1. rivers is a vector of river lengths that comes with R. Load the data using data(rivers). Answer the following questions using R code
   1. What is class of the vector rivers? How many items does it contain?
   2. Create a new vector named myrivers that contains the original rivers vector along with the lengths of five additional rivers: 125, 193, 475, 235, and 301. Verify that the length of the new myrivers vector is the length of the original rivers vector plus 5.
   3. Using indexing, what is the length of the 100th item in the vector? Create a new vector, mylongrivers, that only contains rivers that are longer than the length of the 100th river.
   4. Use the mean function to calculate and report the mean length of rivers in your mylongrivers vector.
2. InsectSprays is a data frame with the count of insects (variable count) in an agricultural experiment treated with different insecticides (variable spray). Load the data using data(InsectSprays). Answer the following questions using R code
   1. How many levels are in factor variable spray?
   2. Using indexing, what is the count and spray used for row 31?
   3. Using indexing and sequencing, what is the mean count for row 45 through row 50?
   4. Create a new variable named countsq that contains the square of the count variable. What is the mean of this new variable?
3. This question covers working directories and user-defined functions.
   1. Save your name in an object called who.am.i
   2. Find your working directory using the getwd() function.
   3. Download the mynameis.R user defined function. Save the function in your working directory that you found in part (a). This simple user defined function takes an object with your name in it, and outputs the results in a sentence. The user defined function takes a single object of class character, such as your who.am.i object
   4. Use the user function to tell me what your name is.