Name : Yash Srivastava || Section - A || Roll. No - 63

# Implementation and Analysis of Selection Sort

```
def selection_sort(a):
   n = len(a)
   for i in range(n - 1):
       min = i
       for j in range(i + 1, n):
           if a[j] < a[min]:
               min = j
           if min != i:
               a[min], a[i] = a[i], a[min]
   return a

def display(a):
   for i in range(len(a)):
       print(a[i])
print("Enter an Array :")
a = list(map(int, input().split()))
selection_sort(a)
display(a)
```

**Input:**

10 20 60 50 30 40

**Output:**

10
20
30
40
50
60

**Time Complexity:** O(n^2) ( in Best, Average, Worst Case)

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# Program:

Selection Sort.py

```python
def selection_sort(a):
    n = len(a)
    for i in range(n - 1):
        min = i
        for j in range(i + 1, n):
            if a[j] < a[min]:
                min = j
            if min != i:
                a[min], a[i] = a[i], a[min]
    return a


def display(a):
    for i in range(len(a)):
        print(a[i])
print("Enter an Array :")
a = list(map(int, input().split()))
selection_sort(a)
display(a)

```

# Input/Output:

```
C:\Anaconda\envs\MLProject\python.exe "C:\MLProject\Selection Sort.py"
Enter an Array :
10 20 60 50 30 40
10
20
40
30
50
60
```