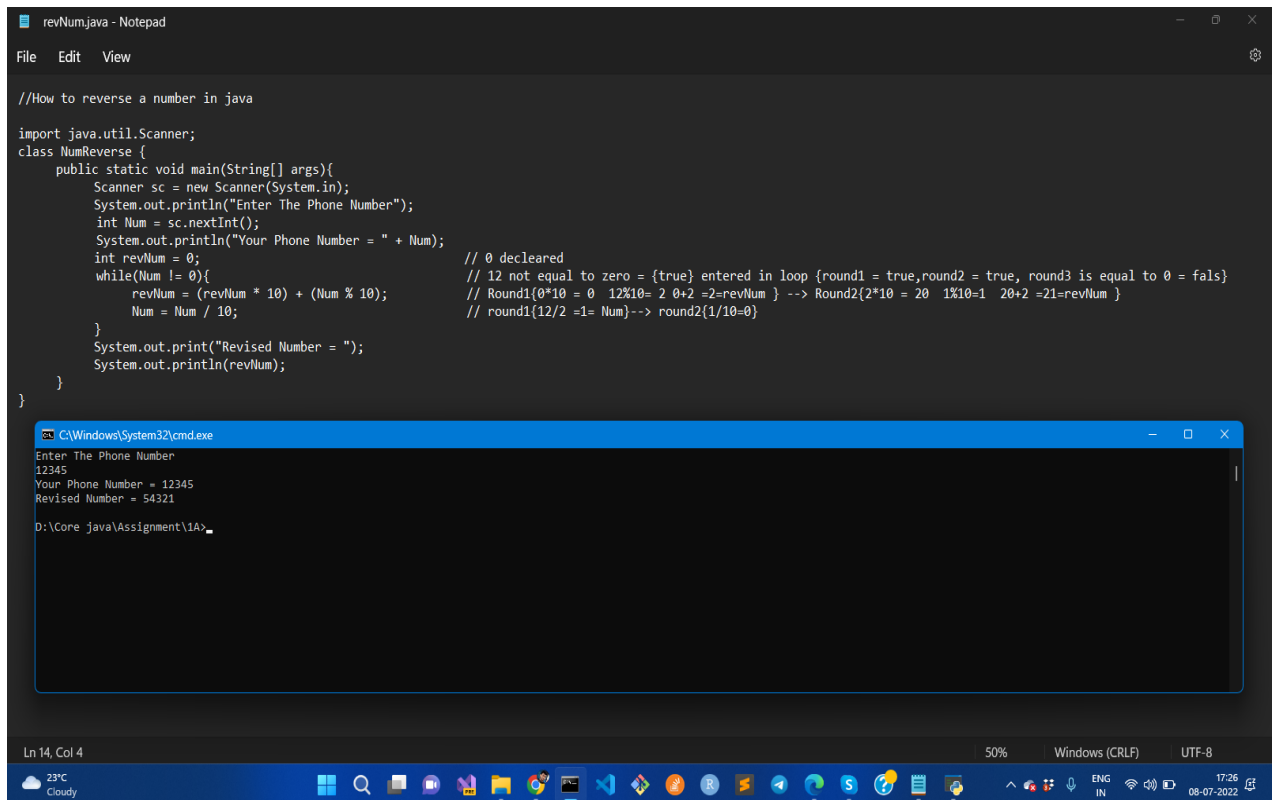


Java Assignment Module 1

1. Reverse a number in java



The screenshot displays a Notepad window titled 'revNum.java - Notepad' containing the following Java code:

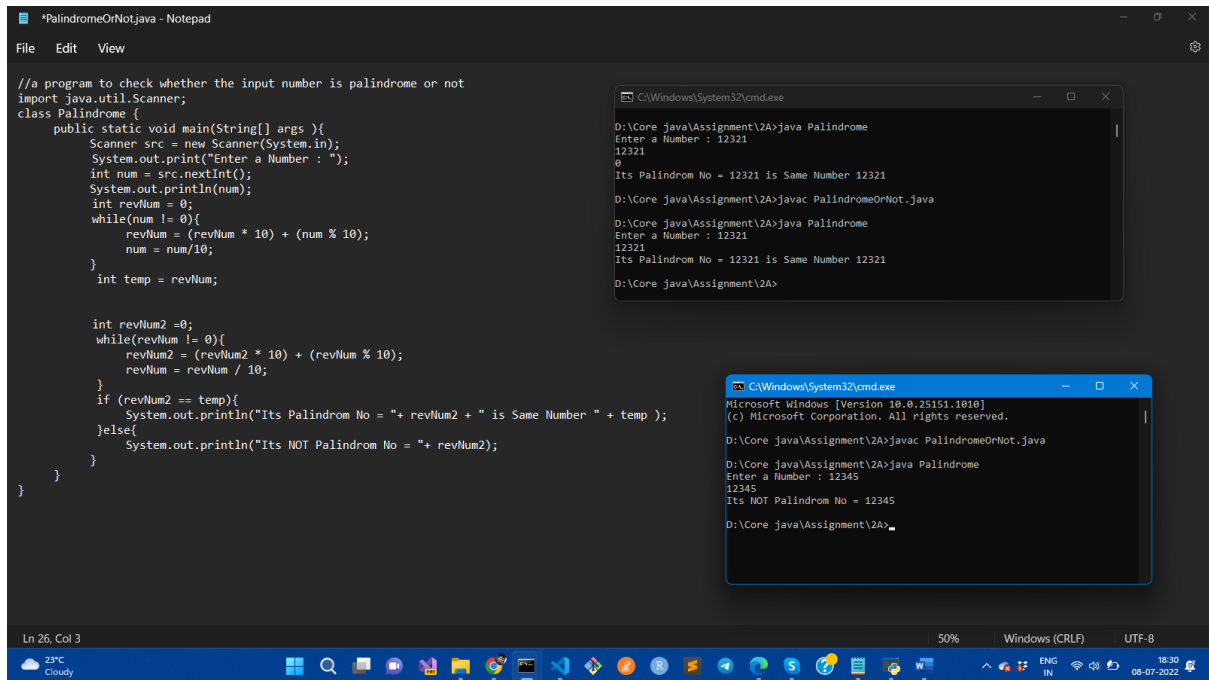
```
//How to reverse a number in java
import java.util.Scanner;
class NumReverse {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Phone Number");
        int Num = sc.nextInt();
        System.out.println("Your Phone Number = " + Num);
        int revNum = 0;
        while(Num != 0){
            revNum = (revNum * 10) + (Num % 10);
            Num = Num / 10;
        }
        System.out.print("Revised Number = ");
        System.out.println(revNum);
    }
}
```

Below the code, a Command Prompt window titled 'C:\Windows\System32\cmd.exe' shows the program's execution:

```
Enter The Phone Number
12345
Your Phone Number = 12345
Revised Number = 54321
D:\Core java\Assignment\1A>
```

The status bar at the bottom of the Notepad window indicates 'Ln 14, Col 4', '50%', 'Windows (CRLF)', and 'UTF-8'. The Windows taskbar at the very bottom shows the date and time as '08-07-2022 17:26' and the weather as '23°C Cloudy'.

2. Program to check whether the input number is palindrome or not



The image shows a Windows desktop environment with a Notepad++ window and two Command Prompt windows. The Notepad++ window contains a Java program to check if a number is a palindrome. The program uses a Scanner to take input, reverses the number by building a new number (revNum) digit by digit, and then compares the original number (num) with the reversed number (revNum). If they are equal, it prints "Its Palindrome No = [number] is Same Number [number]"; otherwise, it prints "Its NOT Palindrom No = [number]".

```
//a program to check whether the input number is palindrome or not
import java.util.Scanner;
class Palindrome {
    public static void main(String[] args ){
        Scanner src = new Scanner(System.in);
        System.out.print("Enter a Number : ");
        int num = src.nextInt();
        System.out.println(num);
        int revNum = 0;
        while(num != 0){
            revNum = (revNum * 10) + (num % 10);
            num = num/10;
        }
        int temp = revNum;

        int revNum2 =0;
        while(revNum2 != 0){
            revNum2 = (revNum2 * 10) + (revNum % 10);
            revNum = revNum / 10;
        }
        if (revNum2 == temp){
            System.out.println("Its Palindrome No = "+ revNum2 + " is Same Number " + temp );
        }else{
            System.out.println("Its NOT Palindrom No = "+ revNum2);
        }
    }
}
```

The top Command Prompt window shows the compilation and execution of the program for the input 12321. It successfully identifies 12321 as a palindrome.

```
D:\Core java\Assignment\2A>java Palindrome
Enter a Number : 12321
12321
0
Its Palindrom No = 12321 is Same Number 12321

D:\Core java\Assignment\2A>javac PalindromeOrNot.java

D:\Core java\Assignment\2A>java Palindrome
Enter a Number : 12321
12321
Its Palindrom No = 12321 is Same Number 12321

D:\Core java\Assignment\2A>
```

The bottom Command Prompt window shows the execution of the program for the input 12345. It correctly identifies 12345 as not a palindrome.

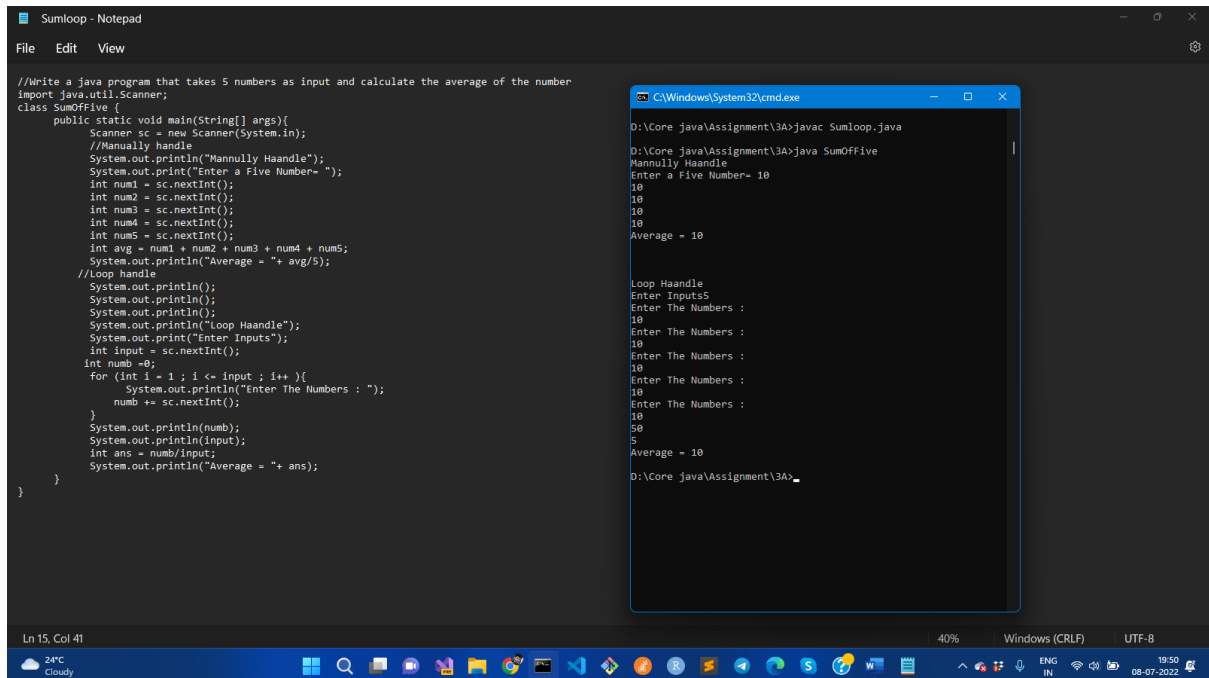
```
D:\Core java\Assignment\2A>javac PalindromeOrNot.java

D:\Core java\Assignment\2A>java Palindrome
Enter a Number : 12345
12345
Its NOT Palindrom No = 12345

D:\Core java\Assignment\2A>
```

The Windows taskbar at the bottom shows the system clock as 16:30 on 08-07-2022, and the weather as 23°C Cloudy.

3. Write a java program that takes 5 numbers as input and calculate the average of the number



The screenshot displays a Windows desktop environment. On the left, a Notepad window titled 'Sumloop - Notepad' contains the following Java code:

```
//Write a java program that takes 5 numbers as input and calculate the average of the number
import java.util.Scanner;
class SumOffive {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        //Manually handle
        System.out.println("Manully Haandle");
        System.out.print("Enter a Five Number- ");
        int num1 = sc.nextInt();
        int num2 = sc.nextInt();
        int num3 = sc.nextInt();
        int num4 = sc.nextInt();
        int num5 = sc.nextInt();
        int avg = num1 + num2 + num3 + num4 + num5;
        System.out.println("Average = "+ avg/5);
        //Loop handle
        System.out.println();
        System.out.println();
        System.out.println();
        System.out.println("Loop Haandle");
        System.out.print("Enter Inputs");
        int input = sc.nextInt();
        int numb =0;
        for (int i = 1 ; i <= input ; i++){
            System.out.println("Enter The Numbers : ");
            numb += sc.nextInt();
        }
        System.out.println(numb);
        System.out.println(input);
        int ans = numb/input;
        System.out.println("Average = "+ ans);
    }
}
```

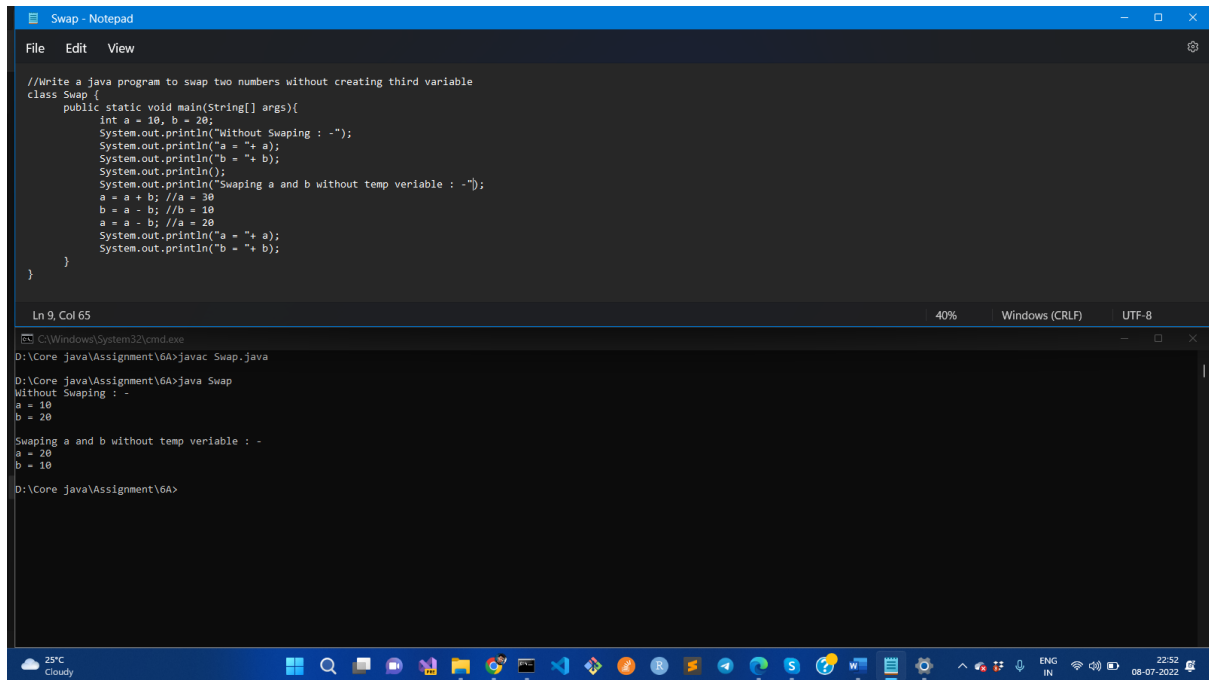
On the right, a Windows Command Prompt window titled 'C:\Windows\System32\cmd.exe' shows the execution of the program:

```
D:\Core java\Assignment\3A>javac Sumloop.java
D:\Core java\Assignment\3A>java SumOffive
Manully Haandle
Enter a Five Number- 10
10
10
10
10
Average = 10

Loop Haandle
Enter Inputs5
Enter The Numbers :
10
Enter The Numbers :
10
Enter The Numbers :
10
Enter The Numbers :
10
Enter The Numbers :
50
Average = 10
D:\Core java\Assignment\3A>
```

The Windows taskbar at the bottom shows the system clock as 19:50 on 08-07-2022, with a temperature of 24°C and a cloudy weather icon.

4. Write a java program to swap two numbers without creating third variable



The screenshot displays a Windows desktop environment. At the top, a Notepad++ window titled 'Swap - Notepad' contains a Java program designed to swap two numbers, 'a' and 'b', without using a third variable. The program uses arithmetic operations: addition and subtraction. It initializes 'a' to 10 and 'b' to 20, prints their initial values, then performs the swap using the formulas $a = a + b$, $b = a - b$, and $a = a - b$. Finally, it prints the swapped values. The status bar at the bottom of the Notepad++ window indicates 'Ln 9, Col 65', '40%' zoom, 'Windows (CRLF)' line endings, and 'UTF-8' encoding.

Below the Notepad++ window, a Command Prompt window is open, showing the execution of the Java program. The user has navigated to the directory 'D:\Core java\Assignment\6A' and run the command 'javac Swap.java' to compile the program, followed by 'java Swap' to execute it. The output of the program is displayed in the Command Prompt, matching the logic shown in the Notepad++ window: it prints 'Without Swaping : -' followed by 'a = 10' and 'b = 20', then 'Swaping a and b without temp variable : -' followed by 'a = 20' and 'b = 10'.

```
//Write a java program to swap two numbers without creating third variable
class Swap {
    public static void main(String[] args){
        int a = 10, b = 20;
        System.out.println("Without Swaping : -");
        System.out.println("a = " + a);
        System.out.println("b = " + b);
        System.out.println();
        System.out.println("Swaping a and b without temp variable : -");
        a = a + b; //a = 30
        b = a - b; //b = 10
        a = a - b; //a = 20
        System.out.println("a = " + a);
        System.out.println("b = " + b);
    }
}
```

Ln 9, Col 65 40% Windows (CRLF) UTF-8

C:\Windows\System32\cmd.exe

D:\Core java\Assignment\6A>javac Swap.java

D:\Core java\Assignment\6A>java Swap

Without Swaping : -

a = 10

b = 20

Swaping a and b without temp variable : -

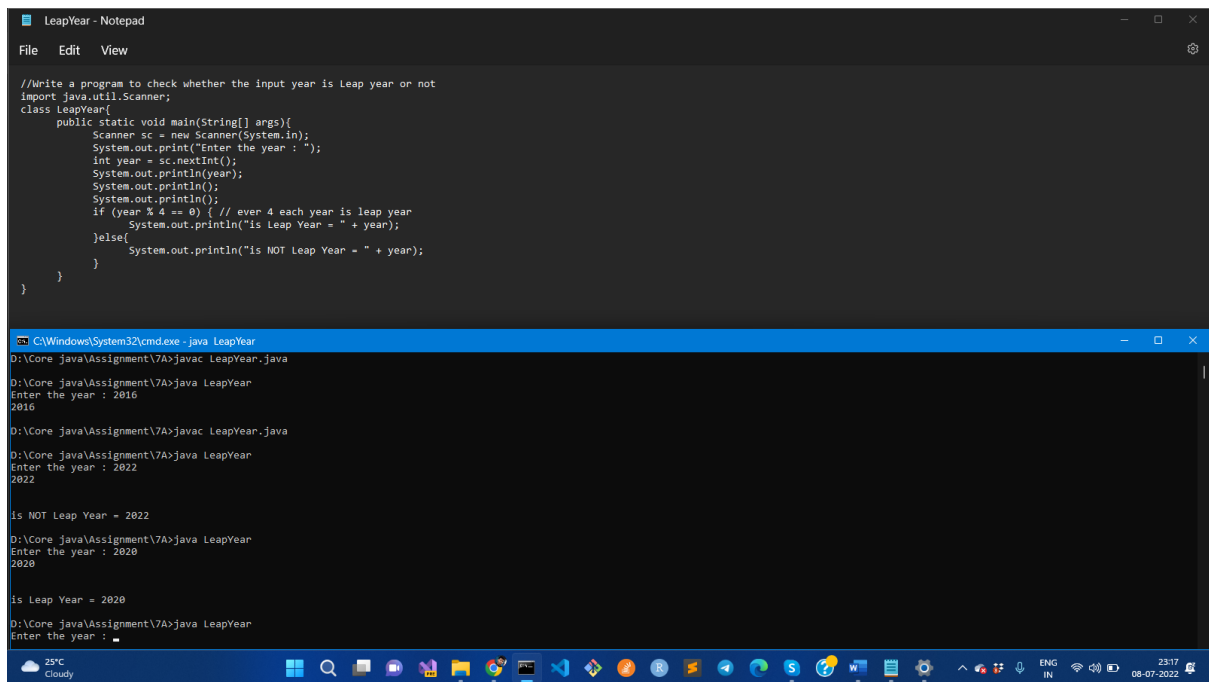
a = 20

b = 10

D:\Core java\Assignment\6A>

25°C Cloudy 22:52 08-07-2022

5. Write a program to check whether the input year is Leap year or not



The image shows a screenshot of a Windows desktop with two windows open. The top window is a Notepad editor titled 'LeapYear - Notepad', containing the following Java code:

```
//Write a program to check whether the input year is Leap year or not
import java.util.Scanner;
class LeapYear{
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter the year : ");
        int year = sc.nextInt();
        System.out.println(year);
        System.out.println();
        System.out.println();
        if (year % 4 == 0) { // ever 4 each year is leap year
            System.out.println("is Leap Year = " + year);
        }else{
            System.out.println("is NOT Leap Year = " + year);
        }
    }
}
```

The bottom window is a Command Prompt titled 'C:\Windows\System32\cmd.exe - java LeapYear'. It shows the compilation and execution of the program:

```
D:\Core java\Assignment\7A>javac LeapYear.java
D:\Core java\Assignment\7A>java LeapYear
Enter the year : 2016
2016
D:\Core java\Assignment\7A>javac LeapYear.java
D:\Core java\Assignment\7A>java LeapYear
Enter the year : 2022
2022
is NOT Leap Year = 2022
D:\Core java\Assignment\7A>java LeapYear
Enter the year : 2020
2020
is Leap Year = 2020
D:\Core java\Assignment\7A>java LeapYear
Enter the year : _
```

The Windows taskbar at the bottom shows the system clock as 23:17 on 08-07-2022, with a temperature of 25°C and a cloudy weather icon.

6. How to create a star pyramid pattern using '*' in Java

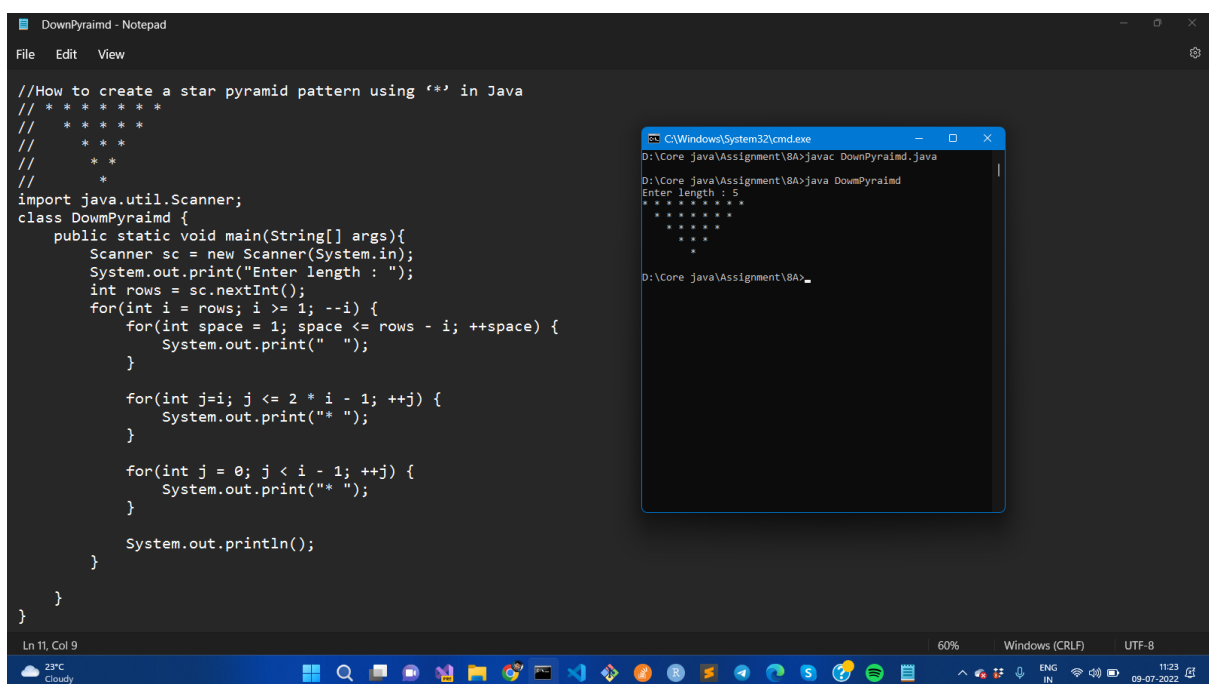
* * * * *

* * * *

* * *

* *

*



The screenshot shows a Notepad window titled 'DownPyramid - Notepad' containing the following Java code:

```
//How to create a star pyramid pattern using '*' in Java
// * * * * *
//  * * * *
//   * * *
//    * *
//     *
//
import java.util.Scanner;
class DownPyramid {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter length : ");
        int rows = sc.nextInt();
        for(int i = rows; i >= 1; --i) {
            for(int space = 1; space <= rows - i; ++space) {
                System.out.print(" ");
            }

            for(int j=i; j <= 2 * i - 1; ++j) {
                System.out.print("* ");
            }

            for(int j = 0; j < i - 1; ++j) {
                System.out.print(" ");
            }

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

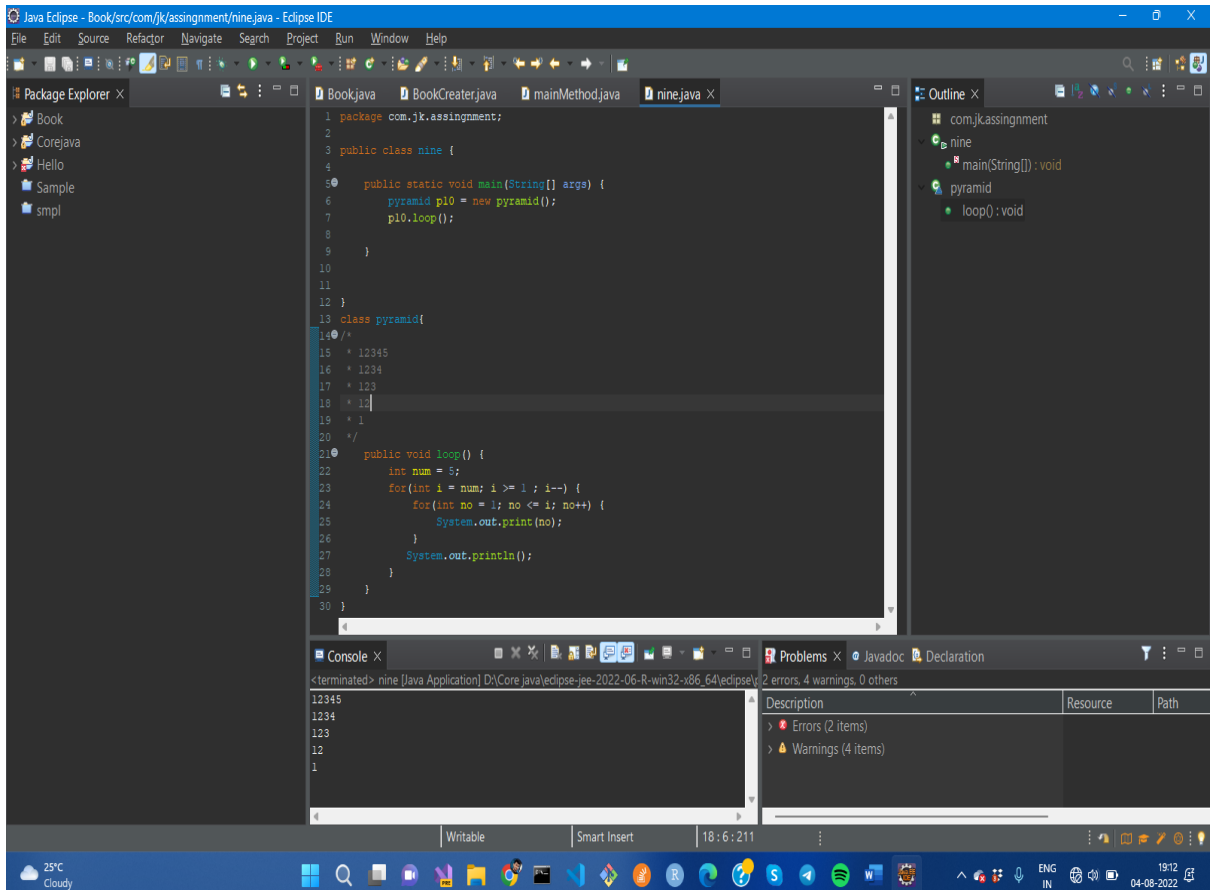
Overlaid on the Notepad window is a Windows Command Prompt window titled 'C:\Windows\System32\cmd.exe'. It shows the execution of the Java program:

```
D:\Core java\Assignment\8A>javac DownPyramid.java
D:\Core java\Assignment\8A>java DownPyramid
Enter length : 5
* * * * *
 * * * *
  * * *
   * *
    *

```

The Windows taskbar at the bottom shows the date and time as 11:23 on 09-07-2022.

7. Write A Program To Print Inverted Half Pyramid Pattern Using Numbers In Java



The screenshot shows the Eclipse IDE with a Java project named 'com.jk.assingment'. The main file, 'nine.java', contains the following code:

```
1 package com.jk.assingment;
2
3 public class nine {
4
5     public static void main(String[] args) {
6         pyramid p10 = new pyramid();
7         p10.loop();
8     }
9
10 }
11
12 }
13 class pyramid{
14
15     /*
16      * 12345
17      * 1234
18      * 123
19      * 12
20      * 1
21      */
22     public void loop() {
23         int num = 5;
24         for(int i = num; i >= 1; i--) {
25             for(int no = 1; no <= i; no++) {
26                 System.out.print(no);
27             }
28             System.out.println();
29         }
30     }
31 }
```

The console output shows the pattern:

```
12345
1234
123
12
1
```

The Problems view shows 2 errors and 4 warnings. The status bar at the bottom indicates the file is writable and the current time is 18:06:211 on 04-08-2022.

8. Write A Program To Print Hollow Rectangle Using “*” In Java

