**Part A: Write a function to reveal the distribution of a vector of numeric values**

1. Create a new function ‘printVecInfo’ and have it take one numeric vector as its input argument.
2. Make the function print the following information for the vector supplied in the argument:
   1. Mean
   2. Median
   3. Min & Max
   4. Standard deviation
   5. 0.05 and 0.95 quantiles (Use the quantile( ) function)
3. Test the function with this vector: testVector <- 1:10. Results should look something like this:

[1] 5.5

[1] 10

[1] 1

[1] 3.02765

5% 95%

1.45 9.55

1. Add labels to each element of the function’s output.

**Part B: Read the census dataset**

1. Read in the Census dataset   
   *Hint: reuse the function you created in HW 3*

**Part C: Sample from the state population data frame**

1. Sample 20 observations from states$population and use printVecInfo( ) to display the characteristics of the resulting sample, and then display the results as a histogram.
2. Repeat step five two more times. Each time that you create a sample, run the resulting vector through printVecInfo( ) and create a histogram.
3. Using a block comment, explain in a comment why each result is different.

**Part D: Replicate the sampling**

1. Use the replicate function, to replicate the sampling (described in step 5 above). Replicate the sampling 2000 times, then use printVecInfo( ) to display the characteristics of the resulting replicated sample, and then display the results as a histogram.
2. Repeat step 8 two more times. Each time that you create the replicated sample, run the resulting vector through printVecInfo( ) and create a histogram.
3. Using a block comment, explain why the histograms generated in Part C are different than the histograms generated in Part D