Assignment 12

```c
#include <stdio.h>

void selection(int arr[], int n)
{
   int i, j, small;

   for (i = 0; i < n-1; i++)    // One by one move boundary of unsorted subarray
   {
      small = i; //minimum element in unsorted array

      for (j = i+1; j < n; j++)
      if (arr[j] < arr[small])
         small = j;
// Swap the minimum element with the first element
   int temp = arr[small];
   arr[small] = arr[i];
   arr[i] = temp;
   }
}

void printArr(int a[], int n) /* function to print the array */
```

```
{
    int i;
    for (i = 0; i < n; i++)
        printf("%d ", a[i]);
}

int main()
{
    int a[] = { 12, 31, 25, 8, 32, 17 };
    int n = sizeof(a) / sizeof(a[0]);
    printf("Before sorting array elements are - \n");
    printArr(a, n);
    selection(a, n);
    printf("\nAfter sorting array elements are - \n");
    printArr(a, n);
    return 0;
}
```

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```java
import java.util.Scanner;

public class select
{
   public static void main(String args[])
   {
       int size, i, j, temp;
       int arr[] = new int[50];
       Scanner scan = new Scanner(System.in);

       System.out.print("Enter Array Size : ");
       size = scan.nextInt();

       System.out.print("Enter Array Elements : ");
       for(i=0; i<size; i++)
       {
           arr[i] = scan.nextInt();
       }

       System.out.print("Sorting Array using Selection Sort Technique..\n");
       for(i=0; i<size; i++)
       {
           for(j=i+1; j<size; j++)
           {
               if(arr[i] > arr[j])
               {
                   temp = arr[i];
                   arr[i] = arr[j];
                   arr[j] = temp;
               }
           }
       }

       System.out.print("Now the Array after Sorting is :\n");
       for(i=0; i<size; i++)
       {
           System.out.print(arr[i]+ "  ");
       }
   }
}
```

```
Command Prompt
Before Selection Sort
9 14 3 2 43 11 58 22
After Selection Sort
2 3 9 11 14 22 43 58
D:\21se02ml014\DS>javac select.java

D:\21se02ml014\DS>java select
Enter Array Size : 5
Enter Array Elements : 10
2
30
4
50
Sorting Array using Selection Sort Technique..
Now the Array after Sorting is :
2  4  10  30  50
D:\21se02ml014\DS>
```