JAVA WEEK-2

CHIRAN JEEVI

2019103013

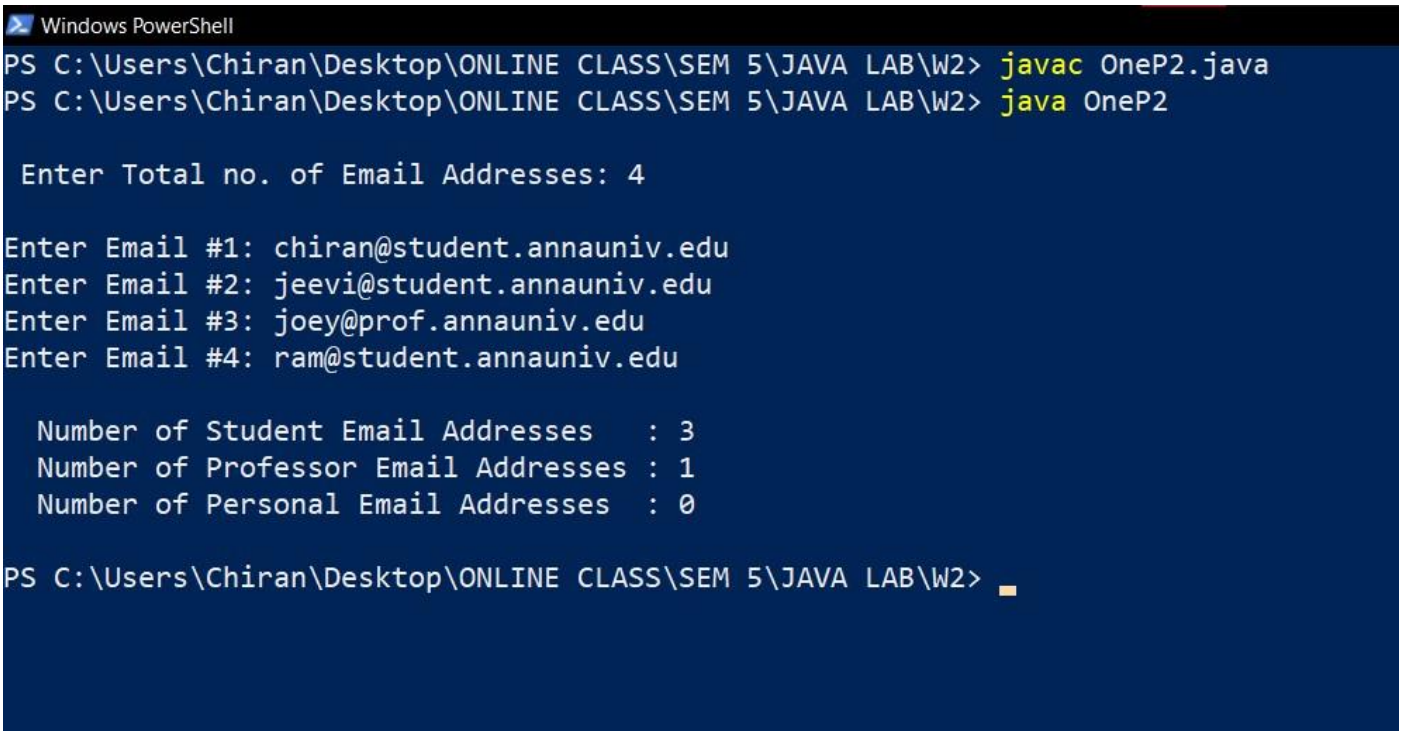
Q1) In our University, student email addresses end with @student.annauniv.edu, while professor email addresses end with @prof.annauniv.edu. Write a program that first asks the user how many email addresses they will be entering, and enter those user given addresses in an array of String. The program should print out a message indicating the number of student addresses and professor addresses.

CODE:

```
import java.util.Scanner;

public class OneP2 {
    public static void main(String[] args)
    {
        Scanner input =  new Scanner(System.in);

        int i, j, n;
        String stud  = new String("@student.annauniv.edu");
        String prof  = new String("@prof.annauniv.edu");
        int studNum=0, profNum=0;

        System.out.print("\n Enter Total no. of Email Addresses: ");
        n = input.nextInt();
        input.nextLine();

        String [] s = new String[n];

        System.out.println();
        for (i=0; i<n; i++)
        {
            System.out.print("Enter Email #"+(i+1)+": ");
            s[i] = input.nextLine();

            int len = s[i].length();

            if (len > 18) {
                if ( prof.equals(s[i].substring(len-(prof.length()), len)) )
                    profNum++;
```

```
            }
            if (len > 20) {
                if ( stud.equals(s[i].substring(len-(stud.length()), len)) )
                    studNum++;
            }
        }

        System.out.println("Number of Student Email Addresses   : " + studNum);
        System.out.println("Number of Professor Email Addresses : " + profNum);
        System.out.println("Number of Personal Email Addresses  : "+(n-studNum-
profNum));

        System.out.println();
        input.close();
    }
}
```

OUTPUT:



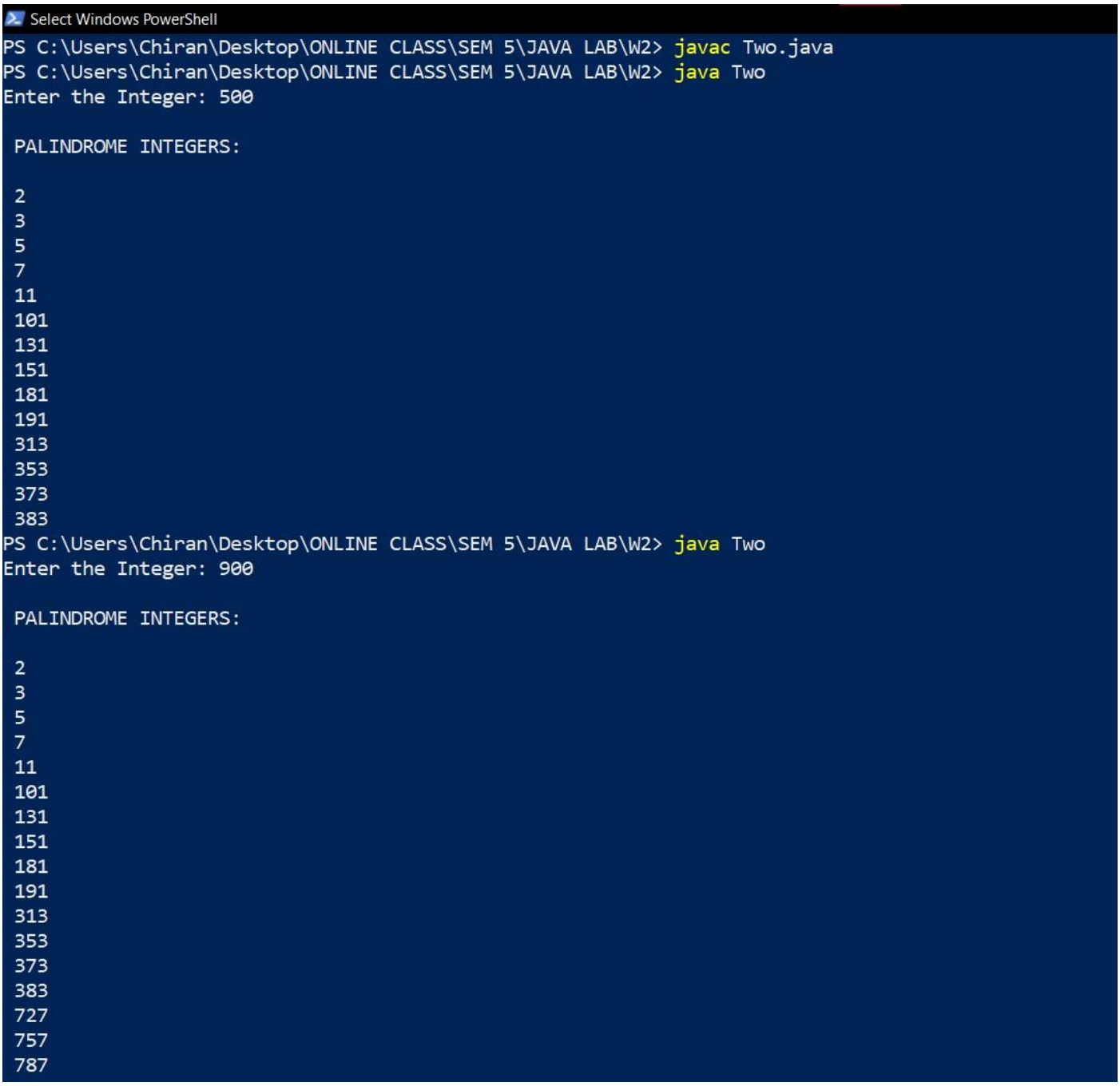
```
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java OneP2

 Enter Total no. of Email Addresses: 3

Enter Email #1: cj@gmail.com
Enter Email #2: jeevi@student.annauniv.edu
Enter Email #3: tommy@prof.annauniv.edu

  Number of Student Email Addresses   : 1
  Number of Professor Email Addresses : 1
  Number of Personal Email Addresses  : 1

PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2>
```

2) Write a static method given as: **public static void palindromicPrime(int n).** The method has to print the palindromic prime within the range of integer specified by the user, n. Example: 131, 313,757 are palindromic primes

```java
import java.util.Scanner;

public class Two
{
    public static void main(String[] args)
    {
        Scanner input = new Scanner(System.in);

        System.out.print("Enter the Integer: ");
        int n = input.nextInt();

        palindromicPrime(n);
    }

    public static void palindromicPrime( int n)
    {
        Scanner input = new Scanner(System.in);
        int i, j, k=0;
        boolean prime, palindrome;
        int [] arr = new int[1000];

        arr[k] = 2;
        int count=1;

        for (i=3; i<n; i++)
```

```
        {
            prime = true;
            for (j=2; j<i; j++)
            {
                if (i%j == 0) {
                    prime=false;
                    break;
                }
            }

            if (prime)
            {
                if (revv(i)) {
                    arr[++k] = i;
                    count++;
                }
            }
        }

        System.out.println("\n PALINDROME INTEGERS: \n");
        for (j=0; j<count; j++)
            System.out.println(" " + arr[j]);

    }

    public static boolean revv (int num)
    {
        int result=0, reminder;
        int original=num;

        while (num != 0) {
            reminder = num%10;
            result = result*10 + reminder;
            num = num/10;
        }


        if (result == original)
            return true;

        return false;
    }
}
```

OUTPUT:


Select Windows PowerShell
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> javac Two.java
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Two
Enter the Integer: 500
PALINDROME INTEGERS:
2
3
5
7
11
101
131
151
181
191
313
353
373
383
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Two
Enter the Integer: 900
PALINDROME INTEGERS:
2
3
5
7
11
101
131
151
181
191
313
353
373
383
727
757
787

3) Write a method equalTo to check whether the given two double values are equal and returns Boolean value

```java
import java.util.Scanner;

public class Three {
    public static void main(String[] args)
    {
        Scanner input = new Scanner(System.in);
        double num1, num2;

        System.out.print("\n Enter 1st Num: ");
        num1 = input.nextDouble();
        System.out.print(" Enter 2nd Num: ");
        num2 = input.nextDouble();

        if (equalTo(num1, num2))
            System.out.println("\t The 2 values are Equal!\n");
        else
            System.out.println("\t The 2 values are NOT Equal\n");
    }

    public static boolean equalTo (double n1, double n2) {
        if (n1==n2)
            return true;
        return false;
    }
}
```

OUTPUT:

```
Windows PowerShell
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> javac Three.java
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Three

 Enter 1st Num: 5.6
 Enter 2nd Num: 5.60
         The 2 values are Equal!

PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Three

 Enter 1st Num: 55
 Enter 2nd Num: 5.5
         The 2 values are NOT Equal

PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Three

 Enter 1st Num: 6.9086
 Enter 2nd Num: 6.90
         The 2 values are NOT Equal

PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2>
```

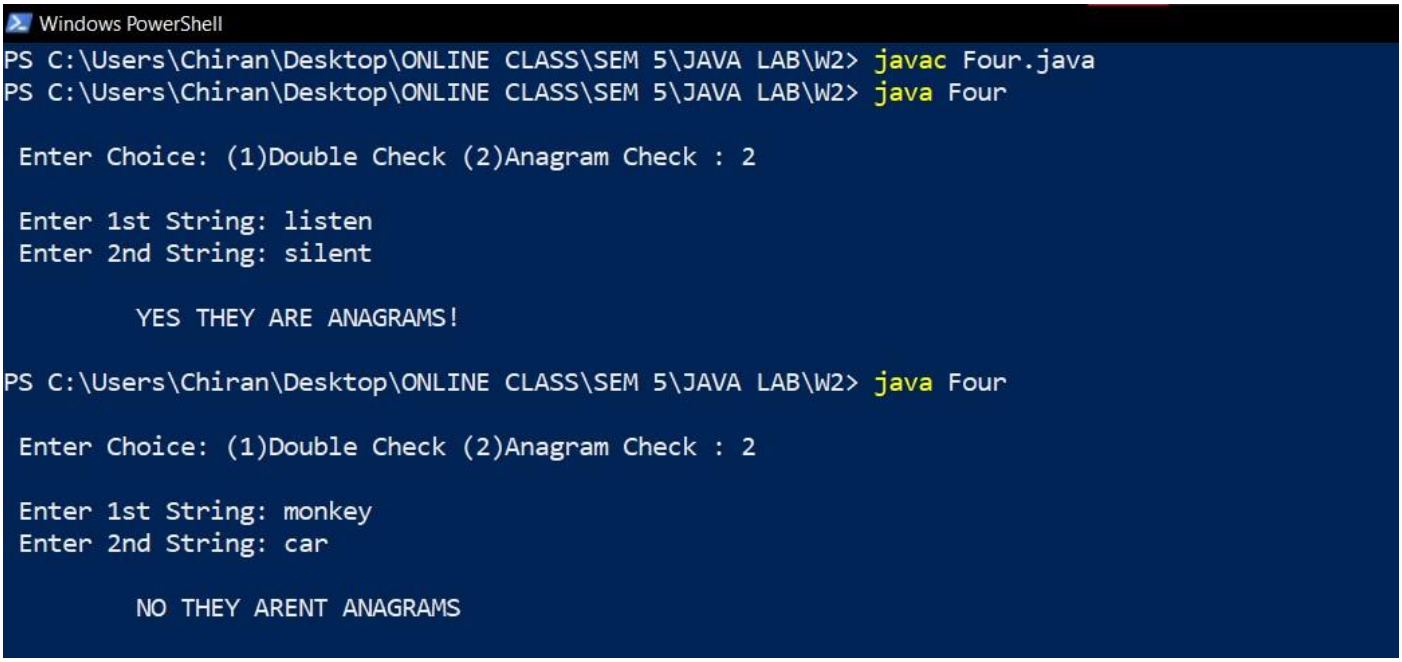
LEVEL 2

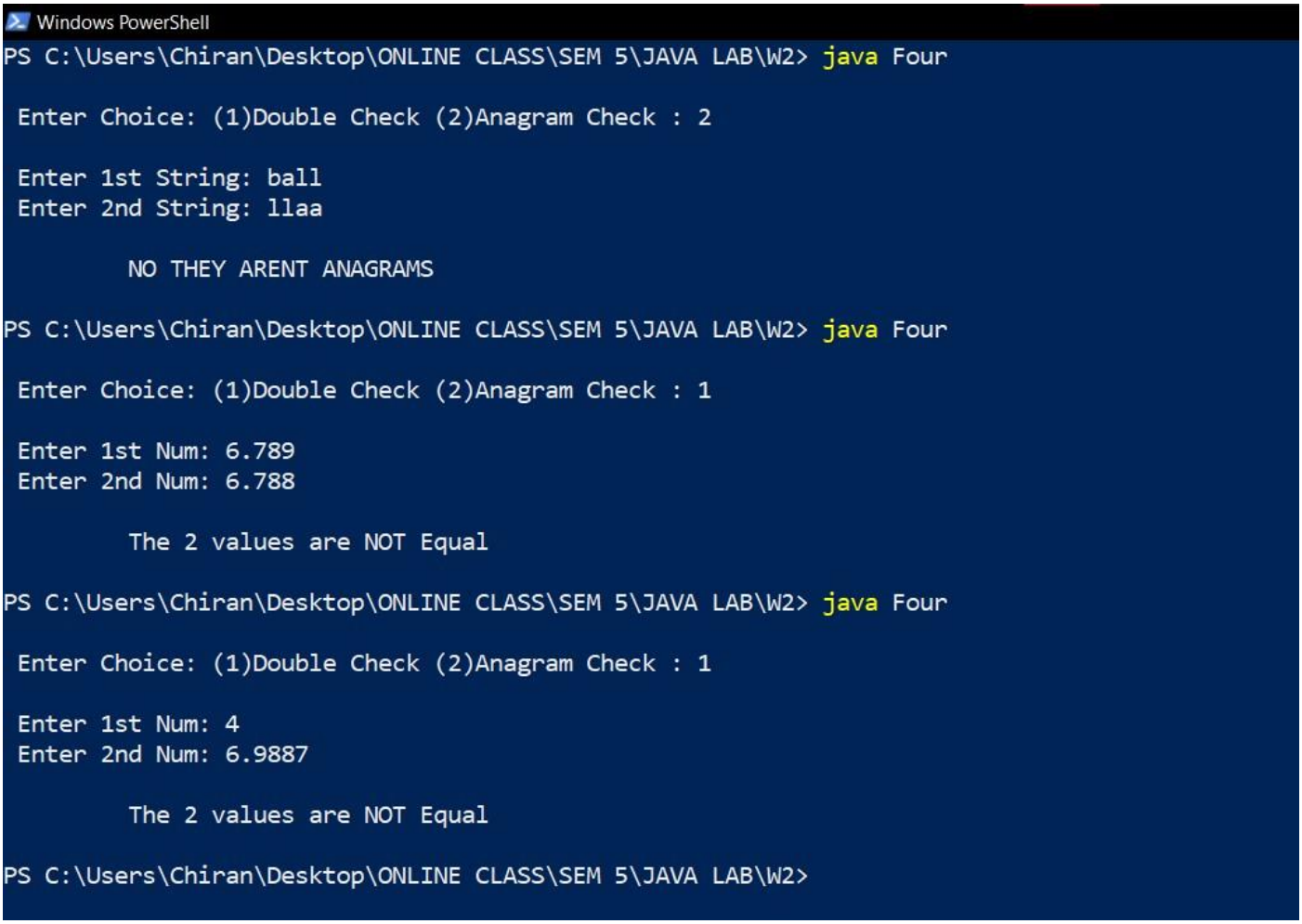
Overload the equalTo method to find whether the given two strings are anagrams. Two words are anagrams if they contain the same letters in any order. For example, silent and listen are anagrams

```
import java.util.Scanner;
import java.util.Arrays;

public class Four
{
    public static void main(String[] args)
    {
        Scanner input = new Scanner(System.in);
        double num1, num2;
        String s1 = new String();
        String s2 = new String();
        int option;

        System.out.print("\n Enter Choice: (1)Double Check (2)Anagram Check : "
);
        option = input.nextInt();

        if (option==1)
        {
            System.out.print("\n Enter 1st Num: ");
            num1 = input.nextDouble();
            System.out.print(" Enter 2nd Num: ");
            num2 = input.nextDouble();

            if (equalTo(num1, num2))
                System.out.println("\n\t The 2 values are Equal!\n");
            else
                System.out.println("\n\t The 2 values are NOT Equal\n");
        }
        else if (option==2)
        {
            input.nextLine();

            System.out.print("\n Enter 1st String: ");
            s1 = input.nextLine();
            System.out.print(" Enter 2nd String: ");
            s2 = input.nextLine();
```

```
            if ( equalTo(s1, s2) )
                System.out.println("\n\t YES THEY ARE ANAGRAMS!\n");
            else
                System.out.println("\n\t NO THEY ARENT ANAGRAMS\n");

        }
    }

    public static boolean equalTo (double n1, double n2)
    {
        if (n1==n2)
            return true;
        return false;
    }

    public static boolean equalTo (String s1, String s2)
    {
        if (s1.length()==s2.length())
        {
            int i, j, len = s1.length();
            int a1[] = new int[len];
            int a2[] = new int[len];
            boolean ans;

            for (i=0; i<len; i++) {
                a1[i] = s1.charAt(i);
                a2[i] = s2.charAt(i);
            }

            Arrays.sort(a1);
            Arrays.sort(a2);

            ans = Arrays.equals(a1, a2);

            return ans;
        }
        else
            return false;
    }
}
```

OUTPUT:


Windows PowerShell
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> javac Four.java
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Four
Enter Choice: (1)Double Check (2)Anagram Check : 2
Enter 1st String: listen
Enter 2nd String: silent
YES THEY ARE ANAGRAMS!
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Four
Enter Choice: (1)Double Check (2)Anagram Check : 2
Enter 1st String: monkey
Enter 2nd String: car
NO THEY ARENT ANAGRAMS


Windows PowerShell
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Four
Enter Choice: (1)Double Check (2)Anagram Check : 2
Enter 1st String: ball
Enter 2nd String: llaa
NO THEY ARENT ANAGRAMS
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Four
Enter Choice: (1)Double Check (2)Anagram Check : 1
Enter 1st Num: 6.789
Enter 2nd Num: 6.788
The 2 values are NOT Equal
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Four
Enter Choice: (1)Double Check (2)Anagram Check : 1
Enter 1st Num: 4
Enter 2nd Num: 6.9887
The 2 values are NOT Equal
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2>

LEVEL 3 – SPOT

Define a static final String array FLAVOURS that consists of Ice cream flavours.

static final String[] FLAVOURS = {‘"Chocolate", "Strawberry", "Vanilla Fudge Swirl", "Mint Chip", "Mocha Almond Fudge", "Mango", "Praline Cream", "Lichi"}.

Define a method called flavourSet **public static String [] flavourSet (String flavor [])** that takes the array of flavours and returns the user preferred flavours as an array in the decreasing order of preference.

```
import java.util.Scanner;

import java.util.Arrays;

public class Five
{
    static final String[] flavours =
    {
        "Chocolate", "Strawberry", "Vanilla Fudge Swirl", "Mint Chip",
        "Mocha Almond Fudge", "Mango", "Praline Cream", "Lichi"
    };

    public static void main(String[] args)
    {
        int i, j, n = flavours.length;
        String result [] = new String[n];
        result = flavourSet(flavours);

        System.out.println("\n USER PREFERENCE: \n");
        for (i=0; i<n; i++)
        {
            System.out.println(result[i]);
        }
        System.out.println("\n");
    }

    public static String [] flavourSet (String flavor [])
    {
        Scanner input = new Scanner(System.in);
        int i, j, n = flavours.length;
        int loves[] = new int[n];

        String pref [] = new String[n];
```

```
        System.out.println("\n");
        for (i=0; i<n; i++) {
            System.out.print(" " + flavours[i] + " ");
        }

        System.out.println("\n\n"+"Enter Your Preferences (0-Most Favorite, 7-
Least Favorite): \n");

        for (i=0; i<n; i++)
        {
            System.out.print(" " + flavours[i] + " Preference: ");
            loves[i] = input.nextInt();
        }

        for (j=0; j<n; j++)
            pref[loves[j]] = flavours[j];

        input.close();

        return pref;
    }
}
```

OUTPUT:

```
Windows PowerShell
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> javac Five.java
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Five


 Chocolate  Strawberry  Vanilla Fudge Swirl  Mint Chip  Mocha Almond Fudge  Mango  Praline Cream  Lichi

Enter Your Preferences (0-Most Favorite, 7-Least Favorite):

 Chocolate Preference: 0
 Strawberry Preference: 2
 Vanilla Fudge Swirl Preference: 3
 Mint Chip Preference: 4
 Mocha Almond Fudge Preference: 6
 Mango Preference: 7
 Praline Cream Preference: 5
 Lichi Preference: 1

 USER PREFERENCE:

Chocolate
Lichi
Strawberry
Vanilla Fudge Swirl
Mint Chip
Praline Cream
Mocha Almond Fudge
Mango


PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2>
```

```
Windows PowerShell
PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2> java Five


 Chocolate  Strawberry  Vanilla Fudge Swirl  Mint Chip  Mocha Almond Fudge  Mango  Praline Cream  Lichi

Enter Your Preferences (0-Most Favorite, 7-Least Favorite):

 Chocolate Preference: 7
 Strawberry Preference: 6
 Vanilla Fudge Swirl Preference: 5
 Mint Chip Preference: 4
 Mocha Almond Fudge Preference: 3
 Mango Preference: 2
 Praline Cream Preference: 1
 Lichi Preference: 0

 USER PREFERENCE:

Lichi
Praline Cream
Mango
Mocha Almond Fudge
Mint Chip
Vanilla Fudge Swirl
Strawberry
Chocolate


PS C:\Users\Chiran\Desktop\ONLINE CLASS\SEM 5\JAVA LAB\W2>
```

	Marks
Preparatory Exercises	
Observation	
Spot	
Total	