**Assignment 3 (ANOVA) Files:**

**Problem 1 [50% of the mark]. Use 5% as a significance level**

In the last decade stockbrokers have drastically changed the way they do business. Internet trading has become quite common and online trades can cost as little as $7. It is now easier and cheaper to invest in the stock market than ever before. What are the effects of these changes? To help answer this question, a financial analyst randomly sampled 366 American households and asked each to report the age of the head of the household and the proportion of their financial assets that are invested in the stock market. The age categories are:

Young (under 35)

Early middle age (35 to 40)

Late middle age (50 to 65)

Senior (over 65)

The analyst was particularly interested in determining whether the ownership of stocks varied by age. Do these data allow the analyst to determine that there are differences in stock ownership between the four-age group? Check the required conditions.

**File: Proportion of Total Assets Invested in Stocks**

**Problem 2 [50% of the mark] - Use 5% as a significance level**

One measure of the health of a national economy is how quickly it creates jobs. One aspect of this issue is the number of jobs individual hold. As part of a study on job tenure, a survey was conducted wherein Americans aged between 17 and 45 were asked how many jobs they have hold in their lifetimes. Also recorded were gender and educational attainment. The categories are

Less than high school (E1)

High school (E2)

Some college/university but not degree (E3)

At least one university (E4)

A. Test to determine whether there is interaction between gender and education

in holding jobs.

B. Test to determine whether there are differences in holding jobs between men

and women.

C. Test to determine whether there are differences in holding jobs between the

educational levels.

**File: Comparing the Lifetime Number of Jobs by Educational Level - (Organize Data by Gender and Education)**