

OOP EXPERIMENT-1

NAME-ANMOL

SAP-590011794

BATCH-20

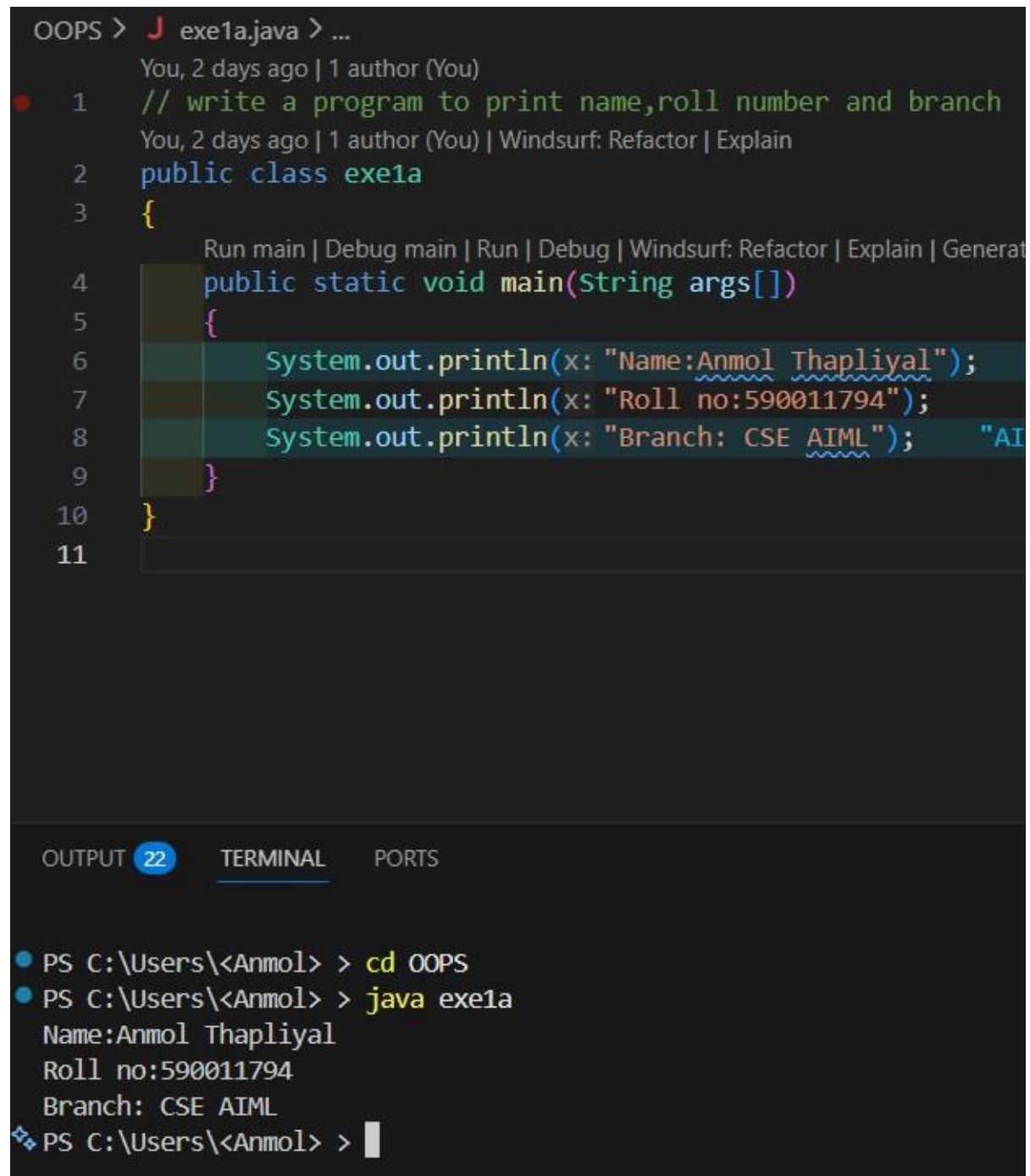
DATE-1 FEB 2026

SUBMITTED TO- PROF. Kalluri Shareef Babu

Topics to be covered: class creation, running, compiling, variable type declaration, if else, operators, printing statements as outputs

EX 1A

Write a Java program to print Name, Roll Number and Branch.



The screenshot shows an IDE with a Java file named `exe1a.java`. The code defines a public class `exe1a` with a `main` method that prints the student's name, roll number, and branch. The IDE interface includes tabs for `OUTPUT`, `TERMINAL`, and `PORTS`. The `TERMINAL` tab is active, showing the command prompt where the program was executed. The output of the program is displayed in the `OUTPUT` tab.

```
OOPS > J exe1a.java > ...
You, 2 days ago | 1 author (You)
1 // write a program to print name,roll number and branch
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1a
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generat
4     public static void main(String args[])
5     {
6         System.out.println(x: "Name:Anmol Thapliyal");
7         System.out.println(x: "Roll no:590011794");
8         System.out.println(x: "Branch: CSE AIML"); "AI
9     }
10 }
11
```

OUTPUT 22 TERMINAL PORTS

```
PS C:\Users\<Anmol> > cd OOPS
PS C:\Users\<Anmol> > java exe1a
Name:Anmol Thapliyal
Roll no:590011794
Branch: CSE AIML
PS C:\Users\<Anmol> >
```

Observation:

creates a class named `exe1a` and prints the name, roll number and branch of the student.

EX 1B

Write a Java program to declare two integers and print their sum.


```
OOPS > J exe1b.java > ...
You, 2 days ago | 1 author (You)
1 // write a java program to declare two integers and print their sum
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1b
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generate Javadoc | X
4     public static void main(String args[])
5     {
6         int a=7;
7         int b=72;
8         int sum=a+b;
9         System.out.println("Sum is:"+sum);
10    }
11 }
12
```

OUTPUT 19 TERMINAL PORTS

```
PS C:\Users\<Anmol> > java exe1b
Sum is:79
PS C:\Users\<Anmol> > |
```

Observation: creates a class named exe1b and prints the sum of two integers using main method and int data type variables a and b

EX 1C

Write a Java program to calculate the area of a rectangle.


```
OOPS > J exe1c.java > ...
You, 2 days ago | 1 author (You)
1 // write a java program to calculate the area of a rectangle
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1c
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generate
4     public static void main(String args[])
5     {
6         int l=17;
7         int b=55;
8         int area=l*b;
9         System.out.println("Area of rectangle is:"+area);
10    }
11 }
12

OUTPUT 19 TERMINAL PORTS
● PS C:\Users\<Anmol> > java exe1c
Area of rectangle is:935
❖ PS C:\Users\<Anmol> > 
```

Observation: creates a class named exe1c and prints the area of a rectangle using main method and int data type variables l and b for length and breadth respectively

EX 1D

Write a Java program to calculate Simple Interest.


```
OOPS > exe1d.java > Language Support for Java(TM) by Red Hat > exe1d >
You, 2 days ago | 1 author (You)
1 // write a java program to calculate simple interest
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1d
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Gene
4     public static void main(String args[])
5     {
6         float p=700f;
7         float t=5f;
8         float r=4.3f;
9         float si=(p*t*r)/100;
10        System.out.println("Simple Interest is:"+si);
11    }
12 }
13

OUTPUT 19 TERMINAL PORTS
● PS C:\Users\<Anmol> > java exe1d
Simple Interest is:150.50002
❖ PS C:\Users\<Anmol> > 
```

Observation: creates a class named exe1d and prints the simple interest using main method and float data type variables p, t and r for principal, time and rate respectively and si for simple interest variable is created to store the calculated simple interest value.

EX 1E

Write a Java program to swap two numbers using a temporary variable.


```
OOPS > J exe1e.java > ...
You, 2 days ago | 1 author (You)
1 // write a java program to swap two numbers using a temporary variable
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1e
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generate Javadoc | X
4     public static void main(String args[])
5     {
6         int a=3;
7         int b=23;
8         int temp;
9         System.out.println("Before swapping:a="+a+" b="+b);
10        temp=a;
11        a=b;
12        b=temp;
13        System.out.println("After swapping:a="+a+" b="+b);
14    }
15 }
16

OUTPUT 19 TERMINAL PORTS
● PS C:\Users\<Anmol> > java exe1e
Before swapping:a=3 b=23
After swapping:a=23 b=3
PS C:\Users\<Anmol> > 
```

Observation: creates a class named exe1e and swaps two numbers using a temporary variable and prints the values before and after swapping using main method and int data type variables a and b for the two numbers and temp for temporary variable.

EX 1F

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


```
OOPS > J exe1f.java > ...
You, 2 days ago | 1 author (You)
1 // write a java program to swap two numbers without using a temporary variable
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1f
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generate Javadoc | X
4     public static void main(String args[])
5     {
6         int a=7;
7         int b=13;
8         System.out.println("Before swapping:a="+a+" b="+b);
9         a=a+b;
10        b=a-b;
11        a=a-b;
12        System.out.println("After swapping:a="+a+" b="+b);
13    }
14 }
15

OUTPUT 19 TERMINAL PORTS
• PS C:\Users\<Anmol> > java exe1f
Before swapping:a=7 b=13
After swapping:a=13 b=7
PS C:\Users\<Anmol> > 
```

Obseravtion: creates a class named exe1f and swaps two numbers without using a temporary variable and prints the values before and after swapping using main method and int data type variables a and b for the two numbers.

EX 1G

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


```
OOPS > J exe1g.java > ...
You, 2 days ago | 1 author (You)
1 // write a java program to check whether a number is even or odd
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1g
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generate Javadoc | X
4 public static void main(String args[])
5 {
6     int n=7;
7     if(n%2==0)
8         System.out.println(x: "Number is even");
9     else
10        System.out.println(x: "Number is odd");
11    }
12 }
13

OUTPUT 19 TERMINAL PORTS
• PS C:\Users\<Anmol> > java exe1g
  Number is odd
❏ PS C:\Users\<Anmol> > |
```

Observation: creates a class named exe1g and checks whether a number is even or odd using main method and int data type variable n for the number using modulus operator and if-else statement to determine evenness or oddness.

EX 1H

Write a Java program to find the largest of two numbers.


```
OOPS > J exe1h.java > ...
You, 2 days ago | 1 author (You)
1 // write a java program to find the largest of two numbers
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1h
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generate Ja
4     public static void main(String args[])
5     {
6         int a=100;
7         int b=999;
8         if(a>b)
9             System.out.println("Largest number is:"+a);
10        else
11            System.out.println("Largest number is:"+b);
12    }
13 }
14

OUTPUT 19 TERMINAL PORTS
● PS C:\Users\<Anmol> > java exe1h
  Largest number is:999
❖ PS C:\Users\<Anmol> > 
```

Obseravtion:

creates a class named exe1h and finds the largest of two numbers using main method and int data type variables a and b for the two numbers using if-else statement to compare the two numbers.

EX 11

Write a Java program to find the largest of three numbers.


```
OOPS > J exe1i.java > Java > exe1i > main(String[] args)
You, 2 days ago | 1 author (You)
1 // write a java program to find the largest of three numbers
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1i
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generate
4     public static void main(String args[])
5     {
6         int a=10;
7         int b=25;
8         int c=15;
9         if(a>b && a>c)
10        {
11            System.out.println("Largest number is:"+a);
12        }
13        else if(b>c)
14        {
15            System.out.println("Largest number is:"+b);
16        }
17        else
18        {
19            System.out.println("Largest number is:"+c);
20        }
21    }
22 }
```

OUTPUT 19 TERMINAL PORTS

```
PS C:\Users\<Anmol> > java exe1i
Largest number is:25
PS C:\Users\<Anmol> > 
```

Observation:

creates a class named exe1i and finds the largest of three numbers using main method and int data type variables a, b and c for the three numbers using if-else-if statement to compare the three numbers.

EX 1J

Write a Java program to check whether a given year is a leap year.


```
OOPS > J exe1j.java > Language Support for Java(TM) by Red Hat > exe1j > main(String[] args)
You, 2 days ago | 1 author (You)
1 // write a java program to check whether a year is a leap year
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1j
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generate Javadoc | X
4     public static void main(String args[])
5     {
6         int year=2026;
7         if(year%4==0)
8             System.out.println(x: "Leap year");
9         else
10            System.out.println(x: "Not a leap year");
11    }
12 }
13

OUTPUT 19 TERMINAL PORTS
PS C:\Users\<Anmol> > java exe1j
Not a leap year
PS C:\Users\<Anmol> > 
```

Observation:

creates a class named exe1j and checks whether a year is a leap year using main method and int data type variable year for the year using modulus operator and if-else statement to determine leap year status and print the result.

EX 1K

Write a Java program to check whether a character is a vowel or consonant.


```
OOPS > J exe1k.java > ...
You, 2 days ago | 1 author (You)
1 // write a java program to check whether a character is a vowel or consonant
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1k
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generate Javadoc | X
4     public static void main(String args[])
5     {
6         char ch='a';
7         if(ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u')
8             System.out.println(x: "Vowel");
9         else
10            System.out.println(x: "Consonant");
11    }
12 }
13

OUTPUT 19 TERMINAL PORTS
● PS C:\Users\<Anmol> > java exe1k
Vowel
❖ PS C:\Users\<Anmol> > 
```

Observation: creates a class named exe1k and checks whether a character is a vowel or consonant using main method and char data type variable ch for the character using if-else statement to determine vowel or consonant status and print the result.

EX 1L

Write a Java program to perform addition, subtraction, multiplication and division.


```
OOPS > J exe1l.java > ...
You, 2 days ago | 1 author (You)
1 // write a java program to perform addition, subtraction, multiplication and division
You, 2 days ago | 1 author (You) | Windsurf: Refactor | Explain
2 public class exe1l
3 {
    Run main | Debug main | Run | Debug | Windsurf: Refactor | Explain | Generate Javadoc | X
4 public static void main(String args[])
5 {
6     float a=26;
7     float b=88;
8     System.out.println("Addition:"+(a+b));
9     System.out.println("Subtraction:"+(a-b));
10    System.out.println("Multiplication:"+(a*b));
11    System.out.println("Division:"+(a/b));
12 }
13 }
14

OUTPUT 19 TERMINAL PORTS
● PS C:\Users\<Anmol> > java exe1l
Addition:114.0
● Subtraction:-62.0
Multiplication:2288.0
Division:0.29545453
❖ PS C:\Users\<Anmol> > |
```

Observation: creates a class named exe1l and performs addition, subtraction, multiplication and division using main method and float data type variables a and b for the two numbers and prints the results of the operations.