

Virtual Lab :

Selection Sort

Instructions

27 28 39 40 47 56 57 58 66 68 71 96

Sorted Elements

Element being iterated

Minimum element in current iteration

Observations

The sort is complete - there were 66 OPERATIONS and N is 12. See how number of operations are $O(n^2)$ or ≤ 144

Min. Speed Max. Speed

Next Reset Play

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Batch : T2

Roll no. : 22

PR Name Selection Sort

INPUT

```
#include <iostream>
using namespace std;
void Selectionsort(int arr[], int n)
{
    int i, j, min;
    for(i=0; i<n-1; i++)
    {
        min=i;
        for(j=i+1; j<n; j++){
            if(arr[j] < arr[min]){
                min=j;
            }
        }
        int temp = arr[min];
        arr[min] = arr[i];
        arr[i] = temp;
    }
}
```

```

}
}
int main()
{
int n,i;
cout<<"Enter the no of elements : "<<endl;
cin>>n;
int arr[n];
cout<<"Enter the elements:- "<<endl;
for(i=0; i<n; i++){
cout<<i+1<<" ";
cin>>arr[i];
}
Selectionsort(arr, n);
cout<<"\nAfter sorting elements are - "<<endl;
cout<<"In ascending order"<<endl;
for(i=0; i<n; i++){
cout<<i+1<<" ";
cout<<arr[i] <<" "<<endl;
}
return 0;
}

```

OUTPUT

Enter the no of elements :

4

Enter the elements:-

1) 1

2) 2

3) 3

4) 0

After sorting elements are -

In ascending order

1) 0

2) 1

3) 2

4) 3

...Program finished with exit code 0

Press ENTER to exit console.

