16.INSERTION SORT:-

Code:-

```c
#include <math.h>
#include <stdio.h>
void insertionSort(int arr[], int n)
{
        int i, key, j;
        for (i = 1; i < n; i++)
        {
                key = arr[i];
                j = i - 1;
                while (j >= 0 && arr[j] > key)
                {
                        arr[j + 1] = arr[j];
                        j = j - 1;
                }
                arr[j + 1] = key;
        }
}
void printArray(int arr[], int n)
{
        int i;
        for (i = 0; i < n; i++)
                printf("%d ", arr[i]);
        printf("\n");
}
int main()
{
        int arr[] = {12, 11, 13, 5, 6};
        int n = sizeof(arr) / sizeof(arr[0]);
```

```
insertionSort(arr, n);

printArray(arr, n);


    return 0;
}
```

OUTPUT:-

```
5 6 11 12 13

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Process exited after 0.02202 seconds with return value 0
Press any key to continue . . .
```