CSE 115 Spring 2016

Assignment on functions (5%). Has to be handwritten. Due: 11/07/2016 during the class time. This is a hard deadline, you cannot submit after the theory class. However you are welcome to submit at any time before the deadline.

1) Using block diagrams explain how two functions communicate with each other.

2) W hat is the difference between argument and parameter of a function.

3) Write down a function that will take an array, its size and an integer M as parameters and return the total number of integers that are greater than or equal to M. Then write a main function that asks the user to enter an integer X and N integers. Store N integers in an array and use the above function to compute the total number of integers that are greater than or equal to X and display the result.

4) Write a program that asks the user to type N integers of an array and an integer M. The program then searches if M is in the array or not using a user defined function with the following prototype.

```
void search ( int A[ ] , int N, int M);
```

In the function, the program finally displays "M is in the array" or "M is not in the array" as output.

5)Write a program that asks the user to type N integers of an array and an integer V. The program then searches if V exists in the array and removes the first occurrence of V, shifting each following element left and adding a zero at the end of the array using a user defined function with the following prototype:

```
void remove ( int A[ ] , int N, int V);
```

In the function, display the modified array.

6) Write a program that asks the user to type N integers of an array. The program then right rotates all elements of the array by shifting each element one place to the right and dropping off the last element using a user defined function with the following prototype

```
void right_rotate ( int A[ ] , int N);
```

In the function, finally display the modified array.

7) Write down a function that will take an integer N as parameter and will determine whether the number N is a perfect number or not. Return 1 from the function if N is a perfect number, and 0 otherwise. In your main function take an integer as input and using the function determine whether the number is a perfect number or not. Display “YES” if it is a perfect number and “NO” otherwise.