Programming assignment 2.

Suggested due date: Friday, October 12 2018 at 11:59pm

Remember:

You can remove all the variables from the workspace by writing "clear"

Look up the description of all the functions in MATLAB by typing doc in the command window.

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In this assignment, we will apply the idea of Binary Search algorithm to solve the below questions.

Note: The running time of your solutions should be **_O(logn)_**.

Question 1. Implementing the square root function: Write a function that asks a user to enter an integer *N* and returns $\lceil \sqrt{N} \rceil$.

Question 2. Ask the user to enter a random binary array having the first *K* numbers equal to *0* and the rest equal to *1*. Write a function to find the position of k that splits the 0s and 1s.

(*Example*: a = [0 0 0 1 1] , k = 3)