

Assignment-5

Q1 Write the function for insertion sort.

Ans Function:

```
void insertion sort (int array[], int n)
```

```
{
```

```
    int i, element, j;
```

```
    for (i=1; i<n; i++) { element = array[i]; j = i-1; /*
```

```
        move elements of arr [0.. i-1], that are greater
        than key by one position */ while (j >= 0 && array[j]
```

```
        > element) {
```

```
            array[j+1] = array[j];
```

```
            j = j-1;
```

```
        }
```

```
        array[j+1] = element;
```

```
    }
```

```
}
```

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

→ // push operation
public void push(int data) {

// declare max variable

int max = data;

~~if~~ if (!maxSt.isEmpty() && max < maxSt.peek())
max = maxSt.peek();

}

st.push(data);

maxSt.push(max);

}

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

Solⁿ

Program // Stack push operation
public void push(int data){

// Assign the value we need to push
int min = data;

// If minStack is not empty

// then the value from the top of stack

if (!minSt.isEmpty() && min > minSt.peek();

// then we assign the top value of stack

min = minSt.peek();

}

st.push(data);

minSt.push(min);

}