**Assignment Day 5**

**Question: Write the function for insertion sort.**

**Program:**

#include <stdio.h>

int n, i, j, temp;

int arr[64];

int inser\_sort()

{

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

{

j = i;

while ( j > 0 && arr[j-1] > arr[j])

{

temp = arr[j];

arr[j] = arr[j-1];

arr[j-1] = temp;

j--;

}

}

printf("Sorted list in ascending order:\n");

for (i = 0; i <= n - 1; i++)

{

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

}

return 0;

}

int main()

{

printf("Enter number of elements\n");

scanf("%d", &n);

printf("Enter %d integers\n", n);

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

{

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

}

inser\_sort();

}

**Output:**

Enter number of elements

5

Enter 5 integers

12

63

10

56

4

Sorted list in ascending order:

4

10

12

56

63