LAB2- Selection sort

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4-D

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
int n;
void swap(int *x, int *y)
{
  int temp = *x;
  *x = *y;
  *y = temp;
}


void selectionSort(int arr[])
{
    int i, j, min;

    for (i = 0; i < n; i++)
    {
        min= i;
        for (j = i+1; j < n; j++)
          if (arr[j] < arr[min])
```

```
            min= j;

        swap(&arr[min], &arr[i]);
    }
}



int main()
{

  int choice,i;
  double st;
  clock_t start, end;
  printf("Enter the number of elements of the array\n");
  scanf("%d",&n);
  int array[n],array1[n];
  for (i = 0; i < n; i++)
  {
     array[i]= rand ()%200;
     array1[i]=array[i];
     printf("%d ", array[i]);
  }
  printf("\n");

  start = clock();
  selectionSort(array);
  end = clock();
  st = ((double) (end - start)) / CLOCKS_PER_SEC;
```

```
  printf("Sorted array is : ");
  for (i = 0; i < n; i++)
  {
     printf("%d ", array[i]);
  }
  printf("\n");
  printf("\nTime taken by Selection Sort : %lf\n", st);
  printf("\n");

}
```