	
Data processing services	841
Advertising services	842
Legal services - (non-government)	843
Accounting, auditing and book-keeping services	844
Surveyors and architects	845
Engineering and technical services	846
Shipping pilots	847
Machinery and equipment rental or leasing	848
Other business and professional services n.e.c.	849
Recreational Services	
Motion picture production	851
Libraries, museums, botanical and zoological gardens	852
Cinemas and theatres	853
Orchestras, own account musicians and musical entertainment, entertainment services n.e.c.	854

	CODE
Horse racing	855
Radio and television broadcasting	856
Member clubs and recreational associations	857
Betting services (including lotteries)	858
Amusement and recreational services n.e.c. (e.g. boxing fairs, circus and sail boats rental)	859
 Hotels, Restaurants and Clubs	
Hotels, guest houses and other lodging places (including camps)	861
Restaurants and lounges	862
Night clubs	863
Bars and taverns	864
Snack counters and cold supper shops	865
 Personal Services (i.e. services generally involving the care of the person or his apparel)	
Domestic services (i.e. services in private houses, e.g. cooks, maids, gardeners, etc.)	871
Laundries and dry cleaning	872
Barbers and beauticians	873
Massaging and bodybuilding services, gymnasias	874
Portrait and commercial photography	875
Undertakers, embalmers and cremators	876
Personal services n.e.c.	879
 MISCELLANEOUS SERVICES	
Pest control	881
Security services and private detective agencies	882
Other services n.e.c. (watch repair, musical instrument repair, battery charging, repair of machinery and transport equipment, repair of air conditioner)	889
Not adequately classified	990
Not stated	998
No industry, Not applicable, None	999

