Assignment 1-CSE1007
Name: Akshata A Bhat
Reg no- 20BCE0923

1.

Code for selection sort:

```java
import java.util.Scanner;

public class assignment
{
    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();
        }


        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;
                }
            }
        }
```

```java
        }


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



    }
}
```

Output:

```java
Code to remove duplicates
public class assignment {
    public static int removeDuplicateElements(int arr[], int n){
            if (n==0 || n==1){
                return n;
            }
            int[] temp = new int[n];
            int j = 0;
            for (int i=0; i<n-1; i++){
                if (arr[i] != arr[i+1]){
                    temp[j++] = arr[i];
                }
             }
            temp[j++] = arr[n-1];
            // Changing original array
            for (int i=0; i<j; i++){
```

```java
                    arr[i] = temp[i];
            }
            return j;
        }

        public static void main (String[] args) {
            int arr[] = {100,200,100,100,200,300};
            int length = arr.length;
            length = removeDuplicateElements(arr, length);
            //printing array elements
            for (int i=0; i<length; i++)
                System.out.print(arr[i]+" ");
        }
    }
```

```
PS C:\Users\Akshata A Bhat>  & 'c:\Users\Akshata A Bhat\.vscode\extens
m Files\Java\jdk-16.0.2\bin\java.exe' '--enable-preview' '-XX:+ShowCod
kshata A Bhat\AppData\Local\Temp\vscodesws_8e6d5\jdt_ws\jdt.ls-java-pr
100 200 100 200 300
PS C:\Users\Akshata A Bhat> 
```

2

```java
import java.util.*;
class student {
    String name;
    String reg_no;


}
public class Main {
        public static void main(String[] args) {
            List<Integer> slow=new ArrayList<Integer>();
        List<Integer> fast=new ArrayList<Integer>();
        List<Integer> normal=new ArrayList<Integer>();
```

```java
        int n;double res=0;

    Scanner sc=new Scanner(System.in);

    System.out.println("enter how many numbers to cal  avg");

    n=sc.nextInt();

    int a[]=new int[n];

    System.out.println("enter   "+n+"  numbers");

    for(int i=0;i<n;i++)
        a[i]=sc.nextInt();

    for(int i=0;i<n;i++)
        res =res+a[i];
        double fin=res/n;

    System.out.println("average="+fin);
    if(fin>89){
       fast.add(fin);
    }
    else if(fin<40){
        slow.add(fin);
    }
    else{
        normal.add(fin);
    }



     System.out.println(slow);


  }
}
```