

# ST 103 – Statistics Applications I

## ASSIGNMENT 01

**Submission Date-05/06/2014**

**Submission type- Online (Refer the note about “How to submit an Assignment online” in the coursehome page.**

**Note :-Make a zip folder by including necessary text files and minitab projects using the registration number. As an example if the registration number is S/12/123 then prepare a zip folder S12123.zip and submit it.**

1) Consider the studentmarks.txt file in the course home page. The data set include the marks of 10 students.

- a) Import the data set into a Minitab worksheet.
- b) Create a **local Macro** to do the following things.
  - a. Calculate the total marks for each student
  - b. Calculate the average mark of the each student
  - c. Calculate the mean average mark for each subject and store them using constants.
  - d. Calculate the Grades for each subject based on the following criteria  
(**hint: You may use a suitable loop statement** )

Range	Grade
100-75	A
74-60	B
59-40	C
39-20	D
19-0	F

- e. Calculate the GPA values for each subject based on the following criteria.  
(**hint: You may use a suitable loop statement** )

Value	GPA Value
A	4
B	3
C	2
D	1
F	0

- f. Based on the GPA values for each subject, calculate the overall GPA for each student.

2) Enter the following matrices into M1 and M2

$$\begin{array}{ccc} -2 & 4 & 1 \\ 5 & -1 & 7 \\ 3 & 5 & 6 \end{array} = M1 \qquad \begin{array}{ccc} -1 & 3 & 3 \\ 6 & 1 & 4 \\ -2 & 3 & 2 \end{array} = M2$$

- I. Add M1 and M2 and store the results in a new matrix.
- II. Subtract M1 from M2 and store the results in a new matrix.
- III. Multiply M1 by M2 and store the results in a new matrix.
- IV. Obtain the transpose of the matrix M1 and store the results in a new matrix.