Lab # 2

IF, IF ELSE, IF ELSE IF, NESTED IF, SWITCH STATEMENTS

IF statement:

1. Write a Java program that takes an integer input from the user and prints a message only if the number is positive.
2. Write a Java program that takes marks as input and prints "You passed the exam" only if marks are greater than or equal to 50

IF else Statement:

1. Write a Java program that takes an integer from the user and checks whether the number is even or odd.
2. Write a Java program that checks whether a given year is a leap year or not.
3. Write a Java program to calculate electricity bill based on units consumed: If units $\leq$ 100 charge Rs. 5 per unit Otherwise $\rightarrow$ charge Rs. 10 per unit

IF else if statement:

1. Write a Java program that takes three numbers from the user and prints the largest number.
2. Write a Java program that takes marks as input and prints the grade:

   - Marks $\geq$ 90 $\rightarrow$ Grade A
   - Marks $\geq$ 75 $\rightarrow$ Grade B
   - Marks $\geq$ 50 $\rightarrow$ Grade C
   - Marks < 50 $\rightarrow$ Grade F

3. Write a Java program that takes a year as input and checks whether it is a **leap year** or **not**. A year divisible by 400 $\rightarrow$ Leap year. A year divisible by 100 but not 400 $\rightarrow$ Not a leap year. Otherwise $\rightarrow$ Not a leap year

Nested If:

1. Write a Java program that asks the user for their age:

   - Age < 18 $\rightarrow$ "Not eligible to vote"
   - Age $\geq$ 18 $\rightarrow$ "Eligible to vote"
   - If Age $\geq$ 60 $\rightarrow$ Also print "You are a senior citizen

Switch statement:

1. Write a Java program that takes two numbers and an operator (+, -, *, /) as input and performs the operation using a switch statement.
2. Write a Java program that takes a month number (1–12) as input and prints the number of days in that month. For February, assume 28 days.