Family Name:___________________ Given names:___________________

Student Number:_________________

You will need to submit this completed laboratory sheet by 2:30 pm on Friday 10 August with your tutorial questions for Tutorial Sheet 3 for assessment. The Bank.xls data will be used for your project that is due in week 11, so save you work on a USB device or a CD.

Excel has an extensive and very clearly presented help facility which you should use if you are stuck. You should also use good computing practices such as giving each column an appropriate name in the first row. Appropriate care when filling in dialogue boxes will need to be taken.

Complete your lab exercises in your scheduled lab class. You will be able to seek assistance if you need it, and you will have finished this work instead of putting it off!

1. Finish off any uncompleted work from the last laboratory sheet.

2. For the Bank data, produce a bar chart of the education level of all employees. Note that you first need to organise the data in columns, with education level (use names, such as High School, Some Tertiary, Bachelors, Graduate Courses, Post Graduate) in one column and the frequency in the next column. A quick way of doing this is simply to copy the pivot table that you obtained last week, and perform a Paste Special, selecting Transpose. Then clean up this table and re-organise the columns so that the counts are adjacent to the education level. Then go to Insert → Bar → All Chart Types and select the first option.

If you select the chart by clicking on it, you will see a Chart Tools menu appear above the Menu bar. Click on it and select the first of the Chart Layouts. Now you will be able to create a Chart title and axis labels.

Sketch the graph in the space below.

Solution:
3. Now produce another bar chart of the education level of the employees, but this time within gender. Thus, you will have two bars at each education level, one for the female employees and one for the male. This time the data needs to be organised as a column of education levels, one column of frequencies for male employees and one for the female employees. If you organised the data correctly in the last exercise then it should already be in the correct form. You may just need to re-organise the columns.

Sketch the graph in the space below. Comment on your findings from the plot.

Solution:

The plot shows more females at the lower education levels and fewer at the higher education level compared to males.
4. Create a column that contains the number of years of experience at the Bank. The dates are from 1995, so we need to subtract the YrHired from 1995 to obtain the number of years of experience. Create a column names YrsExp, and enter an appropriate formula that you can fill down to compute the years of experience at the Bank.

5. Produce a scatter plot of Salary against YrsExp (which variable will you put on the vertical axis?). Comment on any relationship that you see.

Solution:

There is a spread of salaries at each experience level (as measured by YrsExp). Also, there seem to be two groups in the data, with a small group of employees at a high level of experience at high salary. One outlier can be identified in the data, corresponding to a person with long experience but a very low salary.

Overall, there seems is an increase in salary with experience.

Dr Nazim Khan
Semester 2
2007