

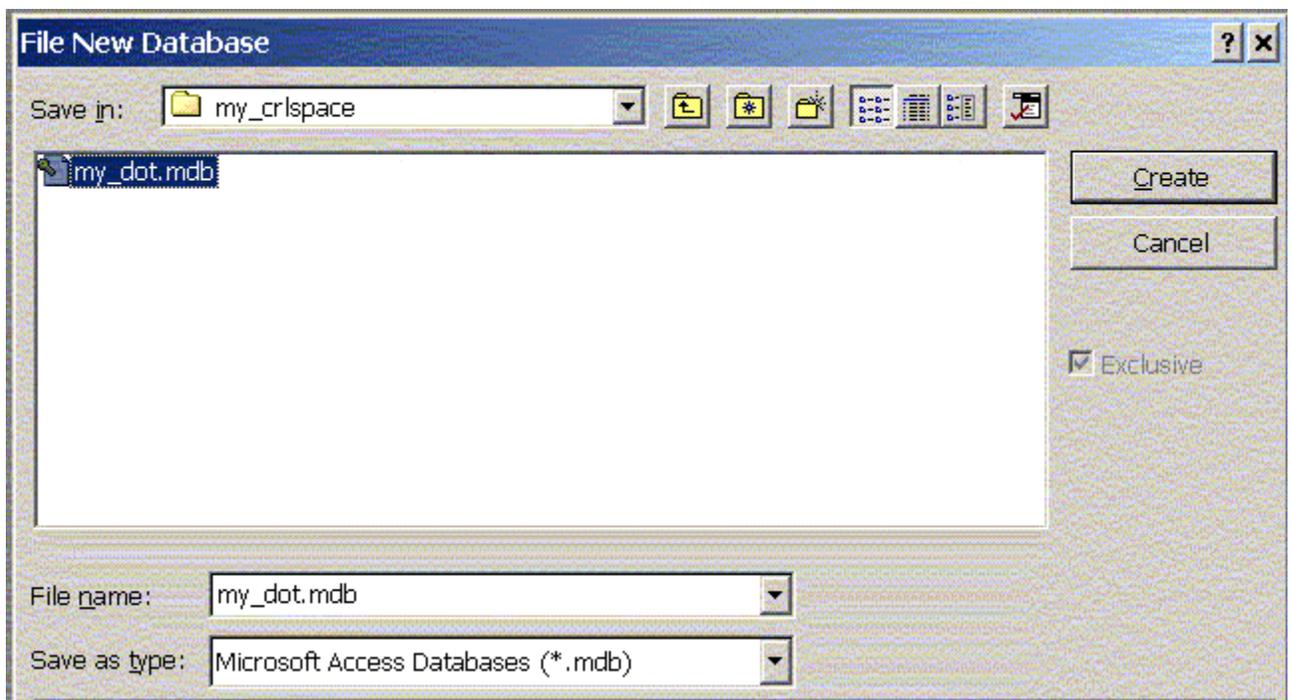
LAB EXERCISE C: Intermediate Database Queries

[Images and output created with MSAccess® software.]

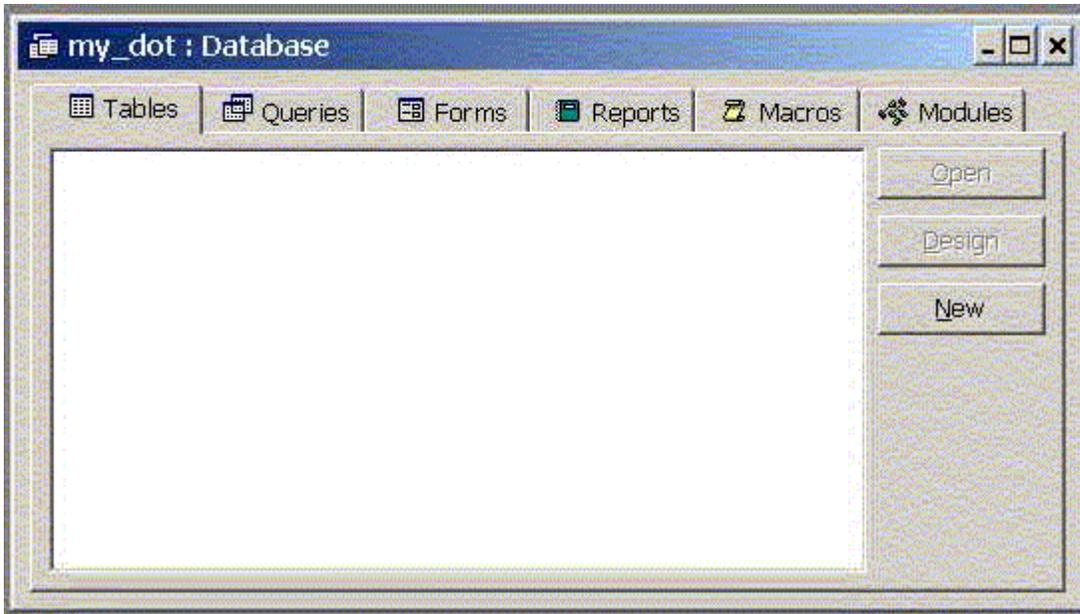
Part 1. DOT Employee Survey

In this exercise you will use MS Access to query the Department of Transportation's employee survey database. You will use **C:\11.208\data\employee.dbf** to answer the following questions about the DOT's employees. To interpret the meaning of the fields in this database, refer to the data definitions and survey.

To use a *.dbf file in MS Access, choose **File > New Database...** to open the **New** window. Confirm that **Blank Database** is highlighted, then click **OK**. At the **File New Database** window, type in a *File name* such as *my_dot.mdb* and make sure that the *Save in* location is your crlspace private folder so that the window looks something like this:



Then click on the **Create** button. You should now see a *my_dot: Database* window:



Now go to **File... > Get External Data... > Import**. In the **Import** window, you must specify where to look for the *.dbf file you want to import. In this case, go to **C:\11.208\data** and then be sure to specify *Files of Type* as dBase 5 (*.dbf). Now select employee.dbf and then click on the **Import** button. Access now displays a window saying "Successfully imported 'employee.'" Close the Import window. In the **my_dot: Database** window, you will see employee listed under tables.

Now you are ready to design and run queries on the table to answer the questions on the assignment sheet.

Note: If at some point, you have a file that you'd like to save in order to perform spreadsheet-based calculations with in Excel, then you may export the file to Excel by going to **Save As/Export... > To an External File or Database**. Make sure that the *Save as type* is (*.dbf), preferably dBase 5. After it is saved, you may easily open the *.dbf file from Excel.

Part 2. Parcel and Property Ownership

For this part of the exercise you will use the database tables **parcels.dbf**, **tax.dbf**, **fires.dbf** and **owners.dbf** located in **C:\11.208\data**. These tables make up a small database of property ownership in Boston. These files are *.dbf just as was the initial employee.dbf you recently imported. This means you will need to follow similar procedures to import the *.dbf files into Access before you can analyze them. That is, create a new database. Then use **Get External Data** and bring in all four *.dbf files. After this, create new queries and add the tables *as you need* them. Remember that you may not need to add all the tables for all of your queries. Be selective. Next, join the tables that you have added using a field that can be used to relate data in one table to the others. For example, since several tables have an ID column, click on the ID field of one table and drag it onto the ID field in the second table (in this case the "parcel" column appears to work for multiple tables but is actually inconsistent from table to table). A line will appear to signify the join. Note that you should add and link *only those tables you need for the specific query* you are conducting. Be selective and use appropriate combinations of the four tables to answer the questions in the lab exercise answer sheet.

Data Dictionaries for parcels.dbf, fires.dbf, owners.dbf and tax.dbf

| PARCELS (Parcel information) | | FIRES (Fire incidents) | | TAX (Tax and value information) | | OWNERS (Owner information) | |
|------------------------------|--------------------------|------------------------|--------------------------|---------------------------------|--------------------------|----------------------------|------------------|
| id | unique parcel identifier | id | Unique parcel identifier | id | unique parcel identifier | ownernum | owner identifier |

| | | | | | | | |
|---------|------------------------|-----------|------------------------|---------|------------------------|---------|-------------------------------|
| wpb | ward/precinct/block | Wpb | Ward/precinct/block | wpb | ward/precinct/block | oname | owner name |
| parcel | parcel number in block | Parcel | Parcel number in block | parcel | parcel number in block | address | owner's street address |
| add1 | street number | Fdate | Date of fire | prptype | property type | city | owner's city of residence |
| add2 | street name | Ignfactor | Ignition factor | landval | value of land | state | owner's state of residence |
| zip | zip code | Estloss | Estimated loss | bldval | value of building | zip | owner's zip code of residence |
| sqft | square footage | | | tax | property tax | | |
| onum | owner identifier | | | | | | |
| landuse | land use type | | | | | | |