PRACTICE-PROJECT4

IMPLEMENTING THE SELECTION SORT ALGORITHM –

**package** project;

**import** java.util.InputMismatchException;

**import** java.util.Scanner;

**public** **class** SelectionSort {

**public** **void** selectionSort(**int** arr[]) {

**int** size = arr.length;

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

**int** index = i;

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

**if**(arr[j] < arr[index]) {

index = j;

}

}

**int** minNumber = arr[index];

arr[index] = arr[i];

arr[i] = minNumber;

}

}

**public** **void** printArray(**int** arr[]) {

System.***out***.print("[");

**for**(**int** i=0; i<arr.length; i++) {

System.***out***.print(arr[i]);

**if**(i != arr.length-1) {

System.***out***.print(",");

}

}

System.***out***.print("]");

System.***out***.println();

}

**public** **static** **void** main(String[] args) {

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

SelectionSort obj = **new** SelectionSort();

**try** {

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

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

**if**(size <= 0) {

System.***out***.println("Invalid input");

sc.close();

**return**;

}

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

System.***out***.println("Enter the array elements: ");

**for**(**int** i=0; i<size; i++) {

arr[i] = sc.nextInt();

}

System.***out***.println("Original array: ");

obj.printArray(arr);

obj.selectionSort(arr);

System.***out***.println("\nAfter sorting: ");

obj.printArray(arr);

} **catch** (InputMismatchException e) {

System.***out***.println("Invalid input");

}

**catch**(Exception e) {

System.***out***.println(e.getMessage());

}

sc.close();

}

}