

71.selection sort

PROGRAM:-

```
def insertion_sort(arr):
    # Traverse through 1 to len(arr)
    for i in range(1, len(arr)):
        key = arr[i]

        # Move elements of arr[0..i-1], that are greater than key,
        # to one position ahead of their current position
        j = i - 1
        while j >= 0 and key < arr[j]:
            arr[j + 1] = arr[j]
            j -= 1
        arr[j + 1] = key

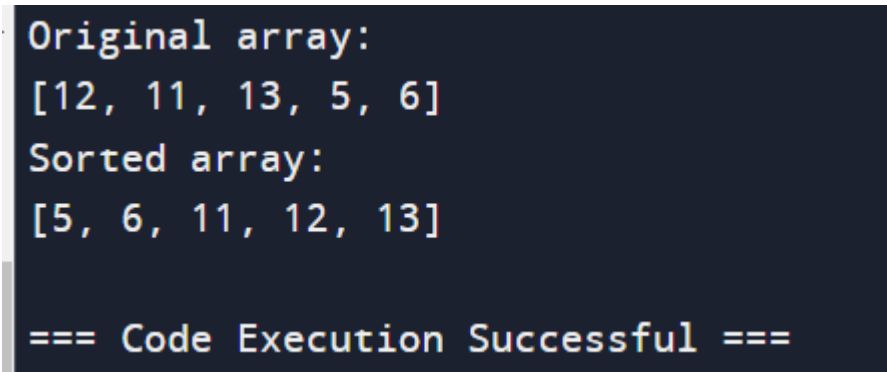
# Example usage
if __name__ == "__main__":
    # Sample array
    array = [12, 11, 13, 5, 6]

    print("Original array:")
    print(array)

    insertion_sort(array)

    print("Sorted array:")
    print(array)
```

OUTPUT:-



```
Original array:
[12, 11, 13, 5, 6]
Sorted array:
[5, 6, 11, 12, 13]

=== Code Execution Successful ===
```

TIME COMPLEXITY:- $O(n^2)$