3. Implement Greedy search algorithm for Selection Sort

Python Code:

*def* selection\_sort(*array*):  
 length = len(*array*)  
  
 *for* i *in* range(length - 1):  
 minIndex = i  
  
 *for* j *in* range(i + 1, length):  
 *if array*[j] < *array*[minIndex]:  
 minIndex = j  
  
 *array*[i], *array*[minIndex] = *array*[minIndex], *array*[i]  
  
 *return array*# creating an empty list  
lst = []  
  
# number of elements as input  
n = int(input("Enter number of elements : "))  
  
# iterating till the range  
*for* i *in* range(0, n):  
 ele = int(input())  
 # adding the element  
 lst.append(ele)  
  
print(lst)  
  
  
print("The sorted array is: ", selection\_sort(lst))

Java Code:

**import** java.io.\*;

**import** java.lang.\*;

**import** java.util.\*;

**public** **class** Selectionsort {

**static** **void** selectionSort(**int**[] A) {

**int**[] U = A.clone();

**int** n = A.length;

**for** (**int** i = 0; i < n - 1; i++) {

**int** min\_idx = i;

**for** (**int** j = i + 1; j < n; j++) {

**if** (A[j] < A[min\_idx]) {

min\_idx = j;

}

}

**int** tmp = A[i];

A[i] = A[min\_idx];

A[min\_idx] = tmp;

}

System.***out***.printf("Selection Sort:\nUnsorted array: %s\nSorted array: %s", Arrays.*toString*(U), Arrays.*toString*(A));

}

**public** **static** **void** main(String ar[])

{

System.***out***.println("Enter the size of array");

Scanner sc=**new** Scanner(System.***in***);

**int** n=sc.nextInt();

**int**[] arr=**new** **int**[n];

System.***out***.println("Enter Array elements");

**for**(**int** i=0;i<n;i++)

{

arr[i]=sc.nextInt();

}

Selectionsort obj=**new** Selectionsort();

obj.*selectionSort*(arr);

}

}