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ACCESSING CENSUS DATA

TUTORIAL

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This tutorial covers two tools for accessing census data: American FactFinder and the US Census 2000 Data Engine Software included with CDs and DVDs. Each of these tools can be used to access Census data, but users will want to choose the tool best suited to their task.

American FactFinder is a web-based access tool. Data is available at all levels of geography, and users can select many different geographic areas. However, selecting data for large numbers of census block groups or census blocks can be time-consuming. American FactFinder has some pre-formatted thematic maps, and users can customize them within narrowly defined limits.

US Census 2000 Data Engine Software included on the Census CDs and DVDs is another powerful tool. This software allows users to choose large numbers of geographic areas more quickly than with FactFinder. In addition, users can select data for an area defined by a radius centered on a user-defined latitude and longitude. Geographic identifiers can be selected so that data can be mapped with GIS software.

American FactFinder

<http://factfinder.census.gov/>

American FactFinder is a powerful and useful tool that enables users to get data for specific areas quickly and easily. Data from 1990 and 2000 censuses as well as from the Economic Census, population estimates and American Community Survey are available. American FactFinder works best with Internet Explorer 5.5 or 6.0 or Netscape 6.2 or 7.1. Display resolution should be 800x600 or higher, and the browser needs to be set to accept session cookies and have JavaScript and style sheets enabled. The main page of FactFinder includes Search, FAQs (including a tutorial), Glossary, Site Map and Help. If a user has problems with American FactFinder, a Feedback form is available to contact staff by e-mail.

American FactFinder provides many different ways to get data. The left side of the screen is a list of hyperlinks: **Fact Sheet, People, Housing, Business and Government, Census Overview, Data Sets, Maps and Geography, Reference Shelf and Tools**. Directly below this list is a Search box; users can search by keyword or geography. Enter a keyword or phrase and click on <Go>. A list of tables and maps for that keyword will appear. In the case of geography, if you enter the name of a city which appears in more than one state, you will be asked to select which one you want before the list of tables and maps appears. Depending on which data source you choose, further specification of the place may be necessary, e.g., Rochester, MN MSA, or

Rochester (place), MN, or Rochester, Olmsted County, MN, or even Rochester, NY. The Search box includes an option to locate data by street address. Clicking on "street address" brings up a screen where users can enter a street address. The result will be a listing of the geographic levels for that address. Users can select the geographic level of interest, and once the address is entered, selection proceeds as for geographic keyword searches, and users can select data tables for the area, map the area or select from thematic maps. This option is an easy way to look up the census tract for a given address.

In the middle of the main page is **Fast Access to Information**. This offers users the first four options listed on the left of the page, and each is a hyperlink to that area of FactFinder. Clicking on Fact Sheet will bring up a screen asking for geographic location. Once this has been entered, a listing will appear of all the geographies with that name, if the location is not unique within the U.S. Clicking on one of the geography options will bring up a one-page summary of demographic data from the Demographic Profiles from Census 2000. This one-page summary can be printed, or if the user wants more data, there are hyperlinks within the profile allowing users to get additional data on those specific topics. In addition, to the far right of each variable in the profile are hyperlinks to Map and Brief. Clicking on the Brief to the right of Total Population brings up a Census 2000 Brief on Population Change and Distribution. Clicking on Map brings up a thematic map of population density of the area. Clicking on show more next to **General Characteristics** brings up the complete Demographic Profile - DP-1 for the area. Clicking on household, or median age or race brings up those terms in the FactFinder glossary.

The following three hyperlinks – **People, Housing, Business and Government** – lead to tables and thematic maps with information primarily from Census 2000, although some options include historic data or projections. Within each subcategory, such as **Basic Counts/Population**, the first option is a Read About the category. The Read About Basic Counts/Population includes national population trend information, a graph of population change over the past 50 years and a description of population change by region. A listing of the sources for the Read About provides hyperlinks to those documents. Icons before the listings indicate what kind of data is provided. The small U.S. outline map 🗺 indicates a thematic map, a aqua-colored table with a dark blue headline 📊 is a quick table, a pale yellow table with a red line on both the top and right side 📄 is a geographic comparison table (contains data for all geographies at the level) and a white table with grey grid 📑 is a detailed data table.

Getting Detailed Data includes the **Census Overview** and **Data Sets**. The **Census Overview** is exactly that — a description of the various programs and data sets included in American FactFinder. **Data Sets** is one of the most powerful tools in American FactFinder. The Data Sets option gives complete subject and geographic coverage for FactFinder data sources and enables users to get a large amount of data for more than one area or who want to customize tables for their use. Users select from five programs: Decennial Census, Decennial Supplementary Survey, American Community Survey, Economic Censuses and Surveys and Population Estimates. Once the user selects a program a screen appears with the file options within that program. Currently, Economic Censuses and Surveys and Population Estimates have only one option. Users select the file option by clicking in the radio button, then users need to select from the options on the right hand side of the screen: **Detailed Tables, Geographic Comparison Tables, Quick Tables, Thematic Maps, Reference Maps, Custom Tables, Enter a Table**

Number, List all tables, List all maps, and finally some technical documentation – **About this data set** and **Technical Documentation (PDF)**.

After selecting Detailed Tables, Geographic Comparison Tables, Quick Tables, Thematic Maps, Reference Maps or Custom Tables, users are prompted to select the geographic level of interest, in this case many more options are available including the Census block (SF1) or block group and 5-digit Zip Code Tabulation Areas. A series of tabs will display — **List, Name Search, Address Search, Map** and **Geo within Geo**. With List and Name Search, a menu appears directing the user to select a geographic type. With List, after selecting geographic type, the user must specify where this type is located. For example, if county is the specified type, users must first select a state. Then a list appears of all counties within that state, and users choose which county (or counties) they want. Selecting All Counties is one option. With Name Search, users select geographic type (including "All"). Then users enter the name they want to search for. Clicking on <Search> brings up a list of all entities within the selected geographic type with that name. Users then select the entity that they want. Geo within Geo allows users to shortcut the selection process and select all tracts in a state or all block groups within a county, for example. Users are asked to enter the geographic level they want (Show me all) then specify within a larger geographic unit (Within). Once again, users need to select the larger geographic unit, then they can select all areas (e.g., all census tracts in the state), one or several areas. Highlight the desired area(s) in the box and click on <Add>.

Address Search looks just like the geographic specification from the Main page - Fact Sheets, etc. However, with Address Search, you must enter a street address, city and state OR street address and zip code. A listing will appear, and the user can select which geographic level and entity they want. The Map tab operates similarly to the Address Search, except that users select the area they want by clicking on a map. A map of the U.S. appears, users click on a state and continue to drill down (the radio button "recenter and zoom in" is highlighted) into the map until they find the area for which they want data. Once the area appears on the map, select the radio button "select/deselect" and highlight the geographic level desired. Click on the area in the map, and it will appear in the box of geographic selections below the map. Once all areas have been selected, click <Next> (below the map) to move to the table selection menu. To deselect an area the user does not want, highlight it and click <Remove>.

At this point, a box will appear with data tables. Three tabs at the top of the box allow users to search by subject and by keyword, or simply display all tables. To add a table, highlight it in the box and click on <Add>. Repeat until all desired tables have been added to the "Current table selections" box. As in geographic selections, clicking on <Remove> allows users to deselect any table. A limit of 50 tables can be selected. Clicking on <Show Result> will display the data by table for all geographic selections, ten areas at a time. If the download option is chosen, users can choose to transpose the data so that geographic areas appear in the first column and data in subsequent columns. Each table appears sequentially in the file.

With the Data Sets option, it is possible to choose more than one geographic level. For example, if users want all counties in Minnesota and all county subdivisions in several counties, the subdivisions can be added after the counties are selected by returning to the selection menu and adding them to the list. However, if the selection is all county subdivisions, then it may be better to use Geographic Comparison Tables, provided the

desired data is available in that format. If not, choosing "geo within geo" allows users to select all county subdivisions for the state, or other similar selections. Be careful that you don't choose more than you want! In Minnesota, for example, there are about 2,778 county subdivisions.

Once the data appears, users can change the selections by clicking on an entry in the "breadcrumb" trail at the top of the page.

You are here: [Main](#) ▶ [All Data Sets](#) ▶ [Data Sets with Detailed Tables](#) ▶ [Geography](#) ▶ [Tables](#) ▶ Results

If users want another table within the same dataset, clicking on Tables allows additional selections. If users want a similar table from the 1990 Census, clicking on "Data Sets with Detailed Tables" allows that selection.

On the upper right hand part of the screen under "Results" appear "**Options**, **Print/Download**, and **Related Items**." Options allows users to add "Geographic Identifiers" to the file, add "Geo Components," and to display the "Current Selections." Adding geographic identifiers appends to the beginning of the file all geographic codes associated with each geographic area, including the land and water area. These may be used in mapping the data in a GIS system. Selecting Geo Components adds urban and rural, metropolitan area (total as well as by size), or several American Indian, Alaska Native and Hawaiian Homeland areas, where applicable, to the selected geographies. For example, users can add American Indian areas to a table for the state. The new entry will reflect population data for native American areas within the state. Using Current Selections brings up a new screen which displays the Data Set, the geographic areas, the geographic components (if any have been selected), and table(s) in the file displayed on the screen.

Data can be printed or downloaded by clicking on <Print/Download>. The Print option gives a formatted table. Download offers several options including comma delimited (.csv), tab delimited (.lst), rich text format (.rtf), and database compatible files in either Microsoft Excel (.xls) and comma delimited database (.txt). Database compatible files are zipped files containing one or more data files and a geographic content file. Users must have Winzip to access these files. By clicking "Include descriptive data element names," column heads include both numeric Census codes as well as descriptive names. The comma delimited database file format is for downloading the data records in order to load them into database or spreadsheet software for data manipulation.

Once a query has been completed and the data appears on the screen, it can be saved in the Print/Download menu. Users can save the query to their hard drive. The query will be saved with an .xql extension. Later, this query can be loaded and run without repeating the selection process. The query can be loaded from the Data Sets menu - using the hyperlink, "Load query," on the upper right hand part of the screen as well as from the Print/Download menu.

Related items brings up a screen with some options that offer additional sources of data about each table selected.

SF2 and SF4 Data Sets - Users interested in data by detailed race (the SF2 dataset) or detailed race or ancestry (the SF4 dataset) will select tables and geographic levels in the

same way. However, before the data table appears, users have the option to select Race or Ethnic Groups when using SF2. With SF4 users can also choose from Ancestry Groups. Selecting "Race or Ethnic Group" will bring up a menu of all races and ethnic groups. The table will appear for the previously chosen geography with data for the selected races and ethnic groups. The same option is available for Quick Tables, Geographic Comparison Tables and Custom Table.

Custom Tables - Custom tables operate the same way as Detailed Tables. However, users can customize data downloads by selecting data elements and filtering the data. Once geographic selections and table selections have been completed (as with Detailed Tables), users can choose which of the data elements they want to appear in the final data table by selecting those items in the list and clicking on <Add>. Then clicking on <Next> gives users two options. Clicking on <Show Result> will display the custom table. However, to filter the table so that only selections that meet a user-defined criteria appear in the table, users select the data element, click on <Next> and complete the filter statement by selecting a logical statement and entering a numeric filter value(s). Clicking <OK> displays the filtered data. Users can use the same Options and Print/Download features as with Detailed Tables. Creating custom tables and filtering data in those tables are convenient tools, but the same results can be obtained by manipulating the downloaded data in a spreadsheet program.

Mapping is possible using FactFinder, simply click on <Map It> after selecting a geographic area. Both Reference Maps and Thematic Maps are available. Reference maps are available for only one geographic area at a time, but users can zoom in and out and select or deselect geographic layers in the maps. The Census Bureau has upgraded FactFinder thematic mapping to allow more flexibility including the ability to change the data classes, select which features and boundaries are displayed and change the title of the map. There are a wide number of maps available to users.

To select geographic identifiers to use as geocodes with other mapping software, such as ArcView, click on "Options" after a dataset is displayed, then click on "Show Geographic Identifiers." All geographic identifiers will be included in the data downloaded. Users then have to choose which identifiers are needed to map the data, generally the FIPS codes for State, County, down to the lowest level in your file. These codes will be added as a separate table. By manipulating the spreadsheet geographic identifiers are linked to the downloaded data. To get geocodes for ArcView, concatenate identifiers for the levels needed, e.g., State, County, Census Tract. The identifiers are numeric, and a multiplier will be required to generate enough place holders in the concatenation process. For example, if to generate county geocodes, the codes should look like this: 27137. Geographic variables selected will be state - 27 and county - 137. If you add the two numeric variables, the result will be 164 not 27137. To get a correct geocode add 27 times 1000 and add the county code to get 27137. ArcView has instructions for concatenating geocodes using ArcView's calculator. Geographic Comparison Tables include a Geography Identifier. The last digits of this number are the FIPS codes, but there some initial numerals and letters in the Geography Identifier. Users will have strip these off before using the data file for mapping.

[User note: American FactFinder will retain selections. The following exercises work best if you close American FactFinder and reload it before each exercise. If that is not feasible, in order to select another table you will need to go to the breadcrumbs menu at the top of the page and select Tables. See also the note in part 6 of Exercise 4.]

American FactFinder Exercise 1: Quick table of data by race and ethnicity for Blue Earth County

1. Open American FactFinder: <http://factfinder.census.gov/>. Click on People under **Fast Access to Information**. In the "county" box, enter Blue Earth. Click <GO>. If there were more than one county in the United States named "Blue Earth," you would have to select the county in Minnesota.

2. Scroll to the subcategory "Race and Ethnicity." Under **Race and Hispanic or Latino:**, select Race and Hispanic or Latino. The table will appear on the screen. You can print or download the data by clicking on <print/download> on the menu in the upper right portion of the screen.

American FactFinder Exercise 2: Data by race and ethnicity for Blue Earth County using Data Sets option

1. Open American FactFinder: <http://factfinder.census.gov/> Click on Data Sets on the left side of the screen or under **Getting Detailed Data** in the middle of the screen.

2. Select <Census 2000 Summary File 1 (SF1) 100-Percent Data>.

3. Select "Quick Tables" from the list that appears on the right of the screen. Select "County" when prompted for geographic type, then select "Minnesota," then highlight "Blue Earth County" click <Add>.

4. Click <Next> to get a list of the Quick Tables, highlight "QT-P3. Race and Hispanic or Latino: 2000" and click <Add>. Clicking <What's this> will display the format of the table in case you're not sure this is what you want. Clicking <Show Result> will display the table on the screen. If you just completed Exercise 1 and continued working in American FactFinder, you will find that the table is already selected. To get a different table, click on Tables in the breadcrumb menu at the top of the screen and choose a table. As in Exercise 1, you can print or download this table. You can also change selections using the "breadcrumb" menu at the top of the screen.

These two exercises give an example of the redundancy built into American FactFinder. Users need to find the most comfortable way for them to get the data that they want. "Data Sets" is a very powerful option that also allows users to get preformatted tables.

American FactFinder Exercise 3: Data by race and ethnicity for all Minnesota counties

a. using Geographic Comparison Tables

1. Open American FactFinder: <http://factfinder.census.gov/> Once again select People. Select Minnesota from the list in the box under "state." Click on <GO>.

2. Scroll to **Race and Ethnicity**, and click on "for all counties" under **Race and Hispanic or Latino:**. The table with data by race and Hispanic origin for all Minnesota counties as

well as totals for the state will appear on the screen. You can print or download the data by clicking on <Print/Download> on the menu in the upper right portion of the screen.

b. using Data Sets option

1. Open American FactFinder: <http://factfinder.census.gov/> Click on Data Sets on the left side of the screen or under **Getting Detailed Data** in the middle of the screen.
2. Select <Census 2000 Summary File 1 (SF1) 100-Percent Data>.
3. Select "Geographic Comparison Tables" from the list that appears on the right of the screen. Select "State" when prompted for geographic type, then select "Minnesota," then State--County.
4. Click <Next> to get a list of the Geographic Comparison Tables, highlight "GCT-P6. Race and Hispanic or Latino: 2000." Clicking <What's this> will display the format of the table in case you're not sure this is what you want. Clicking <Show Result> will display the table on the screen. As in Exercise 1, you can print or download this table. You can also change selections using the "breadcrumb" menu at the top of the screen.

American FactFinder Exercise 4: Single year of age for Census Tracts in Brown County and MCDs in Brown County

1. Open American FactFinder: <http://factfinder.census.gov/>. Click on Data Sets on the left side of the screen or under **Getting Detailed Data** in the middle of the screen.
2. Select <Census 2000 Summary File 1 (SF1) 100-Percent Data>. Select "Detailed Tables" from the list that appears on the right of the screen.
3. Select "Census Tract" under "State" and "County" when prompted for geographic type, then select "Minnesota," from the "Select a geographic area" listing, then select "Brown County." Highlight "All Census Tracts" from the geographic areas list and click <Add>. Since the request is for census tracts and MCDs in Brown County, return to the "Select a geographic type" box and select "County Subdivision" under State and County. Since Minnesota and Brown County are already selected, highlight "All County Subdivisions" and click <Add>.
4. Click <Next> (if next does not appear, but <Show Result> appears, see item 6 below) then <by keyword>. Enter "age" then click on <Search>. A lengthy list of tables will appear. If you are not sure which table has single year of age, use the <What's this?> option to look at the table format. When you find the correct table (PCT12. Sex by Age (Total Population), highlight it and click on <Add>. Click on <Show Result> to display the table on the screen. This table will be very wide since Brown County has 30 tracts and MCDs. Click <Next> to see more columns on the screen.
5. You can print or download this table. You can also change geographic selections in the menu at the top of the screen. Data can be printed or downloaded by clicking on <Print/Download> in the upper right part of the screen. Choose a file format. Click "Include descriptive data element names" to include descriptive names as well as numeric Census codes. Choosing file options with "(transpose rows and columns)" will

put all geographies in the first column and data in subsequent columns. The <Print> option gives a formatted table.

6. If you have been working in American FactFinder and go back to Main at the top of the screen, FactFinder does NOT clear out previous selections. In this exercise, rather than see <Next> in step 3, <Show Result> may appear and the table selected in the previous selection will appear. When this happens, click on Options and then Current Selections at the top of the Screen. This will show you what is selected in FactFinder. You will probably find the table from the previous exercise. Click on "Tables" in the breadcrumb menu at the top of the screen. At this point you can choose from a list of tables or use the keyword search facility to find the table that has the data you want.

7. To map this data using a GIS program, click on Options at the top of the screen when the data appears and click on "Show Geographic Identifiers." The file will appear with all geographic identifiers in the first part, followed by the data in the lower part of the file.

American FactFinder Exercise 5: Median Age for Hispanics/Latinos in Metropolitan Areas in Minnesota

1. Open American FactFinder: <http://factfinder.census.gov/>. Click on Data Sets on the left side of the screen or under **Getting Detailed Data** in the middle of the screen.

2. Select <Census 2000 Summary File 2 (SF2) 100-Percent Data>. Select "Custom Table" from the list that appears on the right of the screen.

3. Click on the **geo within geo** tab at the top of the screen. Under "Show me all" highlight Metropolitan Statistical Areas/Consolidated Metropolitan Statistical Areas." Under "Within" choose "State." Then select "Minnesota" from the "Select a state" list. The select "All Metropolitan Statistical Areas/Consolidated Metropolitan Statistical Areas" and click <Add>. Click <Next>.

4. Click on the **by keyword** tab, and enter "median age." Click on <Search>. Highlight the table, and click <Go>. Median age for total population is the data element specified in this exercise. Under "Select one or more data elements and click 'Add'", click in the box before "Both sexes." Click <Add>, then click on <Next>. At this point, users can choose to display all geographies or filter by value of Median Age. To display Median Age for all metropolitan areas, click on the first <Next>.

5. Scroll through the list of race and ethnic groups and highlight "Hispanic or Latino (of any race)." Click <Show Result>. A table with the median age for all Hispanics or Latinos for all seven metropolitan areas in Minnesota will appear.

US Census 2000 Data Engine Software included on Census CDs and DVDs

Like American FactFinder, the Data Engine software included with the 2000 Census CDs and DVDs is very powerful and useful. This software gives users data from the 2000 Census for specific areas quickly and easily. In addition, users can get data for a large number of areas more easily than with American FactFinder. For users who need data for a large number of blocks or block groups, the CD or DVD software is a much better option than American FactFinder. Finally, users can select individual variables from data tables rather than entire tables.

Install options - with CD or DVD and without. Without allows you to load all data from the CD on your machine. If you choose to load on your hard drive, the software and data from the CD will require up to 650 mB of hard disk space (less for Minnesota). It is about 100 times larger for the DVD. You can load just the software and run it with the CD or DVD in the drive, a good option if space is a premium.

Workspace - To name a Workspace using the default directory for storage, type the name of the file in the space and proceed to the "Save As" button. The workspace directory will retain the parameters of your session. If you routinely need data for 3 census tracts in Benton County, by using the workspace option, you can skip the geography selection process. Similarly, if you always want data on housing, by using the workspace option, those variables will be selected automatically for whatever geography you select.

Pick Geography - For most users, this will be the first step in extracting data. All geographic levels are available. However, clicking in the radio box in front of the level will select all areas at that level, clicking on the name of the level or on the <+> or <-> will display all areas, continue clicking until the areas desired are displayed, then click in the box to select those areas. Be careful that you have selected only those areas wanted, since it is very easy to select all areas. If the geographic level is "Census tract by place and etc." the file will be very large - the first hint will be a very long processing time. Fortunately, if that happens, US Census 2000 Data Engine allows users to cancel, and return to the geographic selection menu and refine the selections.

Custom Radii - This option under "Pick Geography" allows aggregation of data for a circle defined by a radius centered on a point defined by latitude and longitude. If you don't know the latitude and longitude of the center of the area, selecting Internal Point (latitude) and Internal Point (longitude) will give you that information. Enter the latitude and longitude into the Add Radii box, and continue by filling in the radius or radii - you can choose more than one. You can enter a name for the place by highlighting the latitude and longitude in the Point Name box. A doughnut can be specified that is from 1 to 3 miles from the center. In the Radii or Doughnuts box enter 1-3 for 1 to 3 miles. Units can be in Miles or Kilometers (Drive Time (Minutes) requires additional software not included with the CD or DVD) - use the pull down menu to select the units.

Output - The next menu item is selecting the form in which the data will be generated. Data can be in .html format or in one of several file formats: .dbf, .xls, .csv and .mdb. HTML reports can be generated using pre-formatted report options or a blank report. With the pre-formatted reports, variables are pre-selected. The blank report allows users to select variables to include in the report. To view the titles of the reports, click on <browse> and a screen will appear with folders for "Detailed Tables" and "Quick Tables". Click on the folder icon to see the contents of these folders, for "Detailed Tables" there will be folders for Housing (H), Housing (HCT), Population (P) and Population (PCT) tables. Opening the folders will bring up the titles of each table which you can then read. Click on the title to select that report. Clicking on "Create Output as Summary" will give aggregated results for the geographic areas selected. Be careful, because while statistical variables are weighted, this option does NOT give true medians.

Simple Variables - To select variables from the file, simply click on the headings and continue clicking until the actual variables appear. Click on the variables or highlight them and click <select> to select them. Selected variables appear in the Output Variables box on the upper right of the screen. If you want to map the data, select "Geographic Variables" to match the geographic level you chose under "Pick Geography."

Custom Variables - This option allows users to calculate rates or percentages, sums, etc. When the "Custom Variable" option is selected, a box appears with a series of operators, a "Formula" box and a "New Variable Name" box. Highlight the variables for the formula and click on [VAR] to select variables and click on the appropriate operators to generate the formula. When the formula is complete, give the custom variable a name in the "New Variable Name" box and click <select> to add it to the list of variables.

When all selections have been made (and you probably want to look at what is in the "Output Variables" box to be sure), click <Finish> to complete the process. If you are generating an .html file, the software will ask you if you want to open the file with the "system default application" or a "specific application." If you generated another file type, you will be offered the same options as well as the option of opening the field descriptions file which gives the names of the variables as well as the description of each variable, e.g., "TRACT", "Geographic Identifiers 2000 Census Tract". To open the file, the same options will be shown as with .html files. To include the descriptions from the descriptions file, look in the same directory for a file with the same name (e.g., test.xls) but with .desc.txt appended to the name (test.xls.desc.txt). This file will be generated with each file and can be opened as a comma delimited file in any spreadsheet program.

Mapping - A key variable will be generated with every non-html file. The key variable is sometimes the same as the geocode needed to map the data, but not always. To generate a geocode, the best option is to select geographic variables as described above. If you are using ArcView or ArcInfo, the GIS software will allow users to concatenate the codes into a geocode to facilitate mapping. If the codes in the data are text variables, simply concatenate the strings. If the codes are numeric, you may have to include a multiplier to generate enough place holders in the concatenation process (covered under American FactFinder **Mapping**).

US Census 2000 Data Engine Exercise 1: Data by race for Blue Earth County

1. Open the US Census 2000 Data Engine. Skip "Workspace."
2. Go to "Pick Geography." Click on the <+> before "County," and again before "Minnesota," then click in the box by "Blue Earth County."
3. Click <Next> at the bottom of the screen. Output will open, the default is <Report> or a temporary .html file. Choose a "Report Template File" that includes the data you want, in this case, scroll to "Quick Tables\P03. Race and Hispanic or Latino.rpt" has the data we want. Since you have chosen a report template, the variables have been chosen for you, and you needn't choose variables or create custom variables. Even if you do, they won't appear in the predefined format.

4. Click <Finish> at the bottom of the screen. The software will then give you the option of viewing the file either with the default application or a specific application you choose - a <Browse> option is available if you're not sure where the application is located. Your computer's default browser (Internet Explorer or Netscape) will open the file and display it. The file can be saved from the browser, using the <File> <Save As> option.

US Census 2000 Data Engine Exercise 2: Data by race and Hispanic ethnicity for all Minnesota counties - .html report

1. Open the US Census 2000 Data Engine. Skip "Workspace."
2. Go to "Pick Geography." Click in the box before "County," this will select all counties in Minnesota. Since we want the same data as we selected in Exercise 1, select the same Quick Table.
3. Click on <Finish> and open the .html report file. The result is a little different since we selected all Minnesota counties. The .html file has each county listed as a hyperlink on the left side of the page. Clicking on the name of the county will bring up the report for that county. I have not been able to save .html files for all counties, only when just one area was selected.

US Census 2000 Data Engine Exercise 3: Data by race and Hispanic ethnicity for all Minnesota counties - .xls file

1. Open the US Census 2000 Data Engine. Skip "Workspace."
2. Go to "Pick Geography." Once again, click in the box before "County," to select all counties in Minnesota.
3. Select "File" output rather than report. Click on <Save As> and enter a name for the file you will create, selecting .xls for the file type. Click <Next> to select variables.
4. Since this exercise creates a file, the variables must be selected by the user. We're interested in population variables, so go to P Tables and select those variables that reflect race and Hispanic ethnicity data. We're not creating any "Custom Variables" so click on <Finish>. Since we specified an .xls file, the software prompts for a name of the worksheet, enter a name. The software will offer the option of viewing opening the output file - either with the default application or an application specified by the user - or the descriptions file or. If you choose to view the description file, it will be opened in Notepad along with the data file. Be sure to click on the worksheet name that you entered. At this point, you can examine the data to be sure that you got all desired variables. If you want to add a variable, you can return to the "Simple Variables" and add those to the file. Be sure you close the file in Excel before trying to add to it. The software asks if you want to write over the original file name, and you will be asked to give another (new, different) name to the worksheet.

US Census 2000 Data Engine Exercise 4: Single year of age for Census Tracts in Brown County and MCDs in Brown County

1. In this exercise, create a workspace for geographic areas for which you most often need data. Open the US Census 2000 Data Engine.
2. Create "Workspace" by clicking "New" and typing in a name in the box provided.
3. You will be automatically moved to "Pick Geography." Scroll to "County Subdivision by County", click the <+>, then click the <+> before Minnesota. (I've had trouble with the workspace <File> option coming up, just scroll up to move away from that position on the screen and continue.) Scroll to Blue Earth County and click in the box to select all county subdivisions in Blue Earth County. Next scroll to "Census Tract by County" and click the <+>, then click the <+> for Minnesota, scroll to Blue Earth County and click in the box to select all tracts in the county. Click <Next> to select the output type and select "File" output. Click on <Save As> and enter a name for the file you will create, selecting .csv for the file type, and enter a file name as instructed - you can select the folder where you want the file to be saved.
4. Click <Next> to select variables. Single year of age is a PCT table, so scroll to PCT Tables. Scroll to PCT 12 "Sex by Age" and highlight the table name. Click on <select - 5. We won't create any "Custom Variables" so click on <Finish>. The software will offer the option of viewing the descriptions file or opening the output file - either with the default application or an application specified by the user. MS Excel is used to open a .csv file. At this point, you can examine the data to be sure that you have all the variables you want. If something is missing, you can return to the "Simple Variables" and add those to the file. The software will give you the option to write over the original file or to create a new file name. If census tracts and MCDs in Blue Earth County are areas for which you often need data, opening the workspace in subsequent sessions will enable you to skip the "Pick Geography" step. Be sure to save the workspace when you end the session.

US Census 2000 Data Engine Exercise 5: Geocoded data for Household Size for Census Tracts in Mankato, MN

Geocoding Note: In this exercise, data will be extracted with geocodes so that it can be mapped using ArcView. Atlas users need to match geocodes from the .shp file to the data. The AGF_LINK column generated contains the geocode needed to match data to the polygons. By saving the county and MCD .dbf files, a match can be made between FIPS and AGF_LINK. Then load new data (from FactFinder or U.S. Census 2000 Data Engine) into an Excel file sorted to match the FIPS code. The result can be exported as a .dbf file with geocodes from the .shp file that can be linked back to the Atlas GIS geographic file.

1. Open the US Census 2000 Data Engine. Create "Workspace" by clicking <File> then "New" and typing in a name in the box provided if you think this will be useful to you in subsequent sessions.
2. Click <Next> to "Pick Geography." Scroll to "Census Tract by Place and Etc." and click the <+>, then click the <+> before Minnesota and the <+> for Blue Earth County. Scroll to Mankato and click in the box to select all census tracts in Mankato.

3. Click <Next> to select the output type and select "File" output. Click on <Save As> and enter a name for the file you will create, selecting .mdb for the file type. Enter a file name in the desired folder.
4. Click <Next> to select variables. Household size is a Population variable, so click on "P Tables." Highlight P17 and click on <Select>. The variable "Average Household Size" will appear in the "Output Variables" box.
5. To get geocodes, we need to select "Geographic Identifiers." This selection is done while still in "Simple Variables." Our data is for census tracts, and to map them we need a FIPS code for state, county and the census tract code. Select them from the list of "Geographic Identifiers." In this example, only State has a Census and a FIPS code. But for some other geographic levels, you may need to check that you have the FIPS code and not the Census code.
6. We won't create any "Custom Variables" so click on <Finish>. The .mdb needs a table name - enter it and click on <OK>. The software will offer the option of viewing the descriptions file or opening the output file - either with the default application or an application specified by the user. You can either concatenate the geographic identifier codes in MS Access or in ArcView.

US Census 2000 Data Engine Exercise 6: Creating a Custom Variable for Percent Hispanic/Latino in Waseca city

1. Open the US Census 2000 Data Engine. Click "Pick Geography" and scroll to "Place" and click the <+>, then click the <+> before Minnesota. Click in the box before Waseca.
2. Click <Next> to select the output type and select "Report" output. Scroll to the last report type Report (blank) .rpt and highlight it.
3. Click <Next> to select variables. Select any variables you want to include in the output.
4. Click <Next> to begin creating the custom variable. Highlight Hispanic or Latino (variable P004003) and click on <VAR> from the custom variable operators, this will put Hispanic or Latino in the "Formula" box. Click on </>, then highlight "Total" (variable P004001). Click on <*> and type in 100 (to get percent rather than the ratio). In the "New Variable Name" box, enter a descriptive name for the new variable and click on <Select-->. Click <Finish>. An .html report will appear with the variables as well as the custom variable - percent Hispanic. Note that the custom variable equation is shown in the report.

US Census 2000 Data Engine Exercise 7: Finding the number of people 65 and older for the area within 10 miles of Milaca

1. Open the US Census 2000 Data Engine. Click "Pick Geography" and scroll to "Place" and click the <+>, then click the <+> before Minnesota. Click in the box before Milaca.
2. Click <Next> to select the output type and select "Report" output. Scroll to the last report type Report (blank) .rpt and highlight it.
3. Click <Next> to select variables. Under Geographic Identifiers, select Internal Point (Latitude) and Internal Point (Longitude).

4. Click <Finish>. An .html report will appear with the latitude and longitude of the center of Milaca.
5. Return to Pick Geography and highlight Custom Radii. Click on the <File> pull down menu and select "Add Radii." Enter the latitude and longitude you just found in the previous step and click <OK>. In the next box, the latitude and longitude appear in the "Point Name" box, you can replace those numbers with the name of the city, Milaca, if you choose. In the Radii or doughnuts box enter "10," default units are Miles. Click <OK>.
6. For purposes of this exercises, do not change the Output selection (Report (blank).rpt).
7. Select all population variables for persons 65 and over from table P12 (note you need to select 65 and over for both male and female). You could sum them in custom variables, but to save time, we'll simply select all those age cohorts 65 and over.
8. Click on <Finish> and <OK> to see the data. The report will show the number of males and females 65 and over who live within 10 miles of the geographic center of Milaca.