

OOPJ ASSIGNMENT – 1

Name – Nishant Nahar

Roll No – 241551078

Section – CSE-25

1. Write a Java program to print your name, university name, and branch in three separate lines

```
public class assign_1 {  
    public static void main(String args[]) {  
        System.out.println("Name – Nishant Nahar");  
        System.out.println("Roll No – 241551078");  
        System.out.println("Name == Nishant Nahar");  
        System.out.println("University Name == KIIT University");  
        System.out.println("Branch == CSE (AI &ML)");  
    }  
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_1.java  
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8  
Name – Nishant Nahar  
Roll No – 241551078  
Name == Nishant Nahar  
University Name == KIIT University  
Branch == CSE (AI &ML)
```

2. Write a Java program to print the following pattern:

```
*  
**  
***  
****
```

```
public class assign_2 {  
    public static void main(String args[]) {  
        System.out.println("Name – Nishant Nahar");  
        System.out.println("Roll No – 241551078");  
        int rows = 4;  
        for (int i = 1; i <= rows; i++) {  
            for (int j = 1; j <= i; j++) {  
                System.out.print("*");  
            }  
        }  
    }  
}
```

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

OUTPUT

```
B:\java_lab\assignment_1>java assign_2.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
*
**
***
****
```

3. Write a Java program that prints the sum, difference, product, and quotient of two numbers (use hardcoded values)

```
public class assign_3 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        int a = 25;
        int b = 5;
        int sum = a + b;
        int diff = a - b;
        int product = a * b;
        int quotient = a / b;
        int modulo = a % b;
        System.out.println("The sum is " + sum);
        System.out.println("The difference is " + diff);
        System.out.println("The product is " + product);
        System.out.println("The quotient is " + quotient);
        System.out.println("The remainder is " + modulo);
    }
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_3.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
The sum is 30
The difference is 20
The product is 125
The quotient is 5
The remainder is 0
```

4. Write a Java program to display the following output exactly:

"Hello Java"

Welcome to Programming

```
public class assign_4 {  
    public static void main(String args[]) {  
        System.out.println("Name - Nishant Nahar");  
        System.out.println("Roll No - 241551078");  
        System.out.println("\"Hello Java\"");  
        System.out.println("Welcome to Programming");  
    }  
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_4.java  
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8  
Name - Nishant Nahar  
Roll No - 241551078  
"Hello Java"  
Welcome to Programming
```

5. Write a Java program to print the ASCII value of a character. (Example: A → 65)

```
public class assign_5 {  
    public static void main(String args[]) {  
        System.out.println("Name - Nishant Nahar");  
        System.out.println("Roll No - 241551078");  
        char c = 'w';  
        System.out.println("The ASCII value of " + c + " is " + (int) c);  
    }  
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_5.java  
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8  
Name - Nishant Nahar  
Roll No - 241551078  
The ASCII value of w is 119
```

6. Write a Java program to take your name and age as input and print: Hello <name>, your age is <age>

```
import java.util.Scanner;  
public class assign_6 {  
    public static void main(String args[]) {
```

```

        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner a = new Scanner(System.in);
        System.out.println("Enter Your Name");
        String name = a.nextLine();
        System.out.println("Enter Your age");
        int age = a.nextInt();
        System.out.println("Hello " + name + ", your age is " + age);
        a.close();
    }
}

```

OUTPUT

```

B:\java_lab\assignment_1>java assign_6.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter Your Name
Nishant Nahar
Enter Your age
20
Hello Nishant Nahar, your age is 20

```

7. Write a Java program to find the area of a circle using radius given by the user

```

import java.util.Scanner;
public class assign_7 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner a = new Scanner(System.in);
        System.out.println("Enter the radius of the circle");
        int rad = a.nextInt();
        double area = 3.14 * rad * rad;
        System.out.println("The area of circle with radius " + rad + " is " + area);
        a.close();
    }
}

```

OUTPUT

```

B:\java_lab\assignment_1>java assign_7.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter the radius of the circle
3
The area of circle with radius 3 is 28.259999999999998

```

8. Write a Java program to convert temperature from Celsius to Fahrenheit

```
import java.util.Scanner;
public class assign_8 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner a = new Scanner(System.in);
        System.out.println("Enter the Temp in Celcius");
        double cel = a.nextDouble();
        double far = (cel * 9 / 5) + 32;
        System.out.println("The Farhenheit Temp of " + cel + " Celcius is " + far);
        a.close();
    }
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_8.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter the Temp in Celcius
-40
The Farhenheit Temp of -40.0 Celcius is -40.0
```

9. Write a Java program to swap two numbers using a third variable

```
import java.util.Scanner;
public class assign_9 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner a = new Scanner(System.in);
        System.out.println("Enter 1st number");
        int num1 = a.nextInt();
        System.out.println("Enter 2nd number");
        int num2 = a.nextInt();
        int swap;
        swap = num1;
        num1 = num2;
        num2 = swap;
        System.out.println("The Number After swap are:");
        System.out.println("Number 1 " + num1);
        System.out.println("Number 2 " + num2);
    }
}
```

```
        a.close();
    }
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_9.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter 1st number
3
Enter 2nd number
45
The Number After swap are:
Number 1 45
Number 2 3
```

10. Write a Java program to swap two numbers without using a third variable

```
import java.util.Scanner;
public class assign_10 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner a = new Scanner(System.in);
        System.out.println("Enter the NUmbers to Swap");
        int b = a.nextInt();
        int c = a.nextInt();
        b = b + c;
        c = b - c;
        b = b - c;
        System.out.println("The Number After Swap are");
        System.out.println("Num 1 " + b);
        System.out.println("Num 2 " + c);
        a.close();
    }
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_10.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter the NUmbers to Swap
3
45
The Number After Swap are
Num 1 45
Num 2 3
```

11. Write a Java program to check whether a number is even or odd

```
import java.util.Scanner;
public class assign_11 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner a = new Scanner(System.in);
        System.out.println("Enter the Number");
        int num = a.nextInt();
        if (num % 2 == 0) {
            System.out.println("The number is even");
        } else {
            System.out.println("The number is odd");
        }
        a.close();
    }
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_11.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter the Number
32
The number is even
```

12. Write a Java program to read two integers and print the larger number

```
import java.util.Scanner;
public class assign_12 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter Num 1");
        int a = scan.nextInt();
        System.out.println("Enter Num 2");
        int b = scan.nextInt();
        if (a > b) {
            System.out.println(a + " is larger than " + b);
            System.out.println("The larger Number is " + a);
        } else {
```

```

        System.out.println(b + " is larger than " + a);
        System.out.println("The larger Number is " + b);
    }
    scan.close();
}
}

```

OUTPUT

```

B:\java_lab\assignment_1>java assign_12.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter Num 1
34
Enter Num 2
54
54 is larger than 34
The larger Number is 54

```

13. Write a Java program to check whether a number is divisible by both 3 and 5

```

import java.util.Scanner;
public class assign_13 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the Number to be checked");
        int a = scan.nextInt();
        if (a % 3 == 0 && a % 5 == 0) {
            System.out.println("The number is divisible by both 3 and 5");
        } else {
            System.out.println("The number is not divisible by both 3 and 5");
        }
        scan.close();
    }
}

```

OUTPUT

```

B:\java_lab\assignment_1>java assign_13.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter the Number to be checked
35
The number is not divisible by both 3 and 5

```


14. Write a Java program to calculate the simple interest

```
import java.util.Scanner;
public class assign_14 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the Principle Amount");
        double p = scan.nextDouble();
        System.out.println("Enter the Rate of Interest");
        double r = scan.nextDouble();
        System.out.println("Enter the time period");
        double t = scan.nextDouble();
        double SI = (p * r * t) / 100;
        System.out.println("The Simple Interest is " + SI);
        scan.close();
    }
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_14.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter the Principle Amount
1234
Enter the Rate of Interest
3
Enter the time period
3
The Simple Interest is 111.06
```

15. Write a Java program that takes marks of 5 subjects and prints the total and percentage

```
import java.util.Scanner;
public class assign_15 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter Marks in 5 Subjects (Out of 100):");
        float a = scan.nextFloat();
        float b = scan.nextFloat();
        float c = scan.nextFloat();
        float d = scan.nextFloat();
        float e = scan.nextFloat();
        float total = a + b + c + d + e;
```

```

        float avg = total / 5;
        float percentage = total / 500 * 100;
        System.out.println("The total marks obtained is " + total);
        System.out.println("The average marks obtained is " + avg);
        System.out.println("The percentage is " + percentage);
        scan.close();
    }
}

```

OUTPUT

```

B:\java_lab\assignment_1>java assign_15.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter Marks in 5 Subjects (Out of 100):
30 50 90 90 87
The total marks obtained is 347.0
The average marks obtained is 69.4
The percentage is 69.4

```

16. Write a Java program to check whether a given year is a leap year or not

```

import java.util.Scanner;
public class assign_16 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the year");
        int year = scan.nextInt();
        if (year % 4 == 0) {
            if (year % 100 == 0) {
                if (year % 400 == 0) {
                    System.out.println("The year is a leap year");
                } else {
                    System.out.println("The year is not a leap year");
                }
            } else {
                System.out.println("The year is a leap year");
            }
        } else {
            System.out.println("The year is not a leap year");
        }
        scan.close();
    }
}

```

OUTPUT

```
B:\java_lab\assignment_1>java assign_16.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter the year
1901
The year is not a leap year
```

17. Write a Java program to calculate the factorial of a number using a loop

```
import java.util.Scanner;
public class assign_17 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the number for which factorial is to be found:");
        int number = scan.nextInt();
        int factorial = 1;
        for (int i = 1; i <= number; i++) {
            factorial = factorial * i;
        }
        System.out.println("The factorial of " + number + " is " + factorial);
        scan.close();
    }
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_17.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter the number for which factorial is to be found:
6
The factorial of 6 is 720
```

18. Write a Java program to print all numbers from 1 to N that are divisible by 7

```
import java.util.Scanner;
public class assign_18 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
```

```

Scanner scan = new Scanner(System.in);
System.out.println("Enter the number till u want to check");
int num = scan.nextInt();
int a = 0;
for (int i = 1; i <= num; i++) {
    if (i % 7 == 0) {
        System.out.println(i);
        a++;
    }
}
if (a == 0) {
    System.out.println("No number is divisible by 7 till " + num);
}
scan.close();
}
}

```

OUTPUT

```

B:\java_lab\assignment_1>java assign_18.java
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8
Name - Nishant Nahar
Roll No - 241551078
Enter the number till u want to check
50
7
14
21
28
35
42
49

```

19. Write a Java program to reverse a given integer (example: 1234 → 4321)

```

import java.util.Scanner;
public class assign_19 {
    public static void main(String args[]) {
        System.out.println("Name - Nishant Nahar");
        System.out.println("Roll No - 241551078");
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the number to be reversed");
        int num = scan.nextInt();
        int revnum = 0;
        while (num != 0) {
            int temp = num % 10;
            revnum = revnum * 10 + temp;
            num = num / 10;
        }
        System.out.println("The reversed number is " + revnum);
    }
}

```

```
        scan.close();  
    }
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_19.java  
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8  
Name - Nishant Nahar  
Roll No - 241551078  
Enter the number to be reversed  
35472  
The reversed number is 27453
```

20. Write a Java program to find the largest among three numbers using conditional statements (no built-in functions)

```
import java.util.Scanner;  
public class assign_20 {  
    public static void main(String args[]) {  
        System.out.println("Name - Nishant Nahar");  
        System.out.println("Roll No - 241551078");  
        Scanner scan = new Scanner(System.in);  
        System.out.println("Enter the three numbers to be compared:");  
        int a = scan.nextInt();  
        int b = scan.nextInt();  
        int c = scan.nextInt();  
        if (a > b && a > c) {  
            System.out.println("The largest number is " + a);  
        } else if (b > a && b > c) {  
            System.out.println("The largest number is " + b);  
        } else {  
            System.out.println("The largest number is " + c);  
        }  
        scan.close();  
    }  
}
```

OUTPUT

```
B:\java_lab\assignment_1>java assign_20.java  
Picked up JAVA_TOOL_OPTIONS: -Dstdout.encoding=UTF-8 -Dstderr.encoding=UTF-8  
Name - Nishant Nahar  
Roll No - 241551078  
Enter the three numbers to be compared:  
3 7 4  
The largest number is 7
```