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A DEMOGRAPHIC PROJECTION MODEL FOR MICROCOMPUTERS

IBM PC and Apple II Version

Prepared for
Agency for International Development

by

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TABLE OF CONTENTS

| | |
|---|-----|
| INTRODUCTION | iii |
| SECTION I: GETTING STARTED | 1 |
| Chapter 1. Starting the Demographic Projection Model | 2 |
| SECTION II: CREATING A COUNTRY DATA BASE | 5 |
| Chapter 2. Performing the Initial Steps in Data Entry | 6 |
| Chapter 3. Entering Data with the Full-Screen Editor | 9 |
| Chapter 4. Using the Specific Data Entry Screens | 12 |
| SECTION III: CREATING AND EXAMINING A PROJECTION | 18 |
| Chapter 5. Creating a Demographic Projection | 19 |
| Chapter 6. Examining or Saving a Projection | 21 |
| Chapter 7. Examining the Total Population | 23 |
| Chapter 8. Examining the Population by Five-Year Age Groups | 24 |
| Chapter 9. Examining the Population by Single-Year Age Groups | 25 |
| Chapter 10. Examining the Population Age Distribution | 29 |
| Chapter 11. Examining the Inputs to the Projection | 31 |
| Chapter 12. Revising the Inputs to the Projection | 34 |
| SECTION IV: SAVING PROJECTIONS | 35 |
| Chapter 13. Saving Projections in a Disk File | 36 |
| Chapter 14. Saving Projections in a RAPID Disk File | 37 |
| Chapter 15. Ending the Display Session | 40 |

INTRODUCTION

The Demographic Projection Model is a full-featured demographic projection program. It is designed to permit easy manipulation and analysis of demographic data by any user with an understanding of basic demographic principles and the operation of a microcomputer, regardless of programming background. There are two versions of the model. One version runs on the IBM PC and compatible machines including the IBM XT, the PCjr and COMPAQ. A second version runs on the Apple II, II+, IIe and IIc microcomputers.

If operated according to the procedures described in this manual, the program will allow the user to:

1. Input, examine, modify and store the demographic assumptions of fertility, mortality and migration.
2. Calculate, store and display 50-year projections of total population, births, deaths, etc.
3. Create population files that are compatible with other microcomputer models such as:
 - The RAPID* Presentation Model, which displays the effects of population factors on social and economic development
 - The RAPID Target Model, which calculates the number of contraceptive users and the public resources required to achieve a specified target fertility level
 - The Family Planning Costing Model, which permits a quick calculation of the cost of a family planning program to achieve a target fertility level (used instead of the Target Model when detailed data are scarce)
 - Education and Demographic Simulation Model (EDSIM), a demographically driven simulation and presentation model for education policymakers and planners.
 - The Food Model, which examines the relationship between food and population in the African setting.

*RAPID (Resources for the Awareness of Population Impact on Development) is part of the program of the U.S. Agency for International Development to assist developing countries to understand the nature and magnitude of problems confronting them in their efforts to improve the quality of life of their people.

The program has been developed by The Futures Group under several contracts for the U.S. Agency for International Development. Requests for copies of the program or more information about the use of the program may be directed to:

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- 1 -

SECTION I: GETTING STARTED

CHAPTER 1. STARTING THE DEMOGRAPHIC PROJECTION MODEL

The Demographic Projection Model is designed to load and execute automatically. In order to use it, follow the steps listed below:

1. Place the disk titled RAPID Demographic Analysis System into the disk drive. If you have more than one disk drive you should place the disk in the master drive. This is drive A (the left-hand drive) on the IBM PC and drive 1 on the Apple.
2. Turn on the computer.

The computer will automatically load the program into its memory. The first time you run the program, the IBM version will ask you to specify the location of the program disk and the data disk. This allows you to use the program on a normal IBM PC with two floppy disk drives (program disk drive = A , data disk drive = B), an IBM XT (program and data drives may both be the hard disk (or D)), and on an IBM PCjr (both program and data disks are A, or program disk is A and data disk is B).

You will then be presented with a list of choices representing the models that are part of the Demographic Analysis System. Choose the first model, the Demographic Projection Model, by pressing the 1 key. The first screen of the Demographic Projection Model will then be displayed. You will be requested to select one of the following options:

WOULD YOU LIKE TO:

- (1) CREATE A COUNTRY DATA BASE
- (2) CREATE OR EXAMINE A DEMOGRAPHIC PROJECTION
- (3) END

ENTER 1 TO 3

You must enter a number from 1 to 3 to indicate your choice. The appropriate program will then be loaded. Option (1), the creation of a country data base, is described in Section II of this manual. Option (2) is described in Sections III and IV.

The list of choices shown above is called a menu. While using the Demographic Projection Model you will be presented with various menus. Each of these will present a list of choices. You choose one of the alternatives by pressing the number or letter key displayed in brackets just before each choice. If you press a key that does not correspond to one of the choices the computer will ignore that key press and wait for you to make a valid choice.

In most cases you can respond to questions or prompts appearing on the screen by pressing a single key. However, some questions require you to enter information requiring several key strokes. For example, the question:

WHAT YEAR DO YOU WANT TO EXAMINE?

requires you to respond with a number such as 1985. Whenever your response involves more than one key stroke you must signal the end of your response by pressing the key marked RETURN.

Some of the displays look somewhat different depending on the computer you are using. On the IBM, the function keys are used to access many of the special functions of the program. The keys will be displayed at the bottom of the screen when they are used. The F10 key is the QUIT key. It can be used to end the current activity and return to the previous menu. The F9 key is the PRINT key. It can be used to send information to the printer. The F1 key is the HELP key. It causes additional instructions to be displayed on the screen. Other keys are used for special function in certain parts of the program.

The Apple microcomputer does not have function keys. Therefore the displays on the Apple contain extra menu choices in some cases and display extra questions such as "Do you want to send the report to a printer?"

All of the programs in the Demographic Projection Model are contained on one disk. This is called the **PROGRAM DISK**. As you enter information required for the projections (base year population figures, fertility, mortality, etc.) you will

be saving these inputs in disk files on the **DATA DISK**. You may also be saving projections on disk. The projection files may be saved on a separate **PROJECTIONS DISK** or on the **DATA DISK**. The program will prompt you when to switch disks if necessary. Any initialized disk can be used as a **DATA DISK** or **PROJECTIONS DISK**. To initialize a blank disk on the Apple place the **SYSTEM MASTER** disk in the disk drive and turn the computer on. When the computer is ready, put your new disk in the drive and type:

INIT HELLO

This procedure will destroy any data on the disk so be sure the disk is blank before performing this operation. On the IBM you should place your DOS master disk in drive A and turn on the machine. Place a new disk in drive B and type

format b:

Then press any key to start the formatting.

SECTION II: CREATING A COUNTRY DATA BASE

CHAPTER 2. PERFORMING THE INITIAL STEPS IN DATA ENTRY

The option (1) CREATE A COUNTRY DATA BASE from the initial program menu enables you to enter all the demographic data and assumptions for the base year and for all years thereafter. The data base for a country must be created prior to running any demographic projections.

Each time a new country data base is being created, you will be asked the following questions:

ARE THE DATA IN THOUSANDS? (Y) OR (N)

Normally it is a good idea to have the data in thousands. That means that you can enter a number like 1244 to indicate 1,244,000. To use this option press Y.

If the population of the country is smaller than a million you may not wish to enter data in the thousands. In this case respond by pressing N.

The next prompt will ask you to:

ENTER THE BASE YEAR:

This is generally the most recent year for which you have good data. You will later be asked to enter demographic information for this year. The projection will start with this information and project into the future. Respond to this prompt by typing in the base year (e.g., 1980) and pressing the RETURN key.

The next question will be:

WILL THE DATA ENTERED BE:

- 1 POINT RATES (I.E. 1985)
2. PERIOD RATES (I.E. 1985-1990)

You have the option of using either method. Point rates mean that a given number, such as a life expectancy, will refer to a particular year. For example, "The life expectancy in the year 1985 is expected to be 60." Period rates mean that the numbers are averages for a five-year period. For example, "The average life expectancy for the period 1985 to 1990 is expected to be 60." Indicate your choice by pressing either 1 or 2.

You may then enter data for any of the following demographic categories by depressing the corresponding letter:

EDITOR'S MAIN OPTION TABLE

WHAT DO YOU WANT TO ENTER NOW:

- (P) POPULATION IN THE BASE YEAR
- (F) TOTAL FERTILITY RATE
- (A) AGE DISTRIBUTION OF FERTILITY
- (L) LIFE EXPECTANCY AND MORTALITY
- (M) MIGRATION

OR DO YOU WANT TO

- (Q) QUIT

Once the category is selected, you must indicate whether the data to be entered are new (never been saved on a data disk) or have already been entered and stored on a data disk.* This is indicated by responding to the following question:

DO YOU WISH TO:

- (E) ENTER NEW DATA
- (R) REVISE DATA ALREADY ENTERED
- (Q) QUIT

*When options (L) LIFE EXPECTANCY AND MORTALITY and (M) MIGRATION are selected, the program will prompt the user for additional inputs prior to this question. These inputs will be discussed in later sections.

Option (E) ENTER NEW DATA will cause the program to proceed directly to the data entry table. If option (R) is selected you will be instructed to enter the file name under which the data are stored*:

PLEASE ENTER THE FILE NAME UNDER WHICH THE DATA ARE STORED:

You must enter the file name and press RETURN. When the following message appears:

MAKE SURE THE DISK CONTAINING THE DATA FILES IS IN THE DISK DRIVE AND PRESS RETURN

place the disk containing the data files into the disk drive and press RETURN. (This message only appears on the Apple version.) The program will then display the following message on the screen:

READING FILE. . .

The program will proceed to the data entry table if the file is read correctly. If the incorrect disk was placed into the disk drive, however, an error message will appear and you will be asked to enter the file name again.

*After the file name has been specified, all future references to data files will display the current file name. That name may be automatically selected by pressing the RETURN key when this question appears. The user may, however, change the file name by entering a new file name and pressing the RETURN key.

CHAPTER 3. ENTERING DATA WITH THE FULL-SCREEN EDITOR

The Demographic Projection Model contains a full-screen data editor for the easy entry and editing of base year data and projection assumptions. This editor will display data entry tables for each category of data required (e.g., base year population, fertility rates, etc.). These specific tables are described in the next chapter. This chapter describes the general procedures for using the full-screen editor.

The editor begins by displaying the following message:

PREPARING TABLE. . .

Once this message disappears and the data entry table appears, you are requested to do one of the following:

COMMAND:

(E) EDIT

(I) INTERPOLATE

(R) REPLICATE

(Q) QUIT

Your response is accepted after the appropriate key has been pressed. (These responses are displayed as special function keys on the bottom of the screen in the IBM version.)

(E) EDIT. The program will automatically place the cursor (the solid white or green block) beside the first cell on the data entry table (Row A, Column A). The following menu will appear at the top of the screen.

EDITOR: CURSOR CONTROL:

(RETURN) TO ENTER NUMBER

(@) or (DEL) TO BACKSPACE

(Q) TO QUIT

The cursor can be moved to the desired entry cell by using the up, down, left and right arrows, on the Apple IIe or IBM. On the Apple II, which does not have up or down arrows, the (;) is the up arrow key and the (/) is the down arrow key. Data can then be entered into the cell by typing in the number. Pressing the RETURN will enter the typed value into the cell. If a wrong number is inadvertently typed prior to pressing the RETURN key, you can backspace to the previous number by pressing the DELETE key on the Apple IIe or the '@' sign on the Apple II or the backspace key on the IBM.

Each data entry table has a certain size field into which the data can be entered. For example, the largest number that can be entered for 'the percentage distribution of fertility by age' is 99.9. If you try to enter more digits than are allowed, the extra digits will not be accepted by the program.

To correct a number that has already been entered simply move the cursor to that number and enter a new number.

After typing a number at a particular location, it is entered into the cell by pressing RETURN. Pressing the up, down, or left arrow keys will also enter the number and move the cursor in the appropriate direction.

Many of the tables have a TOTAL row. This row is automatically updated as you enter numbers. It cannot be edited directly since it simply reports the totals of the numbers already entered.

To end the editing session press 'Q'.

(I) INTERPOLATE. This option directs the program to calculate values for cells to fill in between two rows or columns of numbers. For example, if data are entered for 1980 and 1990, the interpolation procedure will calculate the 1985 value through linear interpolation. You must first indicate whether the interpolation is to be done between columns or rows by pressing R or C when the following prompt appears:

INTERPOLATE (C) COLUMNS COMMAND

(R) ROWS

(Q) QUIT

Pressing 'Q' causes the program to return to the previous prompt.

The beginning and ending columns/rows must then be specified:

ENTER LETTER OF FIRST COLUMN/ROW

ENTER LETTER OF SECOND COLUMN/ROW

If, for example, Columns A and C were specified as the first and second columns and their respective values were 1 and 2, the program would place the value 1.5 into Column B. This procedure is especially useful when you want to enter base year figures and target year figures, 1980 and 2000 for example. Interpolation can be used to fill in values for 1985, 1990 and 1995.

(R) REPLICATE. The replicate function enables you to replicate the value of one cell to another cell, or other cells. It operates in exactly the same way as the interpolate function, except that the first column/row value will be replicated through to the second column/row. If, for example, Rows A and C were specified as the first and second rows and the value of Row A was 1, the program would place value 1 into Rows B and C.

(Q) QUIT. This option completes the data entry routine. At this point the data should be saved on disk if they are to be used later. You are requested to enter a name for the disk file:

PLEASE ENTER THE FILE NAME UNDER WHICH THE DATA ARE STORED:

PRESS (RETURN) TO USE CURRENT NAME

ENTER (QUIT) IF YOU DO NOT WANT TO SAVE THESE DATA

If a file name has been specified previously, it will be displayed. Pressing RETURN will cause that name to be used. A new file name may be entered by typing in the new file name and pressing the RETURN. (You can bypass saving the new data by typing 'QUIT' and pressing RETURN.)

CHAPTER 4. USING THE SPECIFIC DATA ENTRY SCREENS

The format of the screen displayed by the editor is slightly different for each type of data. This chapter describes the specific formats and questions associated with each. These screens are chosen from the main option table shown in Chapter 2 and reproduced below.

WHAT DO YOU WANT TO ENTER NOW:

- (P) POPULATION IN THE BASE YEAR
- (F) TOTAL FERTILITY RATE
- (A) AGE DISTRIBUTION OF FERTILITY
- (L) LIFE EXPECTANCY AND MORTALITY
- (M) MIGRATION

OR DO YOU WANT TO

- (Q) QUIT

(P) POPULATION IN THE BASE YEAR

| BASE YEAR POPULATION | | | |
|----------------------|------|--------|-----|
| AGE | MALE | FEMALE | ROW |
| TOTAL | 0 | 0 | |
| 0- 4 | 0 | 0 | A |
| 5- 9 | 0 | 0 | B |
| 10-14 | 0 | 0 | C |
| 15-19 | 0 | 0 | D |
| 20-24 | 0 | 0 | E |
| 25-29 | 0 | 0 | F |
| 30-34 | 0 | 0 | G |
| 35-39 | 0 | 0 | H |
| 40-44 | 0 | 0 | I |
| 45-49 | 0 | 0 | J |
| 50-54 | 0 | 0 | K |
| 55-59 | 0 | 0 | L |
| 60-64 | 0 | 0 | M |
| 65-69 | 0 | 0 | N |
| 70-74 | 0 | 0 | O |
| 75+ | 0 | 0 | P |

This table, as all the others, does not permit data entry into the TOTAL row. The row is automatically updated when a value is entered or changed in any of the other cells. The title 'BASE YEAR POPULATION' will be 'BASE YEAR POPULATION (THOUSANDS)' if the data for each cell are to be entered as thousands.

(F) TOTAL FERTILITY RATE

Before this table appears, you will be requested to enter the male/female sex ratio at birth (i.e., the number of male births per female births):

MALE/FEMALE BIRTH RATIO: 1.02

The RETURN key must be pressed to enter this value.

| TOTAL FERTILITY RATE | | | | | | | | | | | | |
|----------------------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | |
| TFR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | ROW A |
| COLUMN | A | B | C | D | E | F | G | H | I | J | K | |

Values for this table cannot exceed 9.9.

(A) AGE DISTRIBUTION OF FERTILITY

| AGE-SPECIFIC FERTILITY RATES (%) | | | | | | | | | | | |
|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| AGE | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
| TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 15-19 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 20-24 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 25-29 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 30-34 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 35-39 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 40-44 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 45-49 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

The model requires that a percentage distribution of age-specific fertility be entered. Yearly columns should total to 100.0.

(L) LIFE EXPECTANCY AND MORTALITY

In order to project the population into the future, the model requires age-specific mortality rates. These rates specify the number of people in a given age group that will die during the next five-year period. The age-specific mortality rates may be entered directly or you may enter life expectancy at birth and direct the program to calculate the age specific mortality rates from a model life table.

When option (L) is selected, the user must first specify which of the following is to be entered:

- (L) LIFE EXPECTANCY
- (A) AGE-SPECIFIC MORTALITY RATES
- OR
- (C) CALCULATE AGE-SPECIFIC MORTALITY RATES USING GIVEN LIFE EXPECTANCIES AND MODEL LIFE TABLES
- OR
- (Q) QUIT

Options (L) LIFE EXPECTANCY and (A) AGE-SPECIFIC MORTALITY RATES prompt the user to enter the sex for which the data are to be entered:

DO YOU WANT TO ENTER DATA FOR:

- (M) MALES
- (F) FEMALES
- OR
- (Q) QUIT

Option (L) LIFE EXPECTANCY.

| | | MALE/FEMALE LIFE EXPECTANCY | | | | | | | | | | | |
|--------|--|-----------------------------|------|------|------|------|------|------|------|------|------|------|-----|
| | | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | |
| LE | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | ROW |
| COLUMN | | A | B | C | D | E | F | G | H | I | J | K | A |

Values for this table cannot exceed 75.

Option (A) AGE-SPECIFIC MORTALITY RATES.

| MALE/FEMALE MORTALITY RATES (PER 10,000) | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|-----|
| AGE BIRTH | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | ROW |
| 0- 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | A |
| 5- 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | B |
| 10-14 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | C |
| 15-19 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | D |
| 20-24 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | E |
| 25-29 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | F |
| 30-34 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | G |
| 35-39 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | H |
| 40-44 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | I |
| 45-49 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | J |
| 50-54 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | K |
| 55-59 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | L |
| 60-64 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | M |
| 65-69 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | N |
| 70-74 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | O |
| COLUMN | A | B | C | D | E | F | G | H | I | J | K | P |

Values for this table are entered in terms of the number of deaths for every 10,000 members of an age group. The value for any cell cannot exceed 9,999.

Option (C) CALCULATE AGE SPECIFIC MORTALITY RATES USING GIVEN LIFE EXPECTANCIES AND MODEL LIFE TABLES. Life expectancy must already be entered before this option is chosen. A data entry table for this selection will not appear, instead the program will read the appropriate model life table and calculate the results for each sex for each year. You will be required to select the appropriate model life table.

WHICH LIFE TABLE DO YOU WANT TO USE:

- (N) COALE-DEMENY NORTH
- (E) COALE-DEMENY EAST
- (S) COALE-DEMENY SOUTH
- (W) COALE-DEMENY WEST

ENTER (Q) TO QUIT

When the calculations are complete, you will have the option to either save the calculated rates or return to the main option menu.

DO YOU WANT TO:

- (S) SAVE THESE RATES
- (Q) QUIT

(M) MIGRATION

Option (M) MIGRATION first prompts you to enter the sex for which the data are to be entered:

DO YOU WANT TO ENTER DATA FOR:

- (M) MALES
- (F) FEMALES

OR

- (Q) QUIT

You may then enter the values for migration:

NET MALE/FEMALE IMMIGRANTS

| AGE | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 | ROW |
|--------|------|------|------|------|------|------|------|------|------|------|------|-----|
| TOTAL | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | A |
| 0- 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | B |
| 5- 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | C |
| 10-14 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | D |
| 15-19 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | E |
| 20-24 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | F |
| 25-29 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | G |
| 30-34 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | H |
| 35-39 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | I |
| 40-44 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | J |
| 45-49 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | K |
| 50-54 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | L |
| 55-59 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | M |
| 60-64 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | N |
| 65-69 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | O |
| 70-74 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | P |
| 75+ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | Q |
| COLUMN | A | B | C | D | E | F | G | H | I | J | K | |

The title 'NET MALE/FEMALE IMMIGRANTS' will be the 'NET MALE/FEMALE IMMIGRANTS (THOUSANDS)' if the data for each cell are to be entered as thousands. A minus sign (-) must be used to indicate emigration. The model

requires that the average number of migrants over the five-year period be entered when period rates are used (the program multiplies the cell by 5). Even when net migration is assumed to be 0, a migration file must be created for the demographic projection to run in the Apple version. On the IBM version it does not need to be created if there is no migration.

(Q) QUIT

This option will terminate the data base program and return you to the main option program.

SECTION III: CREATING AND EXAMINING A PROJECTION

CHAPTER 5. CREATING A DEMOGRAPHIC PROJECTION

The option (2) CREATE OR EXAMINE A DEMOGRAPHIC PROJECTION from the initial program menu enables you to create a demographic projection based on the data entered in the country data base. (It also allows you to examine or save a demographic projection that has previously been created. These functions are discussed in Chapters 6-14.) The program prompts you with the following question to determine which of the above is to be done:

DO YOU WANT TO:

- (1) CREATE A NEW PROJECTION
- (2) EXAMINE OR SAVE A PROJECTION
THAT HAS ALREADY BEEN CREATED

Select the first option by pressing 1. You will then be requested to enter a file name for the projection to be created.

ENTER THE NAME OF THE PROJECTION
BEING CREATED:

Type the name you wish to attach to the projection and press RETURN. Once the name has been entered, you will be instructed to place the disk containing the data files into the disk drive and to press the RETURN key:

PLACE THE DISK CONTAINING THE DATA FILES
INTO THE DISK DRIVE AND PRESS RETURN

(If you have a two-drive IBM system, this prompt will not appear.)

The program will then prompt for the names of the input files. The first prompt will be:

PLEASE ENTER THE NAME OF THE
BASE POPULATION FILE TO BE LOADED:

You should enter the name under which the base year population figures were saved and press RETURN.

The program will issue prompts for the other files as well. The current file name will be displayed on the screen. You can use that name simply by pressing RETURN. Alternatively, you can enter a different file name and press RETURN.

The fact that the program prompts you for each file name enables you to run several similar projections with a minimum of extra work. For example, if you wish to run two projections with the same input data except for fertility you need create only 2 separate fertility files and 1 set of mortality and migration files. You do not have to create 2 separate files for mortality or migration.

When all the file names are entered the program will calculate the projection. While calculating it displays the message:

CALCULATING PROJECTION...

When the projection is complete the program goes directly to the display menu. This menu is discussed in the next chapter. One of the options on this menu is the chance to SAVE THE PROJECTION IN A DISK FILE. You should choose this option first since some of the display routines require a projection file to already exist. (See Chapter 13, Saving Projections in a Disk File.)

CHAPTER 6. EXAMINING OR SAVING A PROJECTION

Once a projection has been prepared it can be displayed in several ways. This chapter describes the general procedure to use these display routines. Specific information is given in Chapters 7-14.

Choosing the second option from the menu:

DO YOU WANT TO:

- (1) CREATE A NEW PROJECTION
- (2) EXAMINE A PROJECTION THAT HAS
ALREADY BEEN CREATED

is one way to enter the display program. This program will first prompt you to put the disk with the projection file into the disk drive. (On the IBM you will not have to switch disks.)

**PLACE THE DATA DISK CONTAINING THE PROJECTION
FILE IN THE DISK DRIVE AND PRESS RETURN**

Once you have placed the disk in the drive, press the RETURN key. Then you will see the request:

**PLEASE ENTER THE NAME OF THE
POPULATION PROJECTION FILE TO BE LOADED:**

You should type the name under which the projection file was saved and press RETURN. The following message will appear:

LOADING PROJECTION...

Next you will be prompted to put the disk containing the data files into the disk drive. This may be the same disk that contains the projection files. You will be asked to enter the name of each of the input files. The current file name will be displayed on the screen and can be selected by simply pressing RETURN. The program needs to read these files so that it can display the assumption as well as the projections themselves.

Once the files are read you will be presented with the main display menu.

The second way to enter the display program is from the projection routine. If you have just made a projection you will be presented with the main display menu.

You may choose any of the following options by depressing the corresponding number:

WHAT DO YOU WANT TO DO NOW:

- (1) EXAMINE THE TOTAL POPULATION
 - (2) EXAMINE THE POPULATION BY 5-YEAR AGE GROUPS
 - (3) EXAMINE THE POPULATION BY SINGLE-YEAR AGE GROUPS
 - (4) EXAMINE THE POPULATION AGE DISTRIBUTION FOR ALL YEARS
 - (5) EXAMINE THE INPUTS TO THE PROJECTION
 - (6) REVISE THE INPUTS TO THE PROJECTION
-
- (7) SAVE THE PROJECTION IN A DISK FILE
 - (8) SAVE THE PROJECTION IN A RAPID DISK FILE
 - (9) QUIT

Options (1) through (5) require you to indicate whether the outputs are to be displayed on a printer:

DO YOU WANT TO USE THE PRINTER?

Respond by pressing 'Y' for yes or 'N' for no. On the IBM, this question will not appear. Instead you can print a table by pressing the PRINT key (F9) after the table has been displayed on the screen.

The specific instructions for using each of these display options are given in the next eight chapters. Each chapter corresponds to one of the choices from this display menu.

CHAPTER 7. EXAMINING THE TOTAL POPULATION

Choosing option 1, (1) EXAMINE THE TOTAL POPULATION, from the main display menu will allow you to display the total population on the screen or a printer.

Output from this option is as follows:

| TOTAL POPULATION | | | |
|------------------|-----------|-----------|-----------|
| YEAR | MALES | FEMALES | TOTAL |
| 1980 | 44000000 | 42000000 | 86000000 |
| 1985 | 49181053 | 47541767 | 96722820 |
| 1990 | 54431147 | 53170571 | 107601719 |
| 1995 | 59800786 | 58941118 | 118741904 |
| 2000 | 65354833 | 64954491 | 130309324 |
| 2005 | 71460435 | 71644534 | 143104970 |
| 2010 | 78460451 | 79393556 | 157854008 |
| 2015 | 86219331 | 87941979 | 174161311 |
| 2020 | 94415666 | 96816001 | 191231667 |
| 2025 | 102846314 | 105808838 | 208655152 |
| 2030 | 111430673 | 114838915 | 226269587 |

Once you are finished examining this display on the screen press RETURN to return to the main display menu.

CHAPTER 8. EXAMINING THE POPULATION BY FIVE-YEAR AGE GROUPS

Choosing option 2, (2) EXAMINE THE POPULATION BY FIVE-YEAR AGE GROUPS, from the main display menu will allow you to examine the age distribution of the population for a particular year. The output may be on the screen or a printer.

You are required to first specify the year to be examined:

WHAT YEAR DO YOU WANT TO EXAMINE?:

Type the year to be examined and press RETURN. Once the year is entered, the program will display the following output:

| AGE DISTRIBUTION | | | | |
|------------------|---------|------|---------|------|
| 2010 | MALES | | FEMALES | |
| AGE | NUMBER | % | NUMBER | % |
| 0- 4 | 9772182 | 12.5 | 9908024 | 12.5 |
| 5- 9 | 8612454 | 11 | 8744561 | 11 |
| 10-14 | 7860097 | 10 | 7970044 | 10 |
| 15-19 | 7503536 | 9.6 | 7627671 | 9.6 |
| 20-24 | 7195050 | 9.2 | 7366472 | 9.3 |
| 25-29 | 6847203 | 8.7 | 7070390 | 8.9 |
| 30-34 | 4719710 | 6 | 4350884 | 5.5 |
| 35-39 | 4456925 | 5.7 | 4123107 | 5.2 |
| 40-44 | 4120680 | 5.3 | 3848669 | 4.8 |
| 45-49 | 3762405 | 4.8 | 3561042 | 4.5 |
| 50-54 | 3378710 | 4.3 | 3262299 | 4.1 |
| 55-59 | 2950222 | 3.8 | 2945417 | 3.7 |
| 60-64 | 2470777 | 3.1 | 2596007 | 3.3 |
| 65-69 | 1950207 | 2.5 | 2192625 | 2.8 |
| 70-74 | 1403161 | 1.8 | 1713579 | 2.2 |
| 75-79 | 1457126 | 1.9 | 2112758 | 2.7 |

Once you have finished examining the display, press RETURN to return to the main menu.

CHAPTER 9. EXAMINING THE POPULATION BY SINGLE-YEAR AGE GROUPS

Choosing option 3, (3) EXAMINE THE POPULATION BY SINGLE-YEAR AGE GROUPS, allows you to examine the age distribution by single-year age groups rather than five-year groups.

This option prompts you to place the program disk in the disk drive

**PLACE THE DISK CONTAINING THE PROGRAM
INTO THE DISK DRIVE AND PRESS RETURN**

It displays the message **LOADING SINGLE AGE PROGRAM...** while the program loads.

With the Apple version you will be asked to enter the name of the projection (which must have previously been saved) and to place the disk containing the file into the disk drive:

PLEASE ENTER THE NAME OF THE PROJECTION:

Enter the name and press RETURN

**PLACE THE DISK CONTAINING THE PROJECTION
FILES IN THE DISK DRIVE & PRESS RETURN**

The file is read and the message **READING FILE...** is displayed. After this procedure is completed, the program proceeds to calculate the population by single ages*;

CALCULATING POPULATION BY SINGLE AGE. . .

and continues to the single-age main option table.

*This program uses the population data in five-year age groups and separates the data into single ages. It uses a procedure derived by H. S. Beers based on a fourth degree polynomial function and is extended to include checking of single ages to ensure that the original five-year group totals are maintained.

WHAT DO YOU WANT TO DO:

- (1) EXAMINE THE POPULATION BY SINGLE AGE FOR ONE YEAR
- (2) EXAMINE A SPECIFIC AGE GROUP FOR ALL YEARS
- (3) CREATE ANOTHER DEMOGRAPHIC PROJECTION
- (4) SAVE THE DEMOGRAPHIC PROJECTION FOR USE AS OUTPUT IN THE EDUCATION MODEL
- (5) QUIT

The IBM version has 6 options. The additional option is a display of the total population by single years.

(1) EXAMINE THE POPULATION BY SINGLE AGE FOR ONE YEAR. This option requires you to enter the beginning and ending ages of the group to be displayed and the year to be displayed (the RETURN must be pressed to enter the responses);

**ENTER THE FIRST AGE TO DISPLAY
ENTER THE LAST AGE TO DISPLAY
ENTER THE YEAR TO DISPLAY**

You then have the option to have the output displayed on the printer or on the screen:

DO YOU WANT TO USE THE PRINTER?

The output appears as follows (assuming 5 is the beginning age, 10 is the ending age and the year to be displayed is 2010):

YEAR = 2010

| AGE | MALES | FEMALES | TOTAL |
|-----|-------|---------|-------|
| 5 | 17997 | 18274 | 36272 |
| 6 | 17858 | 17859 | 35445 |
| 7 | 17201 | 17469 | 34670 |
| 8 | 16839 | 17097 | 33937 |
| 9 | 16499 | 16744 | 33244 |
| 10 | 16184 | 16416 | 32601 |

Once you finish examining the display, press RETURN to return to the menu of choices.

If the display is too long to fit on one screen it will scroll the screen by showing new lines at the bottom and erasing old lines from the top. You can halt the scrolling by holding down the control key and pressing 'S'. Pressing 'S' again will restart the scrolling.

(2) EXAMINE A SPECIFIC AGE GROUP FOR ALL YEARS. Option (2) requires you to enter the same preliminary information as described in (1) above (except that the year to be examined is not requested). The output is as follows (again assuming 5 is the beginning age and 10 is the ending age):

FOR AGE GROUP 5-10

| YEAR | MALES | FEMALES | TOTAL |
|------|--------|---------|--------|
| 1980 | 56040 | 50700 | 106740 |
| 1985 | 58349 | 52734 | 111083 |
| 1990 | 81549 | 82359 | 163908 |
| 1995 | 87843 | 89351 | 177194 |
| 2000 | 90398 | 91493 | 181891 |
| 2005 | 94158 | 95290 | 189448 |
| 2010 | 102309 | 103863 | 206172 |
| 2015 | 115055 | 117202 | 232257 |
| 2020 | 126982 | 129180 | 256162 |
| 2025 | 135286 | 136859 | 272145 |
| 2030 | 141052 | 141841 | 282893 |

Press RETURN to return to the menu of choices.

(3) CREATE ANOTHER DEMOGRAPHIC PROJECTION. This option returns the user to the beginning of the demographic projection model.

(4) SAVE THE DEMOGRAPHIC PROJECTION FOR USE AS OUTPUT IN THE EDUCATION MODEL. The program will create a disk file containing all the necessary information required by the education display model. You are required to enter a name for the disk file and press the RETURN key:

PLEASE ENTER THE NAME OF THE PROJECTION

PLACE THE DISK CONTAINING THE DISPLAY
FILES IN THE DISK DRIVE & PRESS RETURN

(5) QUIT. This option will return you to the main option program.

In the IBM version option (3) is to display the total population by single years.
The output appears as follows.

RAPID Demographic Projection Model
Total Population

| <u>Year</u> | <u>Males</u> | <u>Females</u> | <u>Total</u> |
|-------------|--------------|----------------|--------------|
| 1980 | 508,374 | 498,186 | 45,254,000 |
| 1981 | 500,247 | 491,223 | 46,525,060 |
| 1982 | 497,688 | 489,891 | 47,823,810 |
| 1983 | 499,505 | 492,869 | 49,142,490 |
| 1984 | 504,502 | 498,834 | 50,473,320 |
| 1985 | 511,487 | 506,465 | 51,808,540 |
| 1986 | 521,256 | 516,643 | 53,153,320 |
| 1987 | 534,603 | 530,249 | 54,512,849 |
| 1988 | 550,336 | 545,961 | 55,879,350 |
| 1989 | 567,260 | 562,459 | 57,245,040 |
| 1990 | 584,183 | 578,419 | 58,602,150 |
| 1991 | 600,372 | 592,693 | 59,953,030 |
| 1992 | 616,623 | 606,161 | 61,302,830 |
| 1993 | 634,033 | 620,548 | 62,648,070 |
| 1994 | 653,701 | 637,579 | 63,985,290 |
| 1995 | 676,722 | 658,979 | 65,310,950 |
| 1996 | 706,485 | 688,508 | 66,622,110 |
| 1997 | 742,255 | 725,016 | 67,921,050 |
| 1998 | 778,956 | 762,863 | 69,212,290 |
| 1999 | 811,507 | 796,409 | 70,500,340 |
| 2000 | 834,831 | 829,014 | 71,789,700 |

CHAPTER 10. EXAMINING THE POPULATION AGE DISTRIBUTION

Choosing option 4, (4) EXAMINE THE POPULATION AGE DISTRIBUTION FOR ALL YEARS, from the main display menu will allow you to examine the entire population age distribution.

You may examine the age distribution on the printer or the screen:

DO YOU WANT TO USE THE PRINTER?

Output for this option is as follows (for both males and females):

| MALE/FEMALE AGE DISTRIBUTION (MILLIONS) | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|-------|-------|-------|-------|
| AGE GROUP | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
| 0- 4 | 5.00 | 7.15 | 7.41 | 7.65 | 7.96 | 8.68 | 9.77 | 10.74 | 11.37 | 11.84 | 12.22 |
| 5- 9 | 4.70 | 4.90 | 7.03 | 7.31 | 7.57 | 7.89 | 8.61 | 9.71 | 10.68 | 11.33 | 11.80 |
| 10-14 | 4.40 | 4.67 | 4.88 | 7.00 | 7.28 | 7.54 | 7.87 | 8.59 | 9.68 | 10.65 | 11.31 |
| 15-19 | 4.10 | 4.37 | 4.64 | 4.85 | 6.96 | 7.25 | 7.50 | 7.83 | 8.55 | 9.65 | 10.62 |
| 20-24 | 3.80 | 4.05 | 4.32 | 4.60 | 4.81 | 6.91 | 7.20 | 7.45 | 7.78 | 8.51 | 9.60 |
| 25-29 | 3.50 | 3.75 | 4.00 | 4.27 | 4.55 | 4.76 | 6.85 | 7.14 | 7.40 | 7.73 | 8.46 |
| 30-34 | 3.20 | 3.45 | 3.70 | 3.96 | 4.23 | 4.51 | 4.72 | 6.79 | 7.08 | 7.35 | 7.68 |
| 35-39 | 2.90 | 3.15 | 3.40 | 3.65 | 3.91 | 4.18 | 4.46 | 4.67 | 6.3 | 7.02 | 7.29 |
| 40-44 | 2.60 | 2.84 | 3.08 | 3.33 | 3.59 | 3.85 | 4.12 | 4.40 | 4.62 | 6.65 | 6.95 |
| 45-49 | 2.30 | 2.52 | 2.75 | 3.00 | 3.25 | 3.50 | 3.76 | 4.04 | 4.31 | 4.53 | 6.54 |
| 50-54 | 2.00 | 2.19 | 2.41 | 2.64 | 2.88 | 3.13 | 3.38 | 3.63 | 3.90 | 4.18 | 4.40 |
| 55-59 | 1.70 | 1.86 | 2.04 | 2.25 | 2.48 | 2.71 | 2.95 | 3.19 | 3.44 | 3.70 | 3.97 |
| 60-64 | 1.40 | 1.52 | 1.67 | 1.85 | 2.04 | 2.25 | 2.47 | 2.70 | 2.92 | 3.16 | 3.41 |
| 65-69 | 1.10 | 1.18 | 1.29 | 1.43 | 1.59 | 1.76 | 1.95 | 2.15 | 2.35 | 2.56 | 2.77 |
| 70-74 | .80 | .85 | .92 | 1.01 | 1.13 | 1.26 | 1.40 | 1.56 | 1.73 | 1.90 | 2.08 |
| 75+ | .50 | .74 | .89 | 1.01 | 1.15 | 1.29 | 1.46 | 1.65 | 1.86 | 2.09 | 2.33 |

MALE/FEMALE AGE DISTRIBUTION (%)

| AGE GROUP | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0- 4 | 11.36 | 14.53 | 13.61 | 12.79 | 12.18 | 12.15 | 12.45 | 12.45 | 12.06 | 11.51 | 10.97 |
| 5- 9 | 10.68 | 9.97 | 12.92 | 12.23 | 11.58 | 11.04 | 10.98 | 11.26 | 11.31 | 11.02 | 10.59 |
| 10-14 | 10.00 | 9.49 | 8.96 | 11.70 | 1.14 | 10.55 | 10.02 | 9.96 | 10.25 | 10.36 | 10.15 |
| 15-19 | 9.32 | 8.88 | 8.52 | 8.11 | 10.65 | 10.14 | 9.56 | 9.08 | 9.06 | 9.38 | 9.53 |
| 20-24 | 8.64 | 8.24 | 7.94 | 7.68 | 7.36 | 9.66 | 9.17 | 8.65 | 8.24 | 8.27 | 8.61 |
| 25-29 | 7.95 | 7.62 | 7.35 | 7.15 | 6.96 | 6.67 | 8.73 | 8.28 | 7.84 | 7.51 | 7.59 |
| 30-34 | 7.27 | 7.01 | 6.79 | 6.62 | 6.47 | 6.30 | 6.02 | 7.88 | 7.50 | 7.15 | 6.89 |
| 35-39 | 6.59 | 6.40 | 6.24 | 6.10 | 5.98 | 5.85 | 5.68 | 5.42 | 7.13 | 6.83 | 6.55 |
| 40-44 | 5.91 | 5.77 | 5.66 | 5.57 | 5.49 | 5.38 | 5.25 | 5.10 | 4.89 | 6.47 | 6.24 |
| 45-49 | 5.23 | 5.12 | 5.06 | 5.02 | 4.98 | 4.90 | 4.80 | 4.68 | 4.57 | 4.41 | 5.87 |
| 50-54 | 4.55 | 4.46 | 4.42 | 4.41 | 4.41 | 4.38 | 4.31 | 4.21 | 4.13 | 4.06 | 3.95 |
| 55-59 | 3.86 | 3.78 | 3.75 | 3.77 | 3.79 | 3.79 | 3.76 | 3.70 | 3.64 | 3.60 | 3.56 |
| 60-64 | 3.18 | 3.09 | 3.07 | 3.09 | 3.12 | 3.15 | 3.15 | 3.13 | 3.10 | 3.07 | 3.06 |
| 65-69 | 2.50 | 2.41 | 2.38 | 2.39 | 2.42 | 2.47 | 2.49 | 2.49 | 2.49 | 2.49 | 2.48 |
| 70-74 | 1.82 | 1.72 | 1.69 | 1.69 | 1.72 | 1.76 | 1.79 | 1.81 | 1.83 | 1.85 | 1.86 |
| 75+ | 1.14 | 1.51 | 1.63 | 1.69 | 1.75 | 1.81 | 1.86 | 1.91 | 1.97 | 1.03 | 2.09 |

Press RETURN after examining each table to see the next table.

(4) ALL OF THE ABOVE. This option will automatically print out all the fertility, mortality and migration assumptions.

(5) RETURN TO THE MAIN OPTION TABLE. This option will return the program to the demographic projection's main option table.

(6) TOGGLE THE PRINTER SWITCH. When printing the assumptions, output will normally appear on the screen. If you want output to go to the printer select option 6 and you will get the question:

DO YOU WANT TO USE THE PRINTER?

This option can also be used for turning the printer off and returning to screen displays. This option is not used in the IBM version since the print function is activated by the PRINT key, F9.

CHAPTER 12. REVISING THE INPUTS TO THE PROJECTION

Choosing option 6, (6) REVISE THE INPUTS TO THE PROJECTION, from the main display menu will return you to the country data base program where the demographic assumptions can be revised.

SECTION IV: SAVING PROJECTIONS

CHAPTER 13. SAVING PROJECTIONS IN A DISK FILE

Choosing option 7, (7) SAVE THE PROJECTION IN A DISK FILE, from the main display menu will allow you to create a permanent record (disk file) of the demographic projection. You will be instructed to enter the name of the file to be saved and prompted to enter the data disk:

**ENTER THE NAME UNDER WHICH THE
PROJECTION IS TO BE STORED:**

(the RETURN key must be pressed to enter the name);

**PLACE THE DISK CONTAINING THE PROJECTION
FILES IN THE DISK DRIVE & PRESS RETURN**

You must save your projections in this manner before choosing option 3 (single-age projections) (Apple version only) or option 8 (RAPID disk file).

CHAPTER 14. SAVING PROJECTIONS IN A RAPID DISK FILE

Choosing option 8, (8) SAVE THE PROJECTION IN A RAPID DISK FILE, from the main display menu will allow you to create a special kind of projection file.

The RAPID (Resources for the Awareness of Population Impacts on Development) model is a presentation model that displays the impacts of population growth on social and economic development. It examines three alternative rates of population growth. Choosing this option will allow you to create a disk file containing all the necessary information required by the RAPID model. The program will display the message **LOADING RAPID FILE CREATOR...** while loading this program.

You will be given the following options:

DO YOU WANT TO:

- (1) CREATE A NEW RAPID FILE**
- (2) CHANGE A PROJECTION WITHIN AN EXISTING RAPID FILE**
- (3) SAVE THE NEW FILE**
- (4) QUIT**

(1) CREATE A NEW RAPID FILE. Each time this option is selected, you will be required to enter three alternative population projections. You may enter 'NONE' for the name of a projection if the RAPID file is to have fewer than three projections or if you have not yet created and saved the other demographic projections. An example of the above would be as follows:

**ENTER THE NAME OF PROJECTION FILE
NUMBER 1. (ENTER 'NONE' IF PROJECTION
1 HAS NOT BEEN CREATED YET.)**

*** TEST**

ENTER THE NAME OF PROJECTION FILE
NUMBER 2. (ENTER 'NONE' IF PROJECTION
2 HAS NOT BEEN CREATED YET.)

* NONE

ENTER THE NAME OF PROJECTION FILE
NUMBER 3. (ENTER 'NONE' IF PROJECTION
3 HAS NOT BEEN CREATED YET.)

* NONE

(The RETURN key must be pressed to enter each name.)

In this example, a RAPID file would be created with the values of projection file 'TEST' placed into projection A and no values placed into projections B and C.

After entering each name you will be prompted to place the disk containing the projections into the disk drive.

PLACE THE DISK CONTAINING THE PROJECTION
FILES IN THE DISK DRIVE AND PRESS RETURN

(2) CHANGE A PROJECTION WITHIN AN EXISTING RAPID FILE. This option permits you to replace an existing RAPID projection (A, B or C) with a new projection. In order to run this option, however, an existing RAPID file must have already been created either through the RAPID model, or through the selection of option 3, (3) SAVE THE NEW FILE. An example of changing a projection within an existing RAPID file would be as follows:

ENTER THE NUMBER OF THE PROJECTION
TO BE CHANGED

* 2 (1, 2, 3)

ENTER THE NAME OF THE EXISTING RAPID
PROJECTION FILE

* TEST (Existing RAPID file)

ENTER THE NAME OF PROJECTION FILE TO BE USED

* TURKEY (Projections file)

(The RETURN key must be pressed to enter each name.)

If the incorrect disk was placed into the disk drive, an error message will appear and the program will cease execution.

(3) SAVE THE NEW FILE. This option will permit you to create a disk file for use with the RAPID model.

ENTER THE NAME OF THE RAPID FILE

* TEST

(4) QUIT. This option will return you to the main option program.

CHAPTER 15. ENDING THE DISPLAY SESSION

Choosing option 9, (9) QUIT, from the main display menu will terminate the demographic projection program and return you to the main option program.