**Assignment 5 | 8th January 2021**

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**Question 1**

Write the function for insertion sort.

Function code:

void sort(int \*a,int \*n)

{

    int i,j,t,key;

   for(i=1;i<\*n;i++)

    {

        key=a[i];

        j=i-1;

        while(j>=0 && a[j]>key)

        {

            a[j+1]=a[j];

            j=j-1;

        }

        a[j+1]=key;

    }

}

**Question 2**

Write a function to find the maximum element in the stack.

Function code:

#define MaxSize 5

struct stack

{

    int arr[MaxSize];

    int top;

};

void max(struct stack s)

{

    int i,max;

    if(s.top==-1)

        printf("Stack is empty\n");

    else

    {

max=s.arr[s.top];

        for(i=s.top;i>=0;i--)

        {

            if(arr[s.top]>max)

max=arr[s.top];

        }

        printf("Maximum element: %d\n",max);

    }

}

**Question 3**

Write a function to find the minimum element in the stack.

Function code:

#define MaxSize 5

struct stack

{

    int arr[MaxSize];

    int top;

};

void min(struct stack s)

{

    int i,min;

    if(s.top==-1)

        printf("Stack is empty\n");

    else

    {

min=s.arr[s.top];

        for(i=s.top;i>=0;i--)

        {

            if(arr[s.top]<min)

min=arr[s.top];

        }

        printf("Minimum element: %d\n",min);

    }

}