Guidelines for submitting the assignment:

1. The assignments should be handwritten with your signature and enrollment number on each page.

2. The assignment sheets should be scanned and converted into a PDF and the PDF should be named as per the Enrollment Number of the student.

3. Due date for Assignment 2 : **31st May 2020**

4, Assignment 2 should be emailed to : dar.aafaq6@gmail.com

1. **[4]** Read about Storage Classes and make a table describing various attributes of each storage classes like where they are stored, their initial value, scope and life of the variables.

2. **[4]** For the following recursive function RCALL() called from main, show how the system stack grows and shrinks when n value passed by main() to RCALL() is 8. What is the final answer returned to main ()? Show how that is calculated through the recursive function calls and their return values.

```
int  RCALL(int n)
{
if(n==1)
      return 1;
else
     return ( FUNC(n*n)  +  n );
}
```

```
int FUNC ( int n)
{
if( n== 128)
     return  0;
else
     return (  RCALL( n / 16 ) +2 );
}
```

3. Convert the following from Infix to Prefix and Postfix notations **[2.5,2.5]**.

   a. **(A+B) * C / D + E ^ F/G *H**

   b. **A + (B * C – (D / E ^ F) * G) * H**

4. Show how the following postfix expression can be evaluated using stacks. **[2,2]**

    a. **A B C * + D + E / F ^**

    b. **1 4 1 / 4 1 2 * / 8 ^ - 3 / +**

5. **[3]** Show how the infix string in **3(a)** is scanned and converted into a postfix expression using the **Output String** and **Operand Stack** as discussed in an example in class Lecture 12.