Project #1 **STAT 355 Spring 2017** **Due: 3/13/2017**

Turn in the project at the beginning of lecture (5:30pm). You need to submit R code, results and graphs but NOT 1000 random numbers.

1. Use bernoulli random variable with probability of 0.4 to generate 1000 random number from binomial distribution with n = 20 and p = 0.4. You don't have to report the raw data.

   (a) Draw histogram from your generated data.

   (b) Compute the mean, variance and standard deviation.

   (c) Compute five number summary.

   (d) Count the frequencies and calculate the relative frequencies of your data.

   (e) Calculate $P(X = x)$ from the binomial table and compare with your relative frequencies of generated data.

2. Complete 3.58 by using R.