**ASSIGNMENT 5**

Question 1

1. Write the function for insertion sort.

#include <stdio.h>

#include <conio.h>

#define size 5

void insertion\_sort(int arr[], int n);

void main()

{

int arr[size], i, n;

printf("\n Enter the number of elements in the array: ");

scanf("%d", &n);

printf("\n Enter the elements of the array: ");

for(i=0;i<n;i++)

{

scanf("%d", &arr[i]);

}

insertion\_sort(arr, n);

printf("\n The sorted array is: \n");

for(i=0;i<n;i++)

printf(" %d\t", arr[i]);

getch();

}

void insertion\_sort(int arr[], int n)

{

int i, j, temp;

for(i=1;i<n;i++)

{

temp = arr[i];

j = i-1;

while((temp < arr[j]) && (j>=0))

{

arr[j+1] = arr[j];

j--;

}

arr[j+1] = temp;

}

}