Worksheet_set_2

Ques 1: Write a java program to count the number of Digits in a Number.

```
import java.util.*;
public class Main {
public static void main(String[] args) {
 Scanner sc = new Scanner(System.in);
  int count = 0, num =sc.nextInt();
  while (num != 0) {
    num = num/10;
    ++count;
  }
  System.out.println("Number of digits: " + count);
 }
}
```

Input : 00111
Output : Number of digits: 3

Ques 2: Write a java program to count vowels and consonants in a String.

```
import java.util.*;
public class Main {
 public static void main(String[] args) {
     Scanner scanner = new Scanner(System.in);
     System.out.print("Enter a string: ");
     String input = scanner.nextLine().toLowerCase();
     int vowel = 0;
     int consonant = 0;
     for (int i = 0; i < input.length(); i++) {
        char ch = input.charAt(i);
        if (Character.isLetter(ch)) {
           if (ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u') {
              vowel++;
           } else {
              consonant++;
           }
        }
     }

     System.out.println("Number of vowels: " + vowel);
     System.out.println("Number of consonants: " + consonant);
```

```
    }
}
```

Input : Enter a string: Hello World

Output : Number of vowels: 3

Number of consonants: 7

Ques 3 : Write a Java Code for showing Inheritance.

```java
import java.util.*;
class Calculation {
 int z;
 public void addition(int x, int y) {
   z = x + y;
   System.out.println("The sum of the given numbers:"+z);
 }
 public void Subtraction(int x, int y) {
   z = x - y;
   System.out.println("The difference between the given numbers:"+z);
 }
}

public class My_Calculation extends Calculation {
  public void multiplication(int x, int y) {
    z = x * y;
    System.out.println("The product of the given numbers:"+z);
  }
  public static void main(String args[]) {
    int a = 20, b = 10;
    My_Calculation demo = new My_Calculation();
    demo.addition(a, b);
    demo.Subtraction(a, b);
    demo.multiplication(a, b);
  }
}
```

Output: The sum of the given numbers:30

The difference between the given numbers:10

The product of the given numbers:200

Ques 4 : Write a java program to check if a vowel is present in a string.

```java
import java.util.*;
public class  Main{
```

```java
    public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
        String s = sc.next();
        char[] c = s.toCharArray();
        for (int i = 0; i < s.length(); i++) {
            if(s.charAt(i)=='a' || s.charAt(i)=='e' || s.charAt(i)=='i' || s.charAt(i)=='o' ||
s.charAt(i)=='u')
                return true;
        }
    return false;
    }
}
```
Input : fly
Output : false

Ques 5 : Write a program to remove duplicate elements from an array in Java.
```java
import java.util.*;
public class Main{
 public static void main(String[] args){
    Scanner sc = new Scanner(System.in);
     int n = sc.nextInt();
     int arr[] = new int [n];
     for(int i =0;i<n;i++){
        arr[i] = sc.nextInt();
     }
ArrayList<Integer> list = new ArrayList<>():
  int already = -1;
  Arrays.sort(arr);
    for(int i=0;i<n-1;i++){
        if(arr[i] == arr[i+1]){
            if(already !=arr[i]){
                list.add(arr[i]);
            }
             already = arr[i];
        }
    }
if(list.size()==0){
   list.add(-1);
}
return list;
```

```
  }
}
```

Input : 4

1 3 6 3

Output : 1 3 6