

## CSU101 Introduction to Computer Science with Applications

### Lab 7 Instructions

In this lab we will develop skills in two separate areas, 1) the preparation and manipulation of data using Access, and 2) the use of pivot tables to uncover a distribution.

Down-load a file called NewDataSource.xls from the course web site. It is a spreadsheet with data on over 2000 imaginary students, containing ID, first and last name, address city state and zip, year of graduation, division, major code, and finally QPA.

The best way to do this lab is to create a folder on your desktop and put in the folder both NewDataSource.xls and ComputerStore.mdb.

Our first set of tasks is to move a selective range of cases from the spreadsheet to the customer table. We do it in stages.

Task 1: Import all of the records of NewDataSource.xls into a new table in ComputerStore. You will find a wizard for this purpose under External Data > Excel. Because Access knows how to read Excel files, the types associated with each field are not too far from the mark. Name the new table **DataSource**.

Task 2: Some of the records in our new table we will want to move to the customer table, and so the first thing we must do is to prevent any clashes on ID number. Write an update query on the table DataSource changing every ID to itself + 1000. Since there are not that many customers, we are safe. Save your query as **UpdateID**.

Task 3: Open the table DataSource in design view, and change the type associated with the ID field to “long integer”. This is a whole number from about -2 billion to +2 billion, and agrees with the type of ID in the customer table.

Task 4: Write an append query to move the first name, last name, id, address, city, state and zip from DataSource to Customers, **but only if the student is a CJ major**. Hint: there are 98 of them in the data and all of their major codes begin with a “9”. Save your query as **MoveCJ**.

Task 5: Now write a query to reveal the number of customers per state. Save this query as **CustomersPerState**.

Task 6: Using NewDataSource.xls, construct a pivot table to show how many students there are in each year by sex. Your answer should be arranged as follows:

<b>Count of ID</b>	<b>Sex</b>		
<b>Year</b>	<b>Mr</b>	<b>Ms</b>	<b>Total</b>
value	number of students of that year of that sex, etc.		
value		number of students of that year of that sex, etc.	
value			

Place the pivot table in the same workbook, on its own sheet.

Task 7: (Extra Credit) Use a pivot table to reveal the average QPA for each college represented in the data. Here is a picture of information you will need:

<b>Major Code begins with</b>	<b>College</b>
0	Engineering
2	Computer Science
3	Arts & Sciences
4	College of Business
6	Bouve
7	Bouve
8	Nursing
9	Criminal Justice

Again, place the pivot table on its own sheet in the same workbook.

When you are done with this lab, you should submit ComputerStore.mdb, renamed yourlastnameLab7.mdb, and NewDataSource.xls, renamed yourlastnameLab7.xls using Blackboard.