Class 10, Homework Assignment

Question 1 (3 points). Assuming that three students Bruce, Peter, and Tony got scores of 98, 89, and 55 in physics, respectively. Use if else statement in loops to sign grades (A: 90-100, B: 80-89, C: 70:79, D: 60:69, F: 0-59) to them and make a data frame to store the information.

Question 2 (3 points). Create a matrix with integers from 1 to 9, 3 rows and 3 columns. Double the diagonal entries, square the entries in the upper triangular part, and half the entries in the lower triangular part.

Question 3 (4 points). Use the following codes to generate nine random time series and call it 'ts'. Also generate the upper and lower bound of 95% CIs for these time series and call them 'upp' and 'low', respectively. Now plot these time series in 3 x 3 plots. Use polygon() to draw the 95% CIs. Only draw labels for x-axis at the bottom and y-axis at the left side. Put one name 'Time' for x-axis at the bottom and one name 'Value' for y-axis at the left side.

```
ts <- matrix(rnorm(n=180, mean=0, sd=1), nrow=20, ncol=9)
delta <- runif(n=180, min=.4, max=6)
upp <- ts + delta
low <- ts - delta
```