

CDAC Hyderabad

PG-DAC March 2023

OOPs With Java

Assignment No 4.

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Q1)

The screenshot shows a Sublime Text interface with multiple tabs open. The active tab contains Java code for determining if a number is positive or negative. The terminal window below shows the execution of the program and its output for two different inputs: 23 and -34.

```
import java.util.*;
class SignNumber{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter a Number : ");
        int a = sc.nextInt();
        if(a>0){
            System.out.println(a+" is Positive Integer");
        }else{
            System.out.println(a+" is Negative Integer");
        }
    }
}
```

```
C:\Users\nikhi\Documents\Assignment 4>java SignNumber.java
23
Enter a Number :
23 is Positive Integer

C:\Users\nikhi\Documents\Assignment 4>java SignNumber.java
Enter a Number :
24
24 is Positive Integer

C:\Users\nikhi\Documents\Assignment 4>java SignNumber.java
Enter a Number :
-34
-34 is Negative Integer
```

Q2)

The screenshot shows a Sublime Text window with multiple tabs open. The current tab is 'QuadEq.java'. The code implements a quadratic equation solver using the quadratic formula. It prompts the user for three coefficients (a, b, c) and prints the roots (r1, r2). The code uses Scanner for input and Math.sqrt for the square root calculation.

```
C:\Users\nikhi\Documents\Assignment 4\QuadEq.java • (Documents) - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
FOLDERS
Documents
Assignment 1
Assignment 2
Assignment 3
Assignment 4
AverageValue.java
CubeOfN.java
FahrenToCel.java
FloatingNumber.java
GreatestOfThree.java
IncreasingDecr.java
IndexOfArray.java
LeapYear.java
MaxMinArray.java
MulTable.java
NaturalNumber.java
NaturalSum.java
PatternFloyd.java
PatternIncrNur.java
PatternPyramide.java
PatternRightTriangle.java
PatternSameN.java
QuadEq.java
ReverseArray.java
SequenceOfDigits.java
SignNumber.java
SumOfArrays.java
SumOfN.java
Line 10, Column 1
Tab Size: 4
Java
C:\Windows\System32\cmd.e
C:\Users\nikhi\Documents\Assignment 4>java QuadEq.java
Enter Three Number to find roots :
1 5 1
The roots of r1 AND r2 are : -0.20871215252208009 -4.7912878474779195
C:\Users\nikhi\Documents\Assignment 4>
```

```
4
5     public static void main(String[] args) {
6
7         Scanner sc = new Scanner(System.in);
8
9         System.out.println("Enter Three Number to find roots : ");
10
11        int a = sc.nextInt();
12        int b = sc.nextInt();
13        int c = sc.nextInt();
14
15        double r1, r2, x;
16        // ax^2 + bx + c = 0;
17        // x = b^2 - (4ac)^1/2
18
19        x = Math.sqrt((b*b)-(4*a*c));
20        r1 = (-b+x)/(2*a);
21        r2 = (-b-x)/(2*a);
22
23        System.out.println("The roots of r1 AND r2 are : "+ r1+ " "+ r2);
24
25
26
27
28
29
30    }
31 }
```

Q3)

The screenshot shows a Sublime Text window with multiple tabs open. The active tab contains Java code for finding the greatest of three numbers. The code uses a Scanner to read three integers from standard input and then compares them using if statements. The output pane shows the execution of the program in a cmd window, where it prompts for three numbers (12, 45, 67), finds 67 as the greatest, and then repeats the process with numbers 56, 7, 8, finding 8 as the greatest.

```
import java.util.*;  
class GratestOfThree{  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        System.out.println("Enter Three Number to find gratest of three :");  
        int a = sc.nextInt();  
        int b = sc.nextInt();  
        int c = sc.nextInt();  
  
        if(a>b&&a>c){  
            System.out.println("a is gratest ");  
        }else if(b>c){  
            System.out.println("b is gratest ");  
        }else{  
            System.out.println("c is gratest ");  
        }  
    }  
}
```

C:\Users\nikhi\Documents\Assignment 4>java GratestOfThree.java
Enter Three Number to find gratest of three :
12 45 67
c is gratest
C:\Users\nikhi\Documents\Assignment 4>java GratestOfThree.java
Enter Three Number to find gratest of three :
56 7 8
a is gratest
C:\Users\nikhi\Documents\Assignment 4>java GratestOfThree.java
Enter Three Number to find gratest of three :
12 45 8
b is gratest

Line 15, Column 30 Tab Size: 4 Java 14:24 03-04-2023

Q4)

The screenshot shows a Sublime Text interface with multiple tabs open. The current tab contains Java code for a class named FloatingNumber. The code uses a Scanner to read a float input from standard input and prints whether it is zero, positive, negative, small, or large based on its value and absolute value.

```
import java.util.*;  
class FloatingNumber {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        System.out.println("Enter Number : ");  
        float a = sc.nextFloat();  
  
        if(a ==0){  
            System.out.println("Number is zero ");  
        }else if(a <0){  
            System.out.println("Number is Negative ");  
        }else if(a>=1&&a<=100000){  
            System.out.println("Number is Positive ");  
        }else if(Math.abs(a)<1&& Math.abs(a)>0){  
            System.out.println(" Small");  
        }else if(a>100000){  
            System.out.println(" Large ");  
        }  
    }  
}
```

To the right of the editor is a terminal window titled 'C:\Windows\System32\cmd.exe'. It shows the execution of the 'FloatingNumber.java' program. It first asks for an input number, then prints whether the number is positive or negative. It then asks for another input, prints 'Number is zero' for zero, and finally prints 'Small' for a number between 1 and 100,000.

```
C:\Users\nikhi\Documents\Assignment 4>java FloatingNumber.java  
Enter Number :  
12  
Number is Positive  
  
C:\Users\nikhi\Documents\Assignment 4>java FloatingNumber.java  
Enter Number :  
-12  
Number is Negative  
  
C:\Users\nikhi\Documents\Assignment 4>java FloatingNumber.java  
Enter Number :  
0  
Number is zero  
  
C:\Users\nikhi\Documents\Assignment 4>java FloatingNumber.java  
Enter Number :  
.12  
Small
```

At the bottom of the screen, there is a taskbar with various icons and system status indicators. The date and time are shown as 03-04-2023 14:25.

Q5)

C:\Users\nikhi\Documents\Assignment 4\TwoFloating.java (Documents) - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

Assignment 1
Assignment 2
Assignment 3
Assignment 4
AverageValue.java
CubeOfN.java
FahrenToCel.java
FloatingNumber.java
GreatestOfThree.java
IncresingDecr.java
IndexOfArray.java
LeapYear.java
MaxMinArray.java
MulTable.java
NaturalNumber.java
NaturalSum.java
PatternFloyd.java
PatternIncrNur.java
PatternPyramic.java
PatternRightTr.java
PatternSameNur.java
QuadEq.java
ReverseArray.java
SequenceOfDi.java
SignNumber.java
SumOfArrays.java
SumOfN.java
SumOfOdd.java
TwoFloating.java
Class Test.java

Line 20, Column 47

```
1 import java.util.*;
2 import java.text.DecimalFormat;
3
4 class TwoFloating{
5
6     public static void main(String[] args) {
7
8         Scanner sc = new Scanner(System.in);
9         System.out.println("Enter Two floating number : ");
10        float a = sc.nextFloat();
11        float b = sc.nextFloat();
12
13        DecimalFormat df = new DecimalFormat("#.000");
14
15        float c = Float.valueOf(df.format(a));
16        float d = Float.valueOf(df.format(b));
17
18
19        if(c==d){
20            System.out.println("They are same ");
21
22        }else
23
24            System.out.println("They are different ");
25
26    }
27
28
29
30
31
32
33
34
35
36 }
```

C:\Windows\System32\cmd.exe +

```
C:\Users\nikhi\Documents\Assignment 4>java TwoFloating.java
Enter Two floating number :
3.456 3.456
They are same

C:\Users\nikhi\Documents\Assignment 4>java TwoFloating.java
Enter Two floating number :
3.457 3.458
They are different

C:\Users\nikhi\Documents\Assignment 4>
```

Tab Size: 4 Java

Search  14:26 03-04-2023 ENG IN

Q6)

C:\Users\nikhi\Documents\Assignment 4\LeapYear.java (Documents) - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

Assignment 1
Assignment 2
Assignment 3
Assignment 4
AverageValueA
CubeOfN.java
FahrenToCel.java
FloatingNumber.java
GreatestOfThree.java
IncresingDecr.java
IndexOfArray.java
LeapYear.java
MaxMinArray.java
MulTable.java
NaturalNumber.java
NaturalSum.java
PatternFloyd.java
PatternIncrNur.java
PatternPyramic.java
PatternRightTri.java
PatternSameNir.java
QuadEq.java
ReverseArray.java
SequenceOfDi.java
SignNumber.java
SumOfArrays.java
SumOfN.java
SumOfOdd.java
TwoFloating.java
Class Test.java

Line 17, Column 35

```
1 import java.util.*;
2 class LeapYear{
3
4     public static void main(String[] args) {
5
6         Scanner sc = new Scanner(System.in);
7         System.out.println("Enter Year to find Leap or not");
8         int a = sc.nextInt();
9
10        if(a%4==0){
11
12            System.out.println(a + " is Leap year ");
13        }else
14
15            System.out.println(a + " is not Leap year ");
16
17    }
18
19
20
21
22 }
```

C:\Windows\System32\cmd.exe

```
C:\Users\nikhi\Documents\Assignment 4>java LeapYear.java
Enter Year to find Leap or not :
2016
2016 is Leap year

C:\Users\nikhi\Documents\Assignment 4>java LeapYear.java
Enter Year to find Leap or not :
2022
2022 is not Leap year

C:\Users\nikhi\Documents\Assignment 4>
```

Tab Size: 4 Java

Search ENG IN 14:26 03-04-2023 5

Q7)

The screenshot shows a Windows desktop environment. In the center is a Sublime Text window titled "C:\Users\nikhi\Documents\Assignment 4\NaturalNumbers.java (Documents) - Sublime Text (UNREGISTERED)". The code in the editor is:

```
1 import java.util.*;
2 class NaturalNumbers{
3
4
5     public static void main(String[] args) {
6
7         int n =10;
8         for (int i =1;i<=n ;i++ ) {
9             System.out.println(i);
10        }
11    }
12 }
```

To the right of the Sublime Text window is a terminal window titled "C:\Windows\System32\cmd.e". The command entered is "C:\Users\nikhi\Documents\Assignment 4>java NaturalNumbers.java". The output of the program is displayed in the terminal:

```
1
2
3
4
5
6
7
8
9
10
```

At the bottom of the screen is the taskbar, which includes icons for various applications like File Explorer, Google Chrome, and Microsoft Word. The system tray shows the date and time as "03-04-2023 14:27".

Q8)

C:\Users\nikhi\Documents\Assignment 4\NaturalSum.java (Documents) - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

Assignment 1 Assignment 2 Assignment 3 Assignment 4

Assignment 4

/* AverageValueA
/* CubeOfN.java
/* FahrenToCel.ja
/* FloatingNumb
/* GratestOffthree
/* IncresingDecr.j
/* IndexOfArray.jc
/* LeapYear.java
/* MaxMinArray.ji
/* MulTable.java
/* NaturalNumbe
/* NaturalSum.ja
/* PatternFloyd.ja
/* PatternIncrNur
/* PatternPyramic
/* PatternRightTr
/* PatternSameNi
/* QuadEqj.java
/* ReverseArray.ja
/* SequenceOfDi
/* SignNumber.ja
/* SumOfArrrays.ja
/* SumOfN.java
/* SumOfOdd.jav
/* TwoFloating.ja
Class Test.java

Line 1, Column 1

1 import java.util.*;
2
3 class NaturalSum{
4
5
6
7 public static void main(String[] args) {
8
9 Scanner sc = new Scanner(System.in);
10 System.out.println("Enter Number n to to dsipaly su
11
12 int a = sc.nextInt();
13 int sum =0;
14 System.out.println("First n Natural Numbers are :")
15
16 for (int i =1;i<=a;i++) {
17 System.out.println(i);
18 sum +=i;
19 }
20 System.out.println("The sum of n numbers is :" + sum);
21
22 }
23
24 }
25
26
27 }
28 }

C:\Windows\System32\cmd.e X + ▾

C:\Users\nikhi\Documents\Assignment 4>java NaturalSum.java
Enter Number n to to dsipaly sum :
20
First n Natural Numbers are :
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
The sum of n numbers is :210
C:\Users\nikhi\Documents\Assignment 4>

Tab Size: 4 Java

Search  14:27 03-04-2023 5 ENG IN

Q9)

C:\Users\nikhi\Documents\Assignment 4\SumOfN.java (Documents) - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

Assignment 1
Assignment 2
Assignment 3
Assignment 4
AverageValue.java
CubeOfN.java
FahrenToCel.java
FloatingNumber.java
GreatestOfThree.java
IncrsingDecr.java
IndexOfArray.java
LeapYear.java
MaxMinArray.java
MulTable.java
NaturalNumber.java
NaturalSum.java
PatternFloyd.java
PatternIncrNur.java
PatternPyramic.java
PatternRightTriangle.java
PatternSameN.java
QuadEq.java
ReverseArray.java
SequenceOfDigits.java
SignNumber.java
SumOfArrays.java
SumOfN.java
SumOfOdd.java
TwoFloating.java
Class Test.java

Line 1, Column 1

```
1 import java.util.*;  
2 class SumOfN{  
3  
4     public static void main(String[] args) {  
5         Scanner sc = new Scanner(System.in);  
6  
7         int a[] = new int [5];  
8         int n =5, sum =0;  
9  
10        System.out.println("Enter 5 Numbers : ");  
11  
12        for (int i =0;i<n;i++) {  
13            a[i] = sc.nextInt();  
14  
15        System.out.println("The 5 numbers are : ");  
16        for (int i =0;i<n ;i++ ) {  
17            System.out.println(a[i]);  
18            sum += a[i];  
19        }  
20        System.out.println("The sum of "+ n+ " numbers is :" + sum);  
21        System.out.println("The average of n numbers is :" + sum/5.0);  
22    }  
23 }  
24  
25  
26  
27  
28  
29  
30  
31  
32 }
```

C:\Windows\System32\cmd.exe

```
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
The sum of n numbers is :210  
C:\Users\nikhi\Documents\Assignment 4>java SumOfN.java  
Enter 5 Numbers :  
1 2 3 4 5  
The 5 numbers are :  
1  
2  
3  
4  
5  
The sum of 5 numbers is :15  
The average of n numbers is :3.0  
C:\Users\nikhi\Documents\Assignment 4>
```

Tab Size: 4 Java

Search 14:30 03-04-2023 6 ENG IN

Q10)

The screenshot shows a Windows desktop environment. In the center is a Sublime Text window titled "C:\Users\nikhi\Documents\Assignment 4\CubeOfN.java (Documents) - Sublime Text (UNREGISTERED)". The code in the editor is as follows:

```
1 import java.util.*;
2
3 class CubeOfN{
4
5     public static void main(String[] args) {
6
7         Scanner sc = new Scanner(System.in);
8
9         System.out.println("Enter Number : ");
10
11         int a = sc.nextInt();
12
13         for (int i =1;i<=a ;i++ ) {
14
15             float cube;
16
17             cube = i*i*i;
18
19             System.out.println("The cube of "+a+"Number is :"+(int)cube);
20         }
21     }
22 }
23 }
```

To the right of the Sublime Text window is a terminal window titled "C:\Windows\System32\cmd.e". The terminal output is:

```
17
18
19
20
The sum of n numbers is :210
C:\Users\nikhi\Documents\Assignment 4>java SumOfN.java
Enter 5 Numbers :
1 2 3 4 5
The 5 numbers are :
1
2
3
4
5
The sum of 5 numbers is :15
The average of n numbers is :3.0
C:\Users\nikhi\Documents\Assignment 4>java CubeOfN.java
Enter Number :
5
The cube of 5Number is :1
The cube of 5Number is :8
The cube of 5Number is :27
The cube of 5Number is :64
The cube of 5Number is :125
C:\Users\nikhi\Documents\Assignment 4>
```

At the bottom of the screen, there is a taskbar with various icons and system status indicators.

Q11)

The screenshot shows a Windows desktop environment. In the center, there is a Sublime Text window titled "C:\Users\nikhi\Documents\Assignment 4\MulTable.java (Documents) - Sublime Text (UNREGISTERED)". The file contains Java code for generating a multiplication table. Below the code, the status bar indicates "Line 1, Column 1". To the right of the Sublime Text window is a Command Prompt window titled "C:\Windows\System32\cmd.e". The command "java MulTable.java" is run, followed by the input "Enter Number : 5". The output shows the multiplication table for 5:

```
C:\Users\nikhi\Documents\Assignment 4>java MulTable.java
Enter Number :
5
5 X 1 = 5
5 X 2 = 10
5 X 3 = 15
5 X 4 = 20
5 X 5 = 25
```

At the bottom of the screen, the taskbar displays various icons for applications like File Explorer, Google Chrome, WhatsApp, and Microsoft Word. The system tray shows the date and time as "03-04-2023 14:31".

```
import java.util.*;
class MulTable{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Number : ");
        int n = sc.nextInt();
        for (int i=1;i<=5 ;i++ ) {
            System.out.println(n +" X "+i+" = "+ n*i);
        }
    }
}
```

Q12)

The screenshot shows a Sublime Text editor with multiple tabs open. The active tab contains Java code for calculating the sum of odd numbers. The terminal window to the right shows the command-line execution of the program and its output.

Java Code (SumOfOdd.java):

```
/* FahrenToCel,           Qua GratestOfThree.java x | FloatingNumber.java x | TwoFloating.java x | LeapYear.java x | SumOfArrays.java x | AverageValueArray.java x | SumOfOdd.java x */
File Edit Selection Find View Goto Tools Project Preferences Help


```

1 import java.util.*;
2
3 class SumOfOdd{
4
5
6 public static void main(String[] args) {
7
8
9 Scanner sc = new Scanner(System.in);
10
11 System.out.println("Enter Number n to to dsipaly sum : ");
12
13 int a = sc.nextInt();
14 int sum =0;
15
16 System.out.println("First n odd Numbers are :");
17
18 for (int i =1;i<=a;i++) {
19
20 System.out.println(i);
21
22 sum +=i;
23
24 i++;
25 }
26
27 System.out.println("The sum of "+a+" odd numbers is :" + sum);
28 }
29 }
```



Terminal Output:



```
C:\Users\nikhi\Documents\Assignment 4>java SumOfOdd.java
Enter Number n to to dsipaly sum :
10
First n odd Numbers are :
1
3
5
7
9
The sum of 10 odd numbers is :25

C:\Users\nikhi\Documents\Assignment 4>
```


```

Q13)

The screenshot shows a Sublime Text window with multiple tabs open. The active tab is 'PatternRightTrangle.java'. The code prints a right-angled triangle pattern based on user input. A separate terminal window titled 'cmd' shows the execution of the program and its output.

```
/* FahrenToCel,
 * FloatingNum
 * GratestOfThr
 * IncresingDec
 * IndexOfArray
 * LeapYear.java
 * MaxMinArra
 * MuTable.java;
 * NaturalNuml
 * NaturalSum.j
 * PatternFloyd.
 * PatternIncrN
 * PatternPyram
 * PatternRight
 * PatternSame
 * QuadEq.java
 * ReverseArray
 * SequenceOf[
 * SignNumber.
 * SumOfArrays
 * SumOfNjava
 * SumOfOdd.ja
 * TwoFloating,
 */
import java.util.*;
class PatternRightTrangle{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int i,j;
        System.out.println("Enter Number n to to dsipaly Ptttern : ");
        int n = sc.nextInt();
        for ( i =1;i<=n ;i++ ) {
            for ( j =1;j<=i ;j++ ) {
                System.out.print(j);
            }
            System.out.println();
        }
    }
}
```

C:\Windows\System32\cmd.e

```
C:\Users\nikhi\Documents\Assignment 4>java PatternRightTrangle.java
Enter Number n to to dsipaly Ptttern :
10
1
12
123
1234
12345
123456
1234567
12345678
123456789
12345678910
C:\Users\nikhi\Documents\Assignment 4>
```

Line 1, Column 1

Tab Size: 4 Java

Search

14:32 03-04-2023 6

Q14)

The screenshot shows a Sublime Text editor window with multiple tabs open, including `PatternSameNum.java`. The code in `PatternSameNum.java` is as follows:

```
/* FahrenToCel.
 * FloatingNum
 * GratestOfThr
 * IncresingDec
 * IndexOfArray
 * LeapYear.java
 * MaxMinArray
 * MultTable.java
 * NaturalNuml
 * NaturalSum.j
 * PatternFloyd
 * PatternIncrN
 * PatternPyram
 * PatternRight
 * PatternSame
 * QuadEqJava
 * ReverseArray
 * SequenceOfI
 * SignNumber.
 * SumOfArrays
 * SumOfNjava
 * SumOfOdd.ja
 * TwoFloating,
 */
import java.util.*;
class PatternSameNum{

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int i,j;

        System.out.println("Enter Number n to to dsipaly Ptern : ");
        int n = sc.nextInt();

        for ( i =1;i<=n ;i++ ) {
            for ( j =1;j<=i ;j++ ) {
                System.out.print(i);
            }
            System.out.println();
        }
    }
}
```

To the right of the editor is a terminal window titled `C:\Windows\System32\cmd.e` showing the output of running the `PatternRightTriangle.java` and `PatternSameNum.java` programs.

Output of `PatternRightTriangle.java`:

```
C:\Users\nikhi\Documents\Assignment 4>java PatternRightTriangle.java
Enter Number n to to dsipaly Pttern :
10
1
12
123
1234
12345
123456
1234567
12345678
123456789
12345678910
```

Output of `PatternSameNum.java`:

```
C:\Users\nikhi\Documents\Assignment 4>java PatternSameNum.java
Enter Number n to to dsipaly Pttern :
5
1
22
333
4444
55555
```

At the bottom of the screen, the taskbar shows various application icons and system status indicators.

Q15)

The screenshot shows a Sublime Text editor window with multiple tabs open, including "PatternIncrNum.java". The code in "PatternIncrNum.java" is as follows:

```
1 import java.util.*;
2 class PatternIncrNum{
3
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         int i,j;
7
8         System.out.println("Enter Number n to to dsipaly Ptttern : ");
9         int n = sc.nextInt();
10
11         int num =1;
12         for ( i =1;i<=n ;i++ ) {
13
14             for ( j =1;j<=i ;j++ ) {
15
16                 System.out.print(num+" ");
17
18                 num++;
19             }
20             System.out.println();
21         }
22     }
23 }
24 }
```

To the right of the editor is a terminal window titled "C:\Windows\System32\cmd.e". The terminal shows the command "java PatternIncrNum" being run, followed by the prompt "Enter Number n to to dsipaly Ptttern :". The user enters "5", and the terminal displays the following output:

```
5
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

The terminal window also shows the path "C:\Users\nikhi\Documents\Assignment 4>" at the bottom.

At the bottom of the screen, there is a taskbar with various icons, and the system tray shows the date and time as "03-04-2023 14:33".

Q16)

The screenshot shows a Sublime Text window with multiple tabs open. The active tab contains Java code for printing a pattern pyramid. The code uses nested loops to print a pyramid of numbers based on user input. Below the code, the terminal window shows the output of running the program in cmd.

```
/* FahrnToCel,
 * FloatingNum
 * GratestOfThr
 * IncresingDec
 * IndexOfArray
 * LeapYearjav
 * MaxMinArray
 * MulTable.jav
 * NaturalNuml
 * NaturalSum.j
 * PatternFloyd.
 * PatternIncrN
 * PatternPyran
 * PatternRight'
 * PatternSame
 * QuadEq.java
 * ReverseArray
 * SequenceOfFt
 * SignNumber.
 * SumOfArrays
 * SumOfN.java
 * SumOfOdd.ja
 * TwoFloating,
 * Class Test Java
 * Custom Office
 * Extra Assignme
 * JDBC
 * My Music
 * My Pictures
```

C:\Users\nikhi\Documents\Assignment 4\PatternPyramid.java (Documents) - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

```
1 import java.util.*;
2 class PatternPyramid{
3
4     public static void main(String[] args) {
5         Scanner sc = new Scanner(System.in);
6         int i,j;
7
8         System.out.println("Enter Number n to to dsipaly Ptttern : ");
9         int n = sc.nextInt();
10
11
12         for ( i =1;i<=n ;i++ ) {
13             for(int k =n-i;k>0;k--){}
14                 System.out.print(" ");
15             }
16             for ( j =1;j<=i ;j++ ) {
17
18                 System.out.print(i+" ");
19             }
20             System.out.println();
21         }
22     }
23 }
```

C:\Windows\System32\cmd.e

```
C:\Users\nikhi\Documents\Assignment 4>java PatternPyramid.java
Enter Number n to to dsipaly Ptttern :
4
    1
    2 2
    3 3 3
    4 4 4 4
```

```
C:\Users\nikhi\Documents\Assignment 4>java PatternPyramid.java
Enter Number n to to dsipaly Ptttern :
5
    1
    2 2
    3 3 3
    4 4 4 4
    5 5 5 5 5
```

Line 1, Column 1

Tab Size: 4 Java

Search

14:34 03-04-2023 6

Q17)

The screenshot shows a Sublime Text window with multiple tabs open. The active tab is 'PatternFloyd.java'. The code implements a Floyd's triangle pattern using nested loops and a Scanner for input.

```
/* FahrenToCel,
 * FloatingNum
 * GratestOfThr
 * IncresingDec
 * IndexOfArray
 * LeapYear.jav
 * MaxMinArray
 * MulTable.jav
 * NaturalNuml
 * NaturalSum.j
 * PatternFloyd
 * PatternIncrN
 * PatternPyram
 * PatternRight
 * PatternSame
 * QuadEqj.java
 * ReverseArray
 * SequenceOfF
 * SignNumber.
 * SumOfArrays
 * SumOfN.java
 * SumOfOdd.je
 * TwoFloating,
 */
import java.util.*;
class PatternFloyd{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int i,j;
        System.out.println("Enter Number n to to dsipaly Ptttern : ");
        int n = sc.nextInt();
        int num =1;
        for ( i =1;i<=n ;i++ ) {
            for ( j =1;j<=i ;j++ ) {
                System.out.print(num+" ");
                num++;
            }
            System.out.println();
        }
    }
}
```

The command prompt window shows the output of running the program with input '5' and '10' respectively, displaying the Floyd's triangle patterns.

```
C:\Users\nikhi\Documents\Assignment 4>java PatternFloyd.java
Enter Number n to to dsipaly Ptttern :
5
1
2 3
4 5 6
7 8 9 10

C:\Users\nikhi\Documents\Assignment 4>java PatternFloyd.java
Enter Number n to to dsipaly Ptttern :
10
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
```

The taskbar at the bottom shows various application icons, and the system tray indicates the date as 03-04-2023 and time as 14:35.

Q18)

```
import java.util.*;  
class IncresingDecr{  
  
    public static void main(String[] args) {  
  
        Scanner sc = new Scanner(System.in);  
  
        System.out.println("Enter N Numbers to be Scanned : ");  
  
        int n = sc.nextInt();  
  
        int arr[] = new int[n];  
        int count = 0;  
        int count1 = 0;  
        int i, j;  
        System.out.println("Enter values to be compared ");  
  
        for (i = 0; i < n; i++) {  
  
            arr[i] = sc.nextInt();  
        }  
    }  
}
```

```
}
```

```
for ( j =0;j<arr.length-1;j++) {
```

```
    if(arr[j]<arr[j+1]){


```

```
        count++;


```

```
    }else if(arr[j]>arr[j+1]){


```

```
        count1++;


```

```
}
```

```
}
```

```
if(count ==n-1){


```

```
    System.out.println("Incresing Order");


```

```
}else if(count1==n-1){


```

```
    System.out.println("Decresing Order");


```

```
}else{
```

```

        System.out.println("Nor incresing nor Decresing order");

    }

}

}

```

S C:\Users\nikhi\Documents\Assignment 4\IncresingDecr.java - (Documents) - Sublime Text (UNREGISTERED)

File Edit Selection Find View Goto Tools Project Preferences Help

```

1 import java.util.*;
2 class IncresingDecr{
3
4
5     public static void main(String[] args) {
6
7         Scanner sc = new Scanner(System.in);
8
9         System.out.println("Enter N Numbers to be Scanned : ");
10
11         int n = sc.nextInt();
12
13         int arr[]= new int[n];
14         int count =0;
15         int count1=0;
16         int i,j;
17         System.out.println("Enter values to be compared ");
18
19         for (i =0;i<n ;i++ ) {
20
21             arr[i]= sc.nextInt();
22         }
23
24         for ( j =0;j<arr.length-1;j++ ) {
25
26             if(arr[j]<arr[j+1]){
27
28                 count++;
29             }else if(arr[j]>arr[j+1]){
30
31                 count1++;
32             }
33         }
34
35     }
36
37 }
38

```

C:\Windows\System32\cmd.e X +

C:\Users\nikhi\Documents\Assignment 4>java IncresingDecr.java
Enter N Numbers to be Scanned :
3
Enter values to be compared
1
2
3
Incresing Order
C:\Users\nikhi\Documents\Assignment 4>java IncresingDecr.java
Enter N Numbers to be Scanned :
3
Enter values to be compared
4
3
2
Decresing Order
C:\Users\nikhi\Documents\Assignment 4>java IncresingDecr.java
Enter N Numbers to be Scanned :
3
Enter values to be compared
45
3
67
Nor incresing nor Decresing order

Line 17, Column 17 Tab Size: 4 Java

Search ENG IN 14:40 03-04-2023 4

Q19)

The screenshot shows a Sublime Text interface with multiple tabs open. The current tab, `FahrenToCel.java`, contains the following Java code:

```
import java.util.*;  
class FahrenToCel{  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        System.out.println("Enter Temp in Fahrenheit: ");  
        int temp = sc.nextInt();  
        float cel = (temp-32) *5/9;  
        System.out.println("Temp in Celcius is : "+cel);  
    }  
}
```

To the right of the editor is a terminal window titled `C:\Windows\System32\cmd.e`. It shows the command `C:\Users\nikhi\Documents\Assignment 4>java FahrenToCel.java` being run, followed by the user input "Enter Temp in Fahrenheit:" and the program's output "Temp in Celcius is : 57.0".

At the bottom of the screen, there is a taskbar with various icons, and the system tray shows the date and time as 03-04-2023 14:40.

Q20)

The screenshot shows a Sublime Text window with multiple tabs open. The current tab contains Java code for printing the sequence of digits of a given number. The code uses a Scanner to read an integer from standard input, then iterates through its digits using a while loop and a temporary variable. It prints the digits in reverse order (from least significant to most significant) separated by spaces. The code is annotated with numerous comments explaining each step.

```
import java.util.*;
class SequenceOfDigit{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Number : ");
        int num = sc.nextInt();
        int rem,sum=0,temp=num;
        int n[]=new int[6];
        while(temp!=0){
            for (int i=0;i<6 ;i++ ) {
                rem = temp%10;
                n[i]= sum *10+ rem;
                temp =temp/10;
            }
        }
        System.out.println(n[5]+" "+n[4]+" "+n[3]+" "+n[2]+" "+n[1]+" "+n[0]);
    }
}
```

The terminal window shows the output of running the program with inputs 123456 and 567890, both of which produce the expected output of the reversed digit sequences.

File Edit Selection Find View Goto Tools Project Preferences Help

FOLDERS

- Documents
- Assignment 1
- Assignment 2
- Assignment 3
- Assignment 4
 - AverageValu
 - CubeOfN.jav
 - FahrenToCel.
 - FloatingNum
 - GreatestOffhr
 - IncreasingDec
 - IndexOfArra
 - LeapYear.jav
 - MaxMinArra
 - MulTable.jav
 - NaturalNuml
 - NaturalSum.j
 - PatternFloyd.
 - PatternIncrN
 - PatternPyran
 - PatternRight'
 - PatternSame
 - QuadEq.java
 - ReverseArray
 - SequenceOff
 - SignNumber.
 - SumOfArrays
 - SumOfNjava
 - SumOfOdd.je

Line 22, Column 23

Tab Size: 4 Java

C:\Windows\System32\cmd.e

```
C:\Users\nikhi\Documents\Assignment 4>java SequenceOfDigit.java
Enter Number :
123456
1 2 3 4 5 6

C:\Users\nikhi\Documents\Assignment 4>java SequenceOfDigit.java
Enter Number :
567890
5 6 7 8 9 0

C:\Users\nikhi\Documents\Assignment 4>
```

Search

14:42 03-04-2023

Q21)

The screenshot shows a Sublime Text interface with multiple tabs open. The active tab contains Java code for calculating the sum of elements in an array. The terminal window to the right shows the command-line execution of the program and its output.

Sublime Text Tabs:

- SumOfArrays.java
- AverageValueArray.java
- IndexOfArray.java
- MaxMinArray.java
- ReverseArray.java
- PatternSameNum.java
- PatternIncrNum.java

Folders:

- Documents
- Assignment 1
- Assignment 2
- Assignment 3
- Assignment 4
- AverageValue...
- CubeOfN.java
- FahrenToCel...
- FloatingNum...
- GreatestOfThr...
- IncresingDec...
- IndexOfArra...
- LeapYear.java
- MaxMinArray...
- MulTable.java
- NaturalNum...
- NaturalSum.j...
- PatternFloyd...
- PatternIncrN...
- PatternPyran...
- PatternRight...
- PatternSame...
- QuadEq.java
- ReverseArra...
- SequenceOff...
- SignNumber...
- SumOfArrays...
- SumOfN.java
- SumOfOdd.j...

Terminal Output:

```
C:\Users\nikhi\Documents\Assignment 4>java SumOfArrays.java
Enter Number to scanned:
5
Enter values to scann
10
20
30
40
50
Sum of elements of array is :150
C:\Users\nikhi\Documents\Assignment 4>
```

Line 32, Column 44 Tab Size: 4 Java

Q22)

The screenshot shows a Sublime Text window with multiple tabs open. The active tab contains Java code for calculating the average of an array. The code uses a Scanner to read input from the console, initializes an array of size n, and calculates the sum of all elements. Finally, it prints the average. The code is as follows:

```
import java.util.*;
class AverageValueArray{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n Numbers to scanned:");
        int n = sc.nextInt();
        int arr[] = new int[n];
        int sum = 0;
        System.out.println("Enter values to scan ");
        for (int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }
        for (int i = 0; i < n; i++) {
            sum += arr[i];
        }
        System.out.println("Average of array is :" + sum / n);
    }
}
```

To the right of the code editor is a terminal window titled 'C:\Windows\System32\cmd.e'. It shows the command 'java AverageValueArray' being run, followed by the user's input 'Enter n Numbers to scanned:' and '5'. The program then asks for values, receives '10', '20', '30', '40', and '50', and finally prints the average as '30'. The terminal also shows the current directory as 'C:\Users\nikhi\Documents\Assignment 4'.

Q23)

The screenshot shows a Sublime Text window with multiple tabs open. The active tab is 'IndexOfArray.java'. The code implements a program to find the index of a given number in an array. It uses a Scanner to read input from the user and a while loop to iterate through the array. If the element is found, it prints its index; otherwise, it prints a message indicating the element was not found.

```
import java.util.*;
class IndexOfArray{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter number to get its index (0 to 9): ");
        int index = sc.nextInt();
        int arr[] = {1,2,3,4,5,6,7,8,9};
        int i = 0;
        boolean flag=false;
        int size = arr.length;
        while (i < size){
            if (arr[i] == index) {
                System.out.println("Index of "+index+" is "+i);
                flag = true;
                break;
            } else {
                i = i + 1;
            }
        }
        if(flag==false){
            System.out.println("Element is not found :");
        }
    }
}
```

The terminal window shows the execution of the program:

```
C:\Users\nikhi\Documents\Assignment 4>java IndexOfArray.java
Enter number to get its index (0 to 9):
8
Index of 8 is 7
```

```
C:\Users\nikhi\Documents\Assignment 4>java IndexOfArray.java
Enter number to get its index (0 to 9):
1
Index of 1 is 0
```

```
C:\Users\nikhi\Documents\Assignment 4>
```

The taskbar at the bottom shows various application icons, and the system tray indicates the date and time as 03-04-2023 14:45.

Q24)

The screenshot shows a Sublime Text interface with multiple tabs open. The current tab, 'MaxMinArray.java', contains the following Java code:

```
import java.util.*;
class MaxMinArray{
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Max And Minimum value of array : ");
        int arr[]={1,3,4,6,7,8,4,67,45,56,78};

        int max =arr[0];
        int min = arr[0];

        for (int i =0;i<arr.length ;i++ ) {
            if(arr[i]>max){
                max = arr[i];
            }else if(arr[i]<min){
                min=arr[i];
            }
        }
        System.out.println("Max element is : "+ max);
        System.out.println("Min element is : "+min);
    }
}
```

To the right of the code editor is a terminal window titled 'C:\Windows\System32\cmd.e'. It displays the command 'java MaxMinArray.java' followed by the output: 'Max And Minimum value of array : Max element is : 78 Min element is : 1'. The terminal window has a dark theme.

At the bottom of the screen, there is a taskbar with various icons, including a search bar, system tray icons, and a date/time indicator showing '03-04-2023 14:46'.

Q25)

The screenshot shows a Sublime Text editor with multiple tabs open, including 'ReverseArray.java' which contains the following Java code:

```
/* GratestOfThree.java
 * IncresingDecr.java
 * IndexOfArray.java
 * LeapYear.java
 * MaxMinArray.java
 * Multable.java
 * NaturalNumber.java
 * NaturalSum.java
 * PatternFloyd.java
 * PatternIncrNum.java
 * PatternPyramid.java
 * PatternRightTriangle.java
 * PatternSameNumber.java
 * QuadEq.java
 * ReverseArray.java
 * SequenceOfDigi.java
 * SignNumber.java
 * SumOfArrays.java
 * SumOfN.java
 * SumOfOdd.java
 * TwoFloating.java
 */
class ReverseArray{
    public static void main(String[] args) {
        System.out.println("Reverse of an array elemtn :");
        int arr[] = {1,2,3,4,5,6,7,8,9};
        int i,j,k=0;
        int len = arr.length;
        int arr1[] = new int[len];
        for (i = len-1; i>=0 ; i--) {
            arr1[k] = arr[i];
            k++;
        }
        for (j = 0; j<len ; j++) {
            System.out.println("Reverse array is :" + arr1[j]);
        }
    }
}
```

To the right of the editor is a terminal window titled 'cmd.exe' showing the command 'java ReverseArray' being run and its output:

```
C:\Users\nikhi\Documents\Assignment 4>java ReverseArray.java
Reverse of an array elemtn :
Reverse array is :9
Reverse array is :8
Reverse array is :7
Reverse array is :6
Reverse array is :5
Reverse array is :4
Reverse array is :3
Reverse array is :2
Reverse array is :1
```

The bottom status bar of the operating system indicates the date as 03-04-2023 and the time as 14:46.