1.Write a Java program that prints "VALID" only if a number:

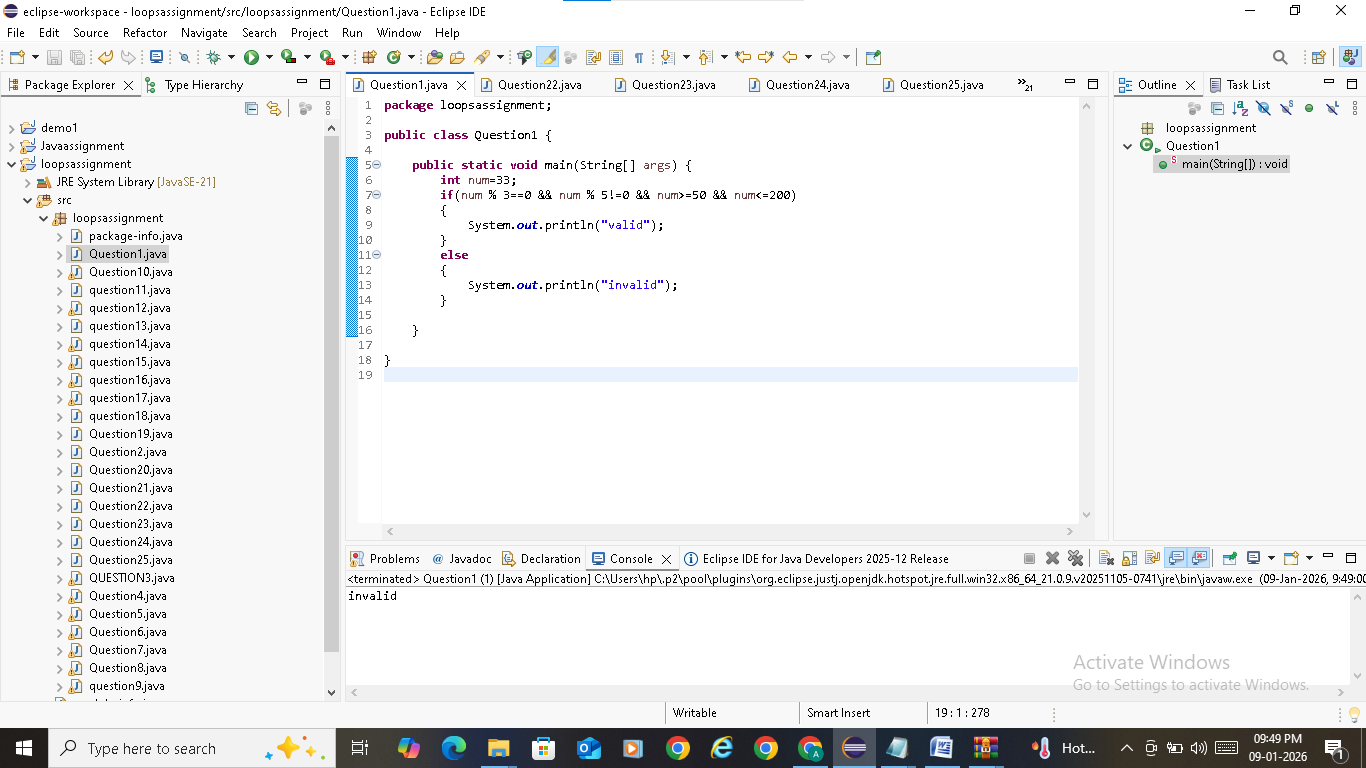
is divisible by 3

NOT divisible by 5

lies between 50 and 200 (inclusive)

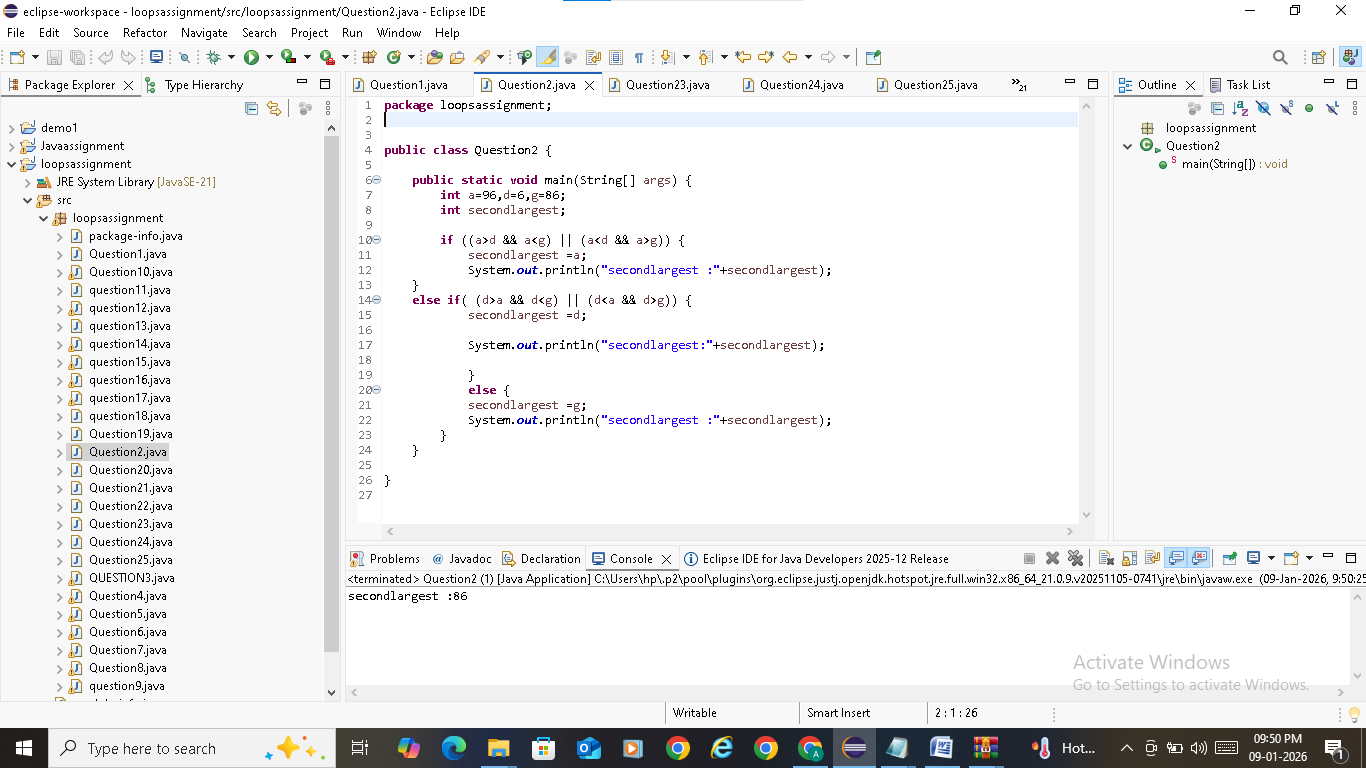
Otherwise print "INVALID"

➡️ Use only one if statement

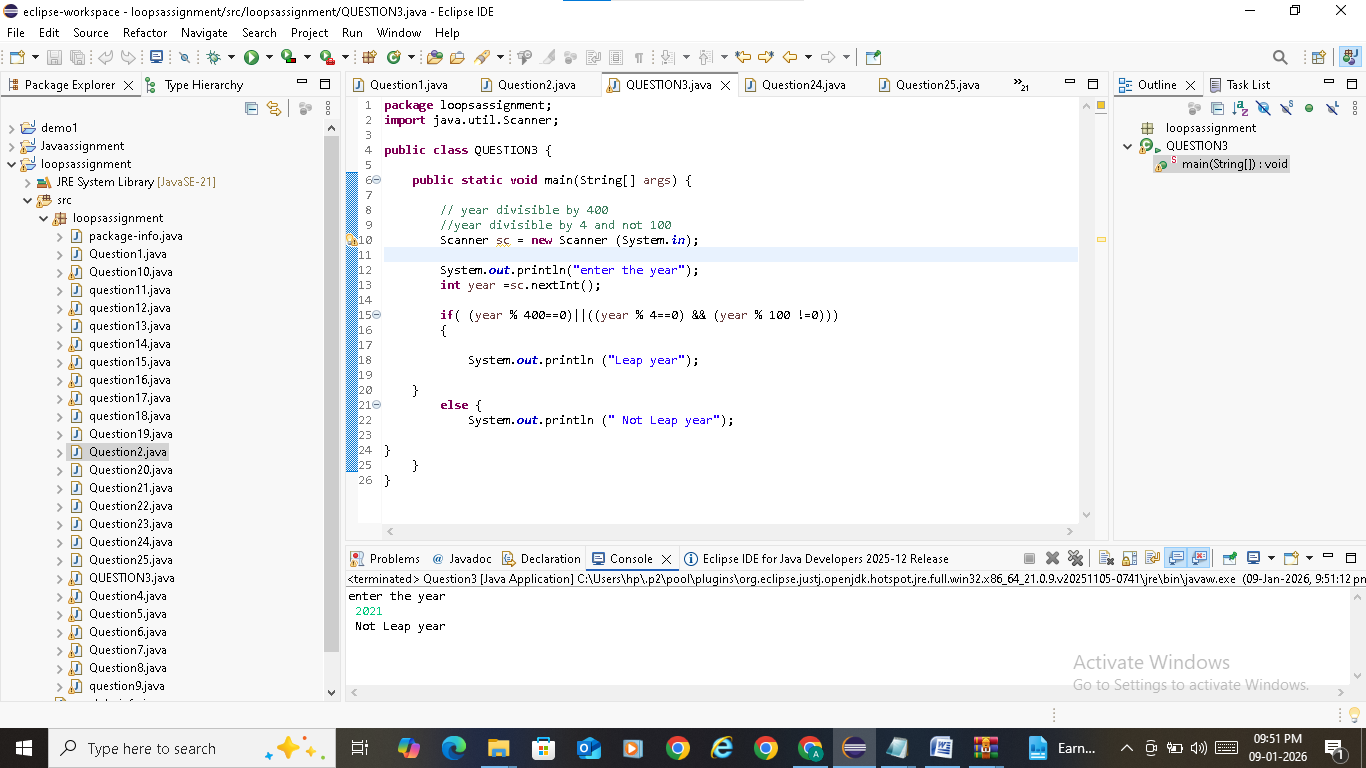


2.Given three integers a, b, and c, print the second largest number using:

Only if–else

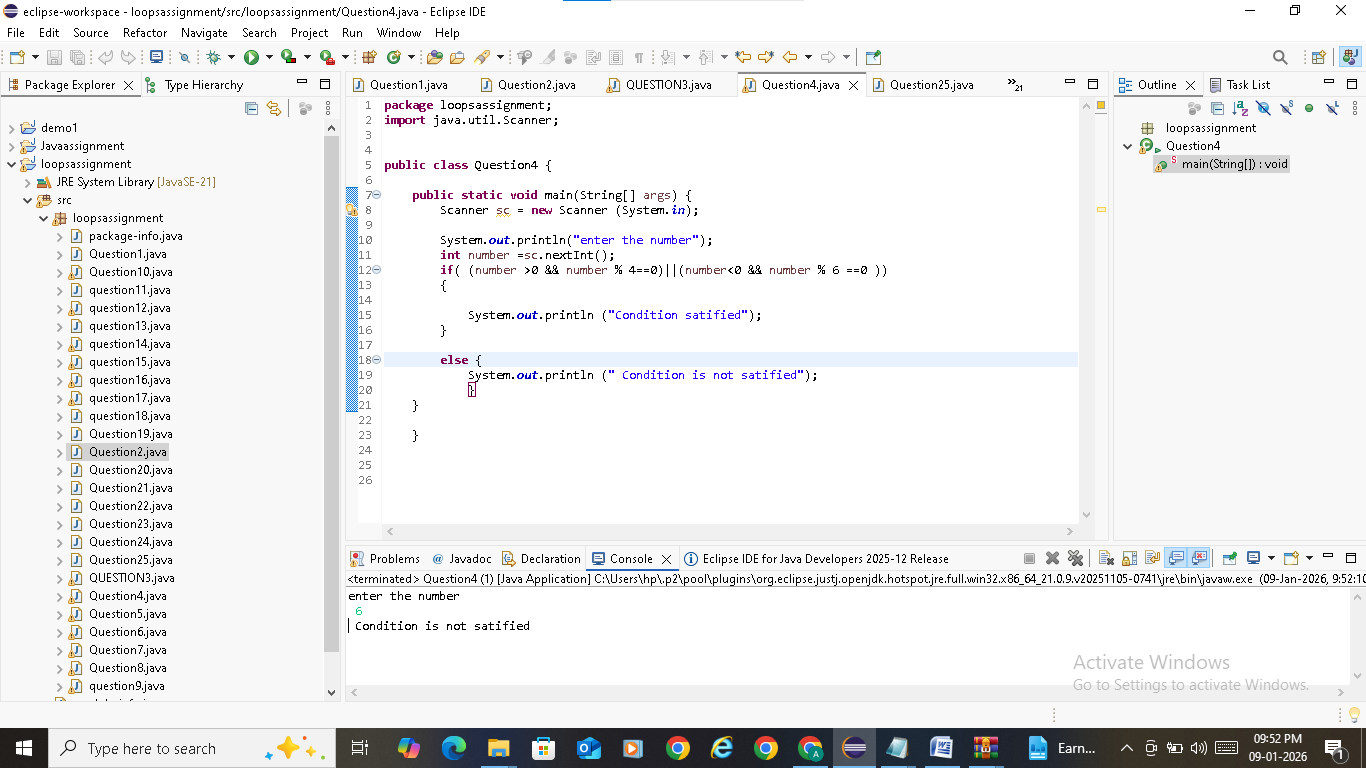


3.Write a program to check if a year is a leap year but:



4.Input an integer and determine whether:

It is positive and divisible by 4 OR negative and divisible by 6



5.Write a program that prints:

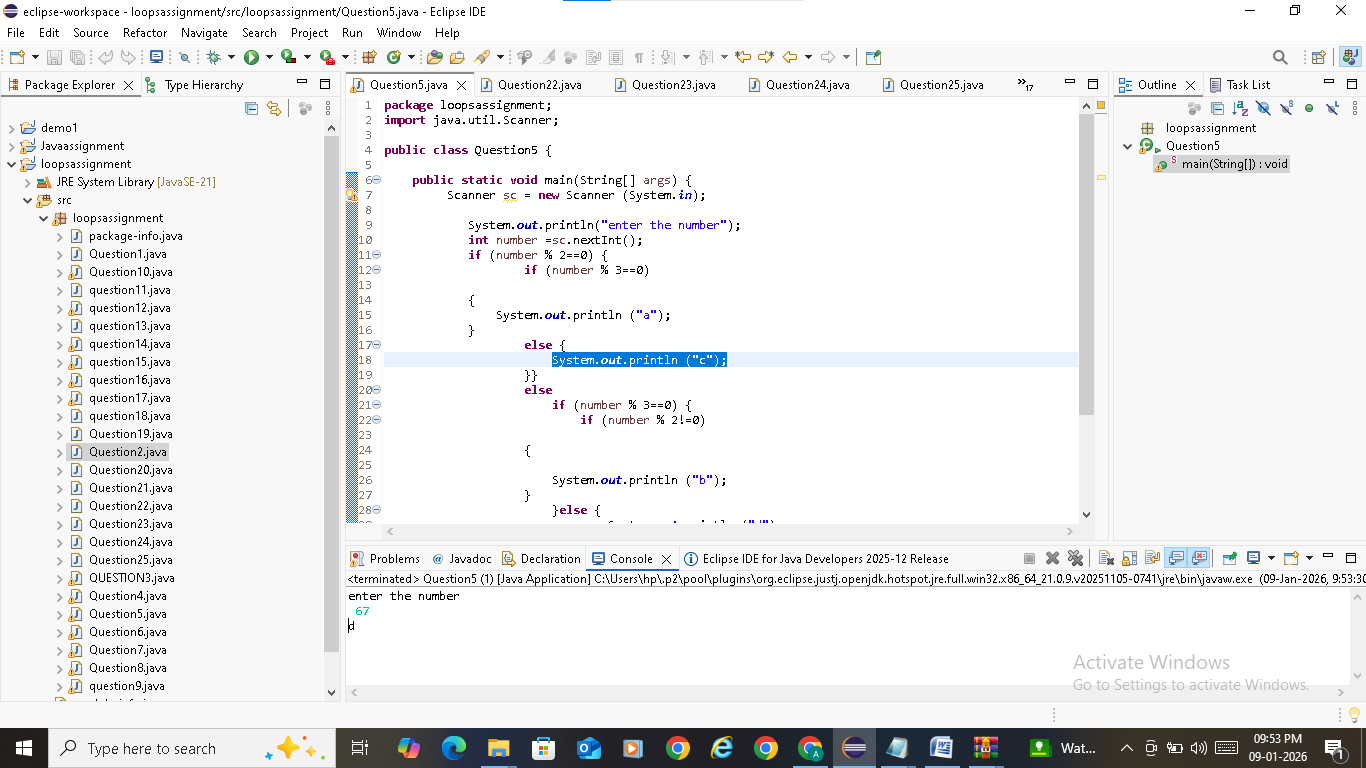
"A" if number divisible by 2 and 3

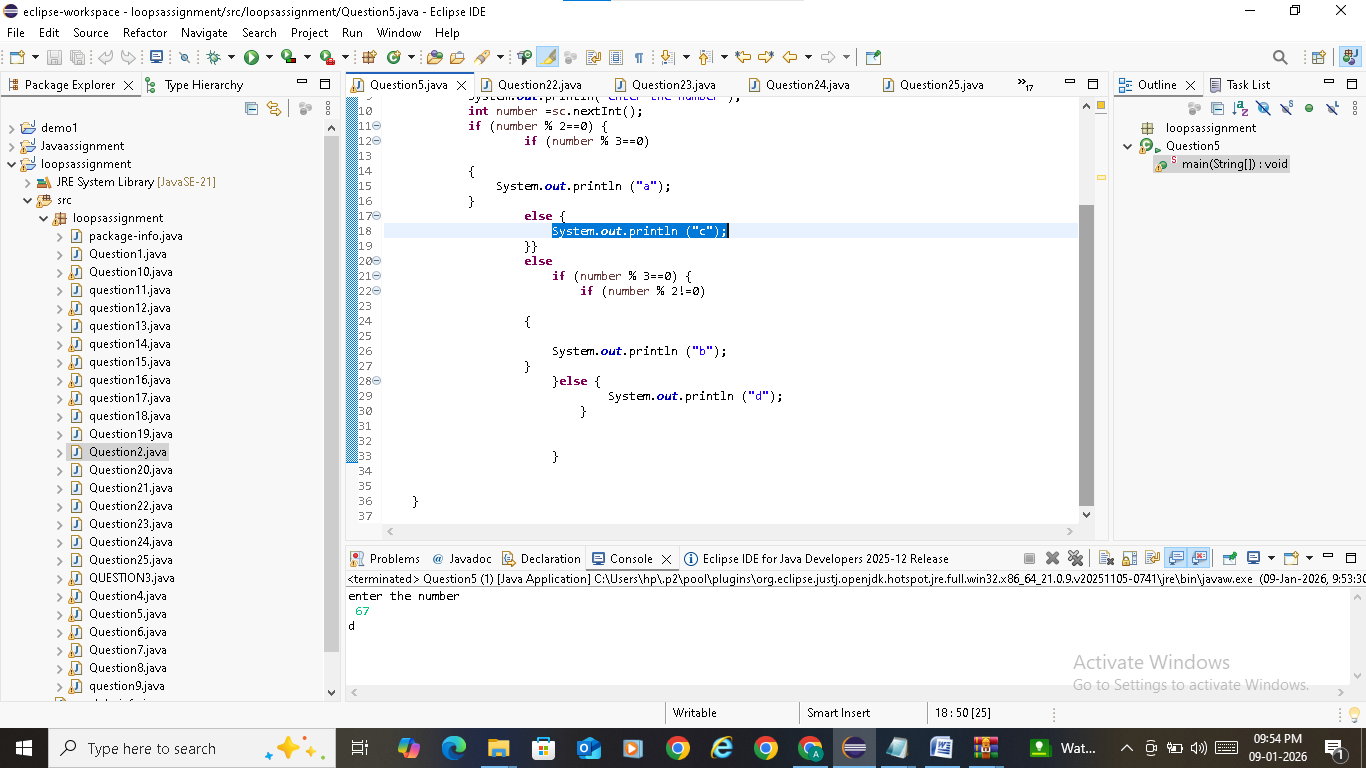
"B" if divisible by 3 and not by 2

"C" if divisible by 2 and not by 3

"D" otherwise

🔹 NESTED IF–ELSE (Complex Conditions)





6.Given marks in Math, Physics, Chemistry, determine eligibility:

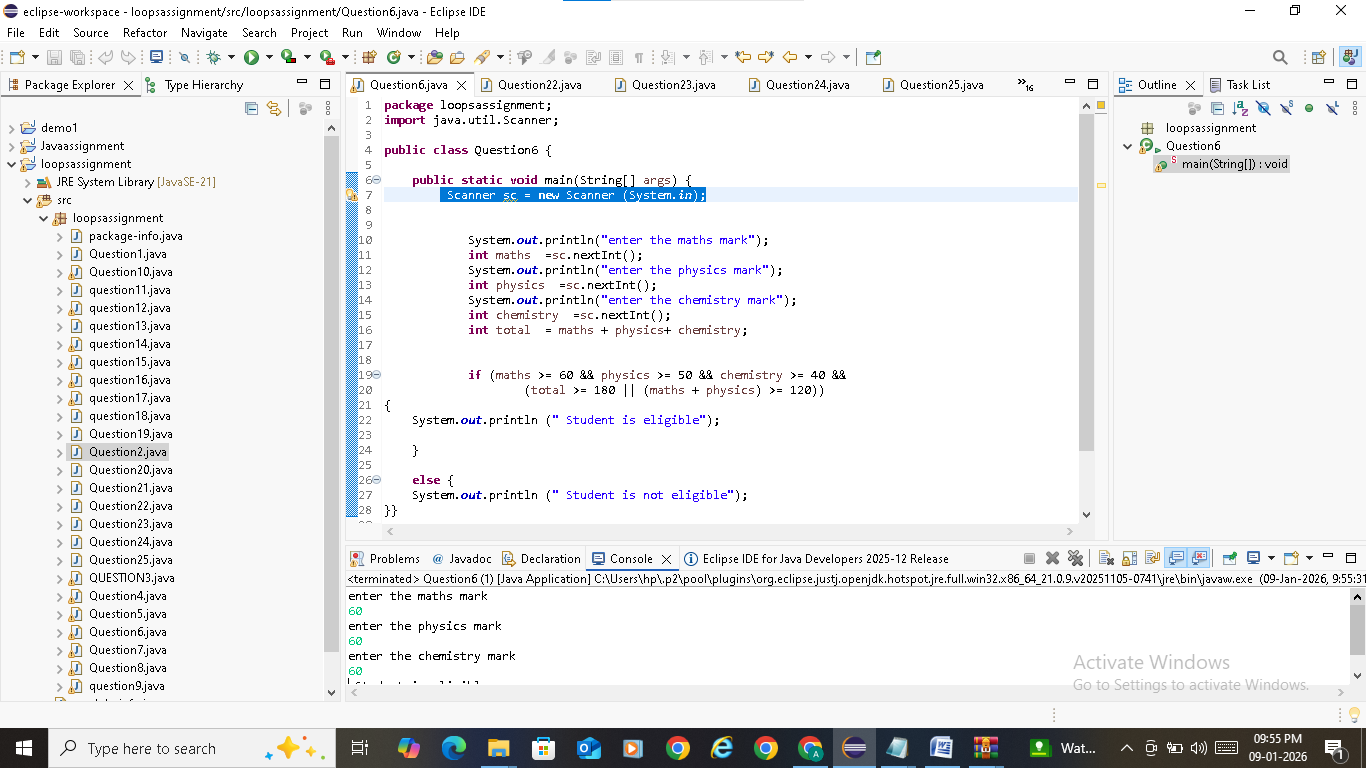
Math ≥ 60

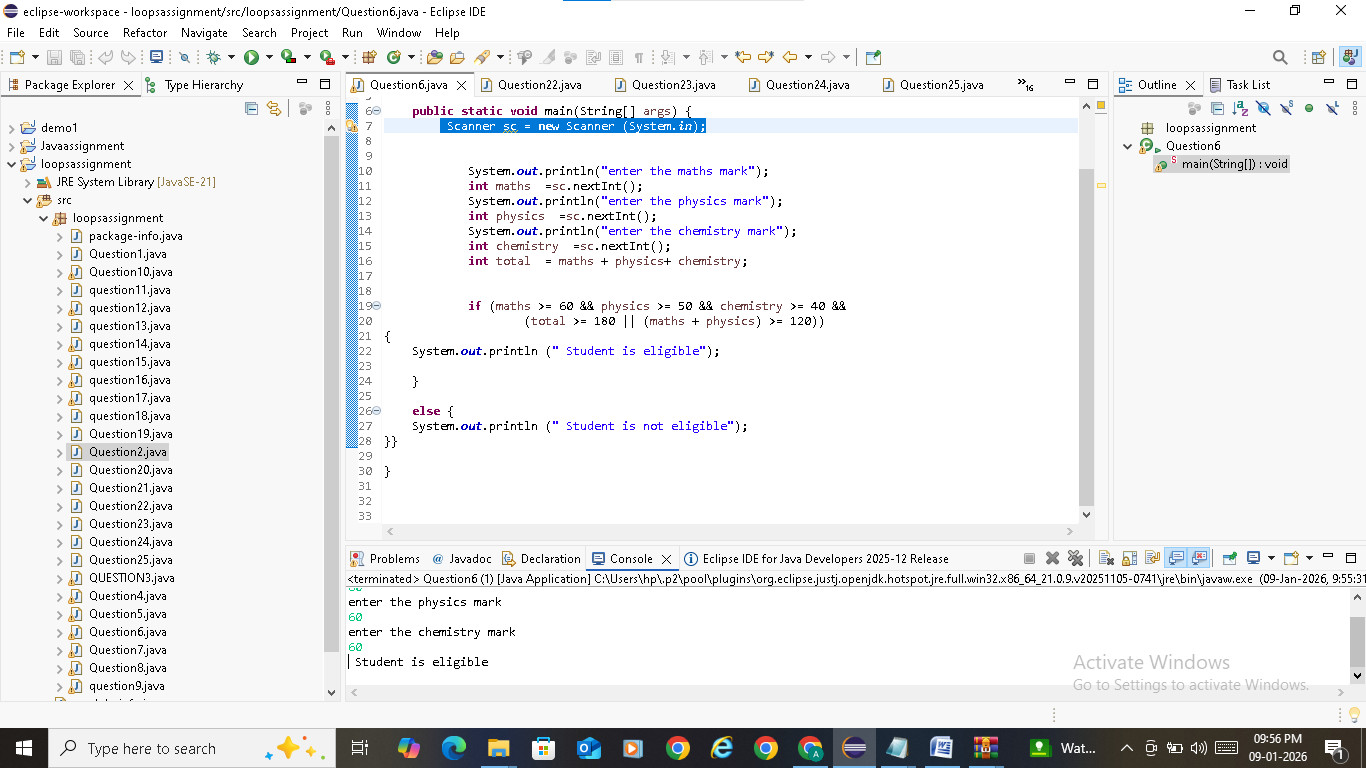
Physics ≥ 50

Chemistry ≥ 40

AND

Total ≥ 180 OR Math + Physics ≥ 120



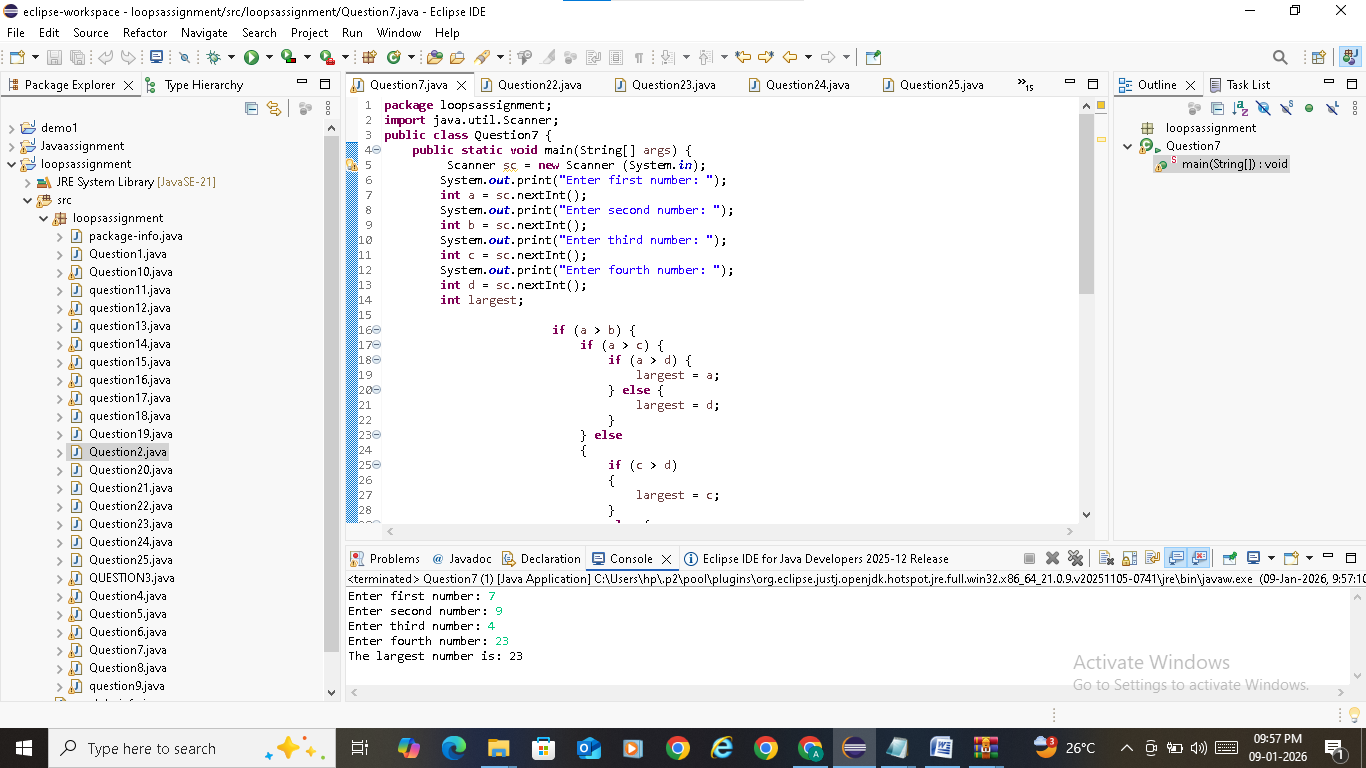


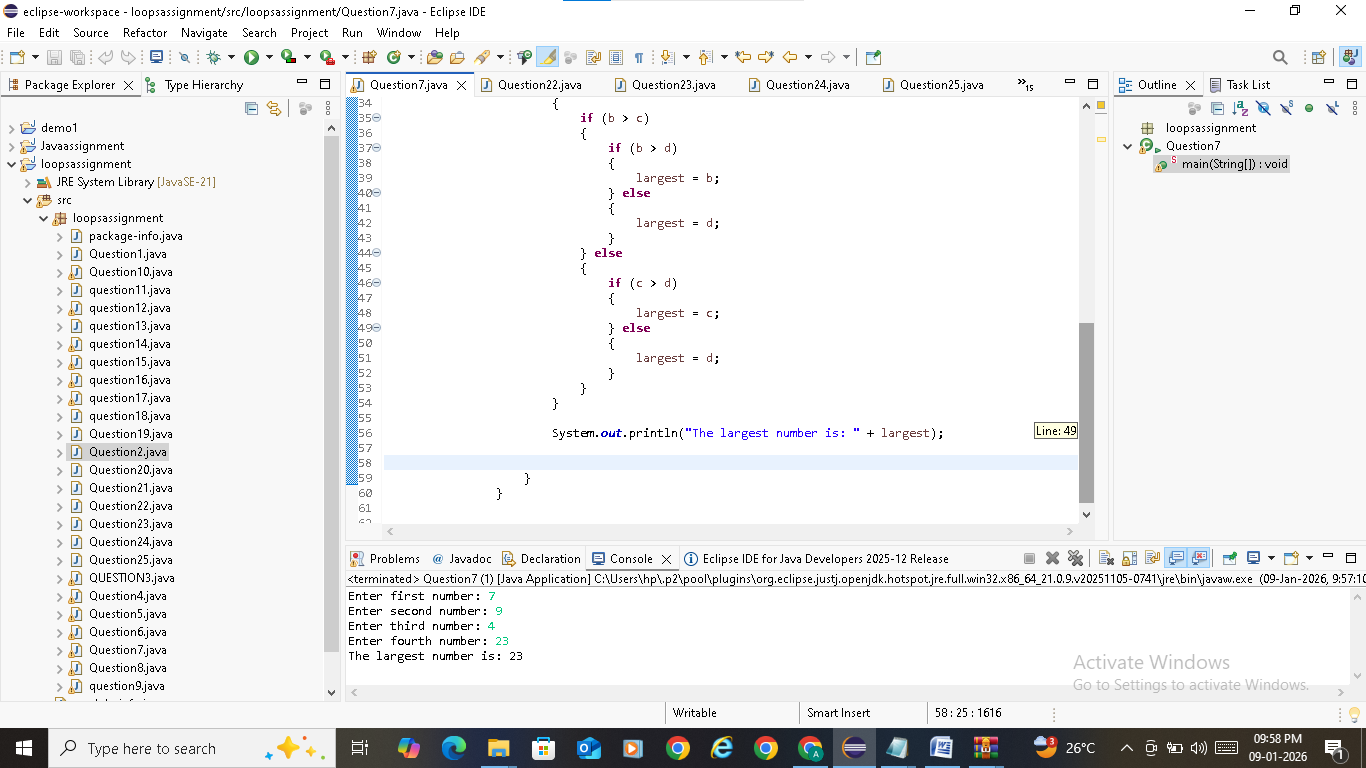
7.Write a program to find the largest of four numbers using:

Nested if–else only

No loops

No arrays





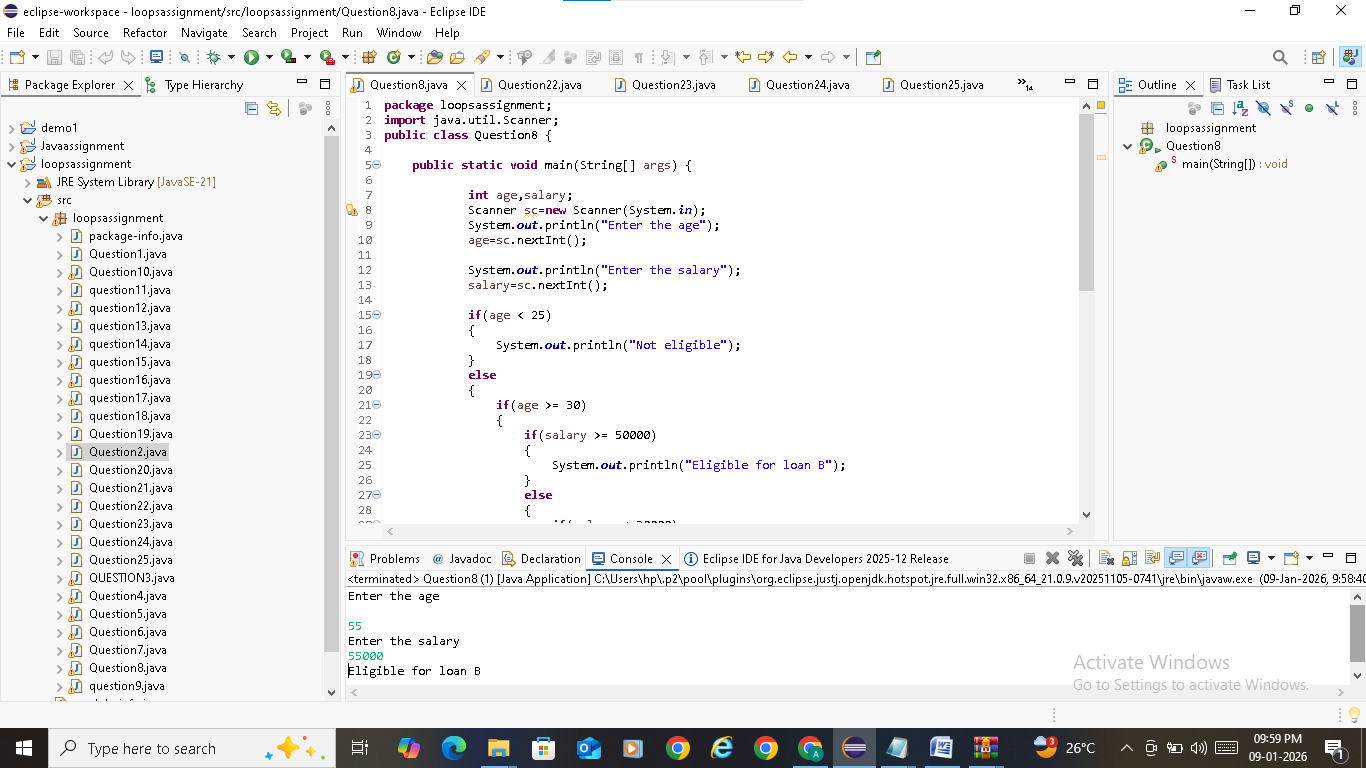
8.Given age and salary:

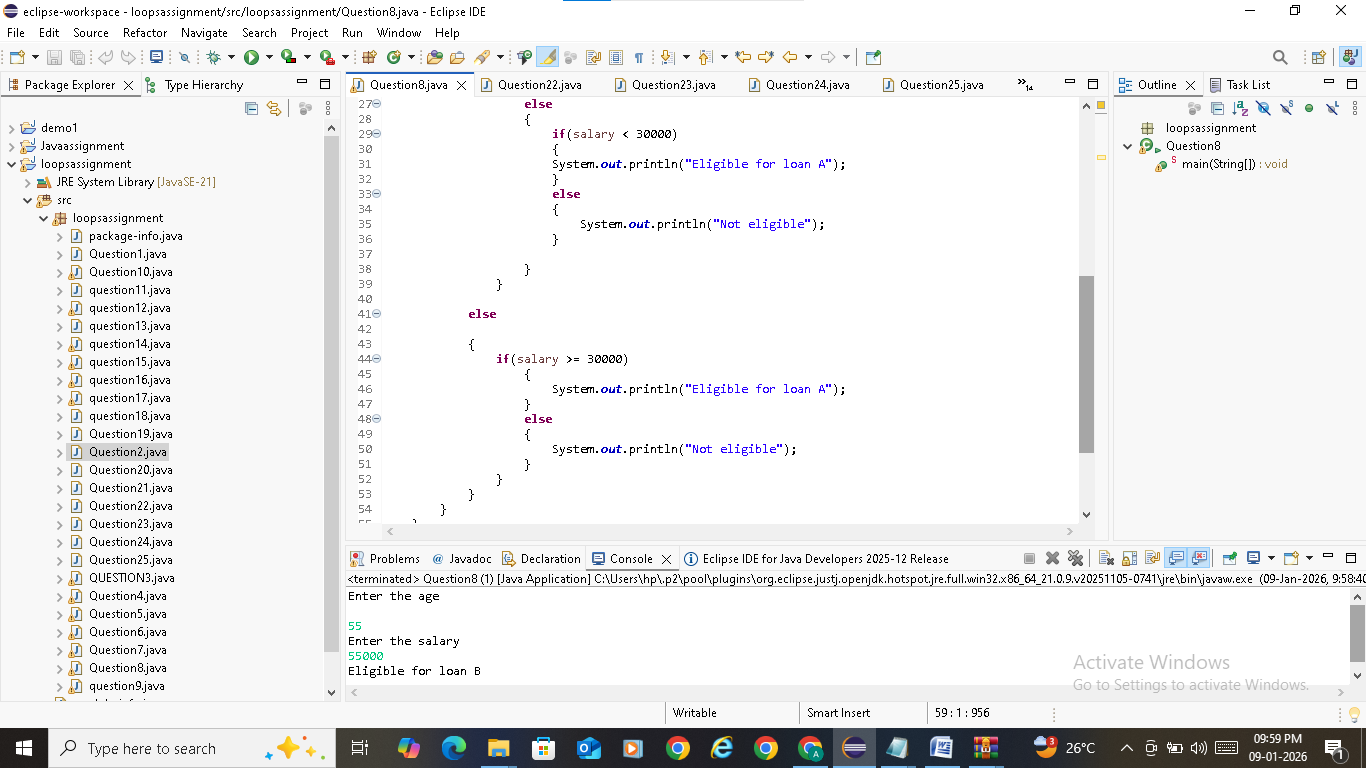
If age < 25 → Not eligible

If age ≥ 25 and salary < 30000 → Eligible for loan A

If age ≥ 30 and salary ≥ 50000 → Eligible for loan B

➡️ Use deep nested if





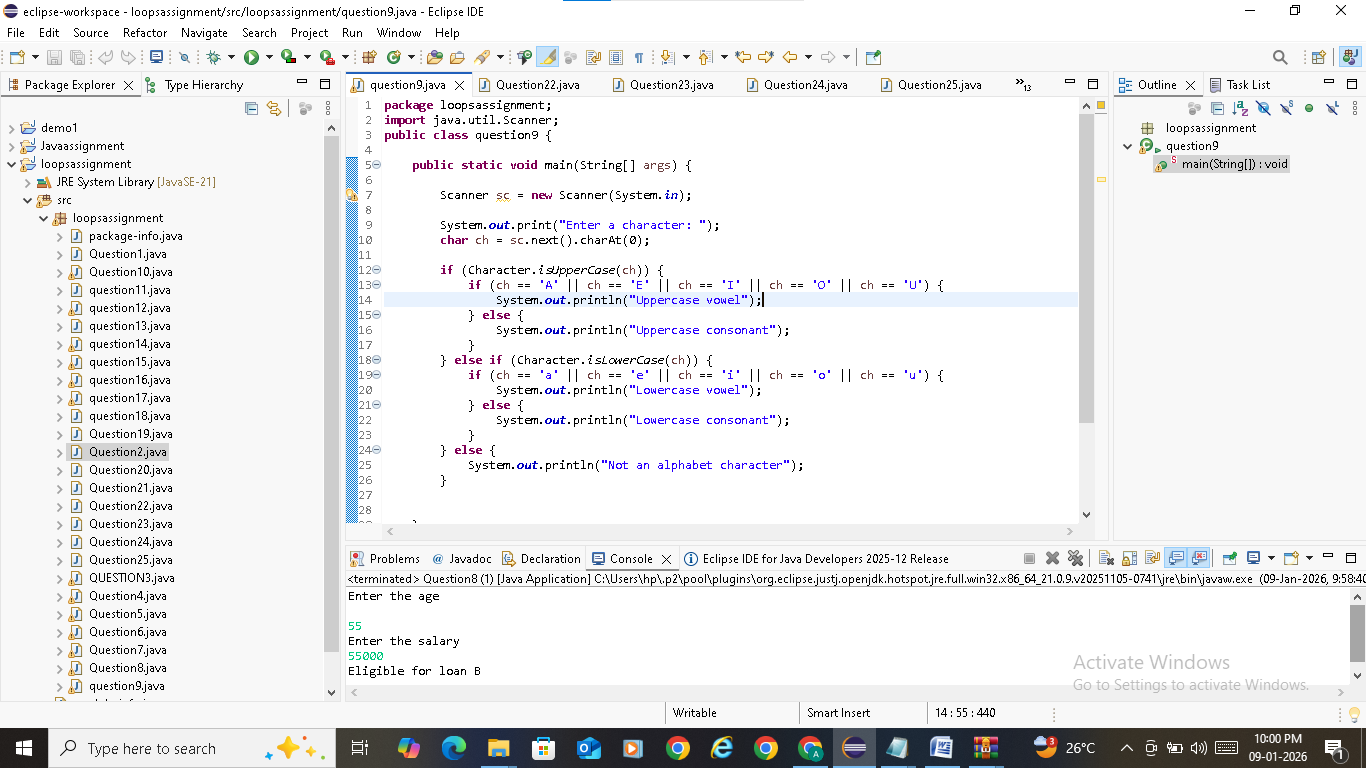
9.Write a program that classifies a character as:

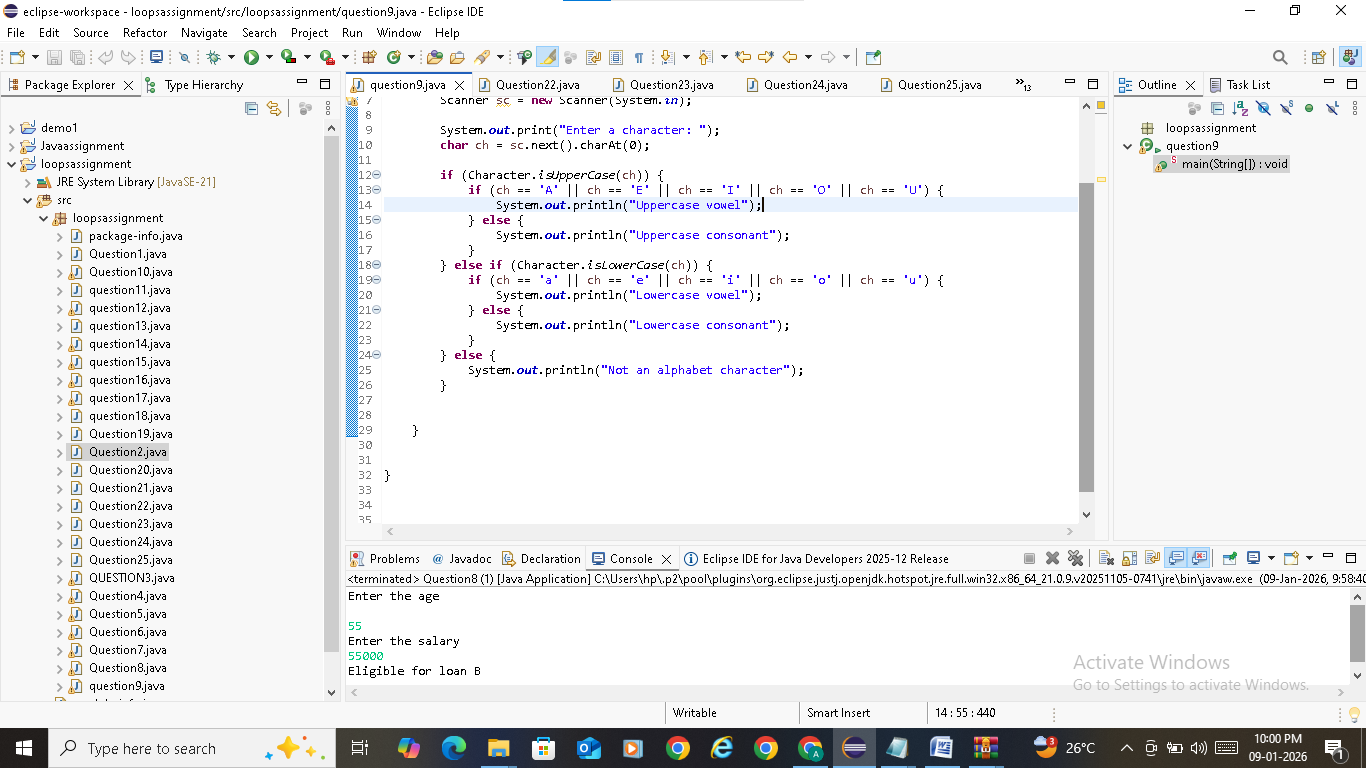
Uppercase vowel

Uppercase consonant

Lowercase vowel

Lowercase consonant



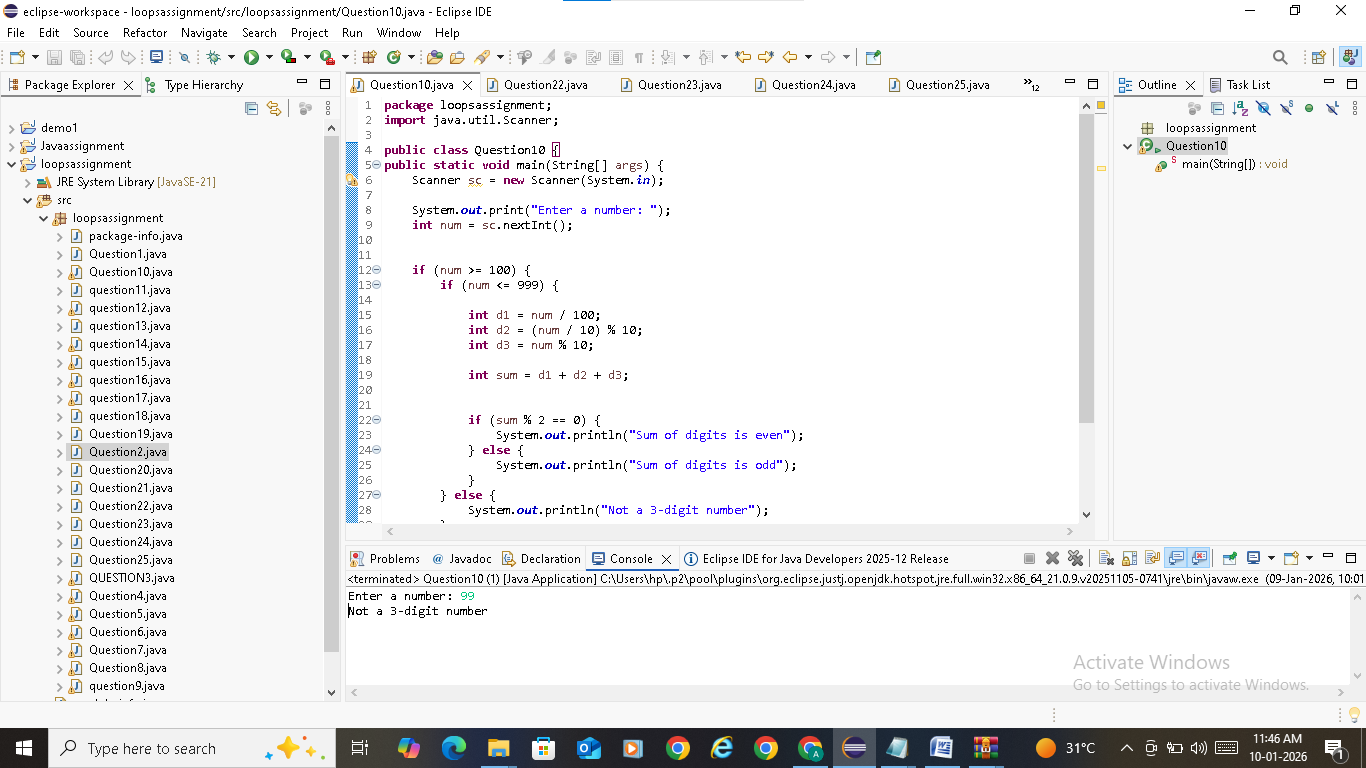


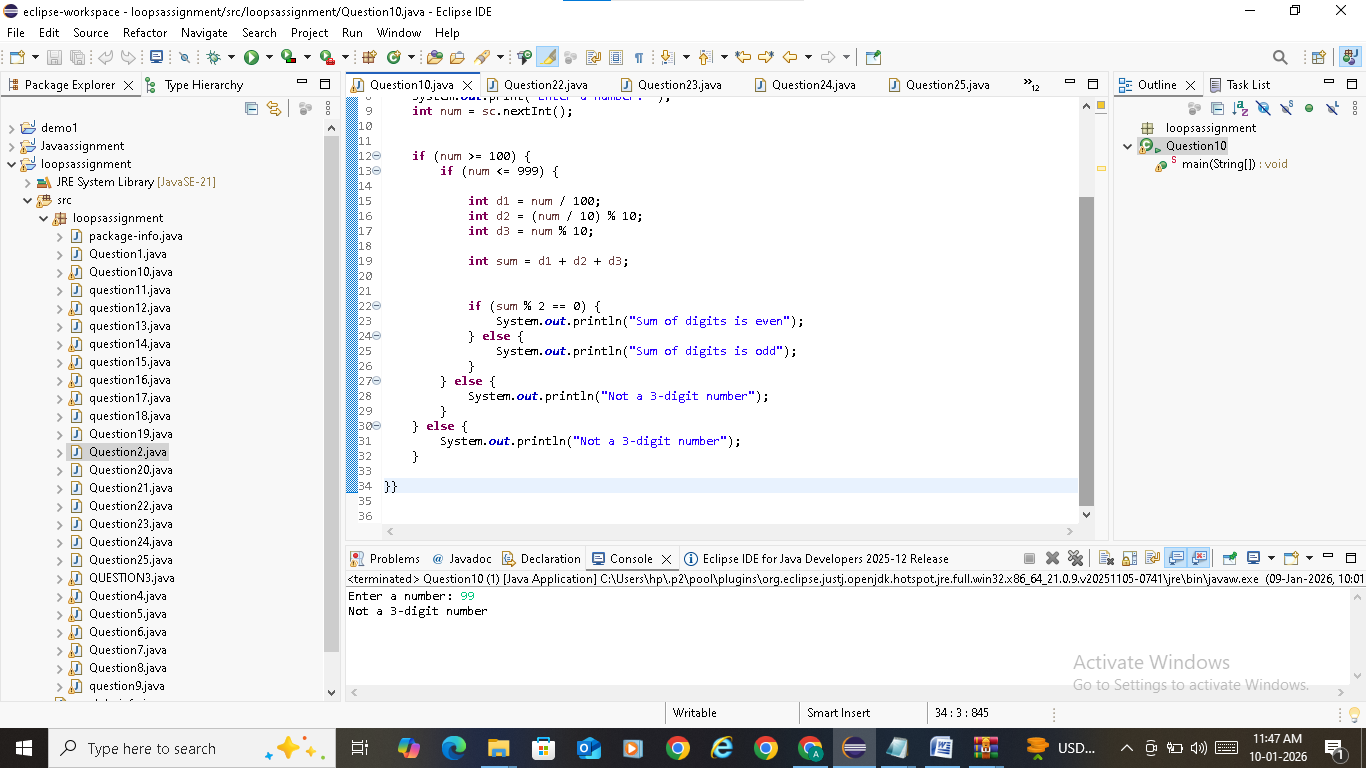
10.Input a number and check:

If it’s a 3-digit number

If yes, check whether the sum of digits is even or odd

➡️ Use nested if only🔹 WHILE LOOP (Tricky Iterations)





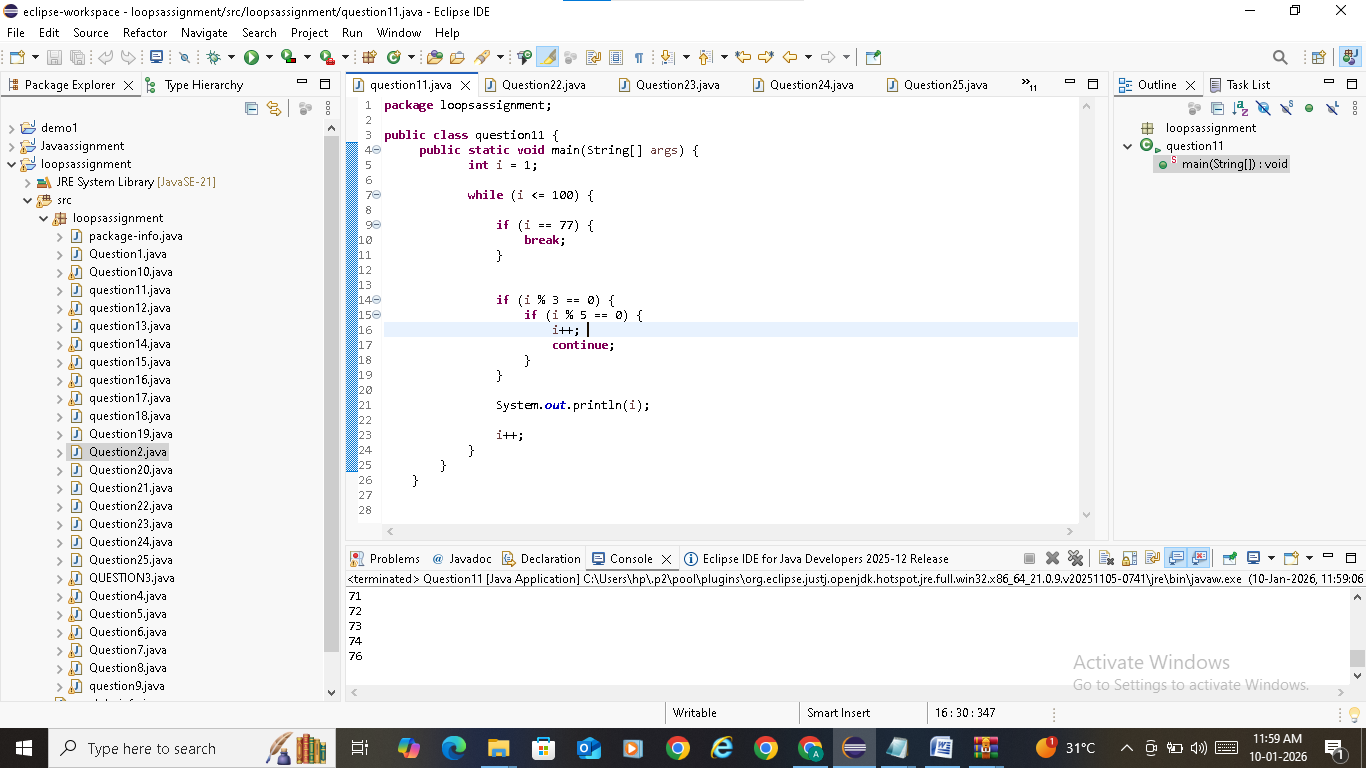
11.

Print numbers from 1 to 100 but:

Skip numbers divisible by both 3 and 5

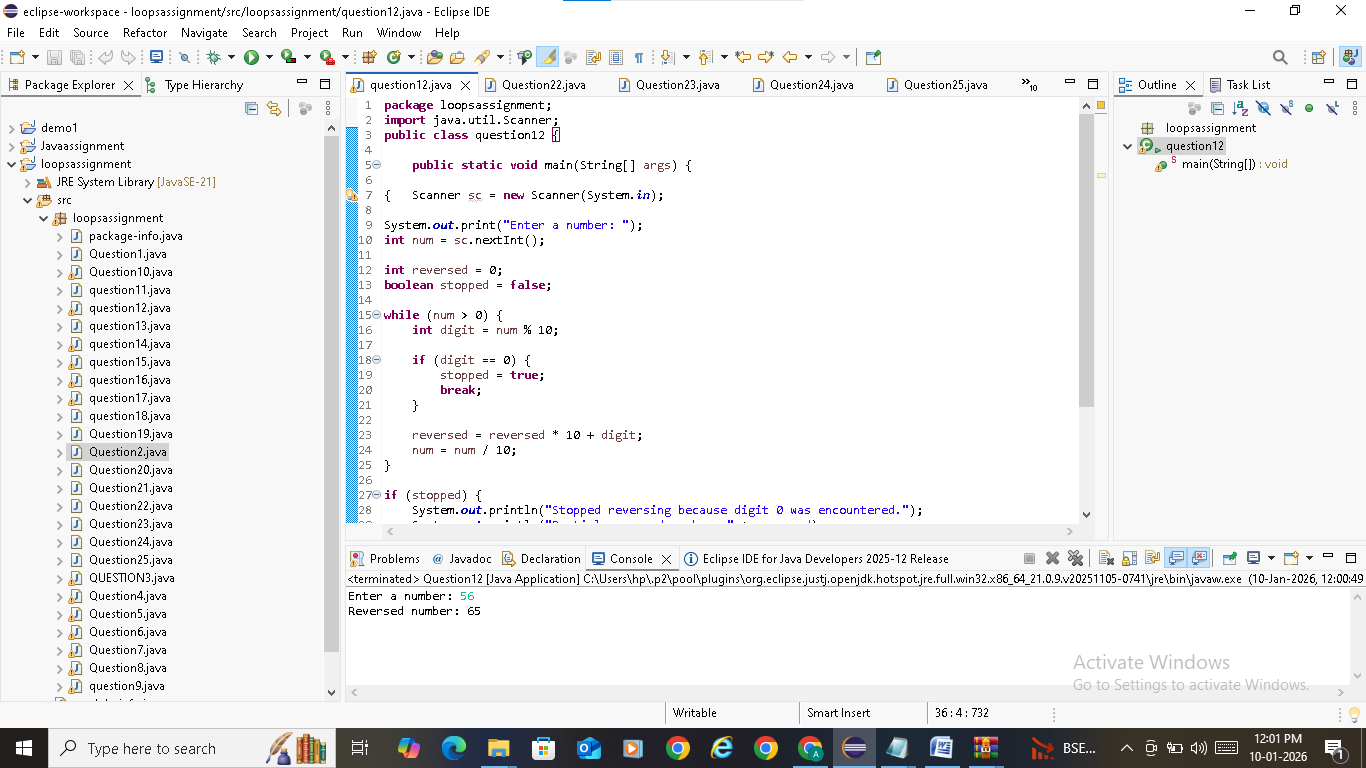
Stop completely when number reaches 77

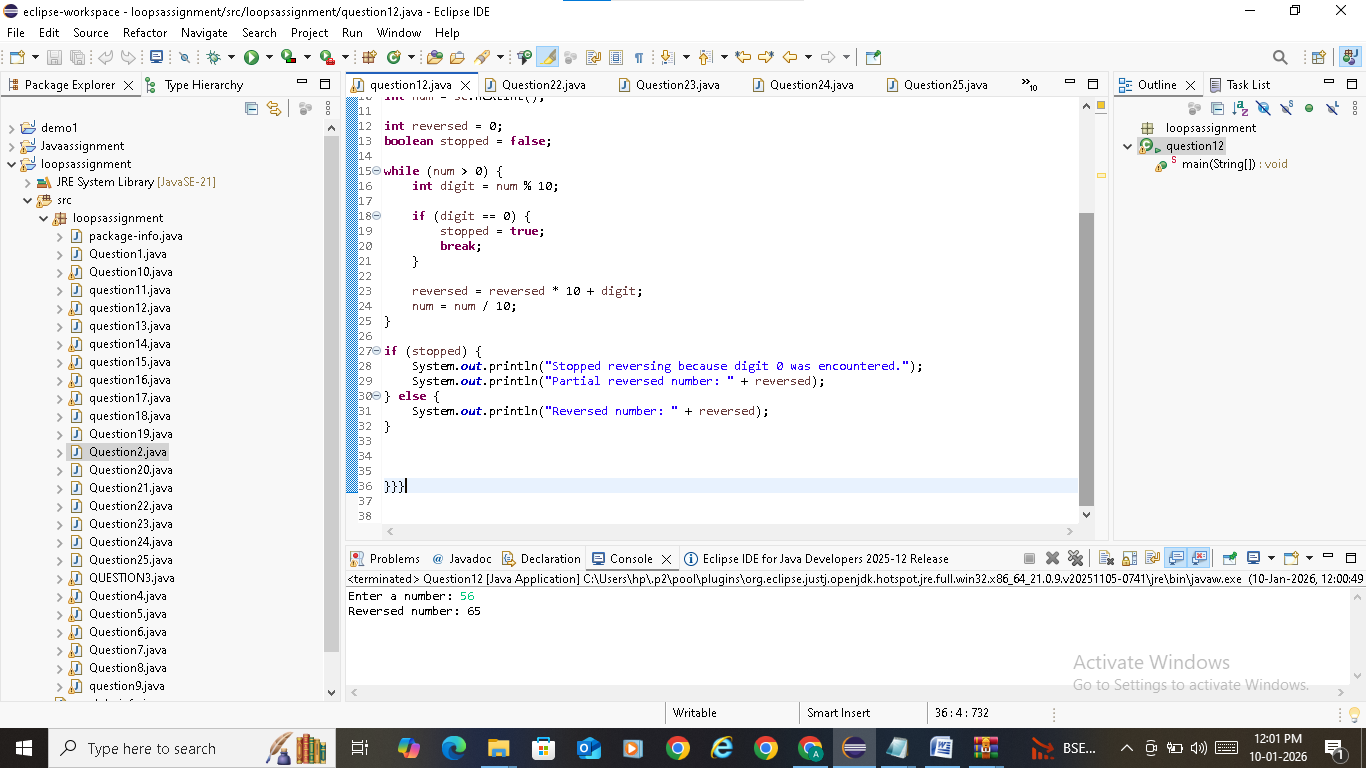
➡️ Use while only



12.

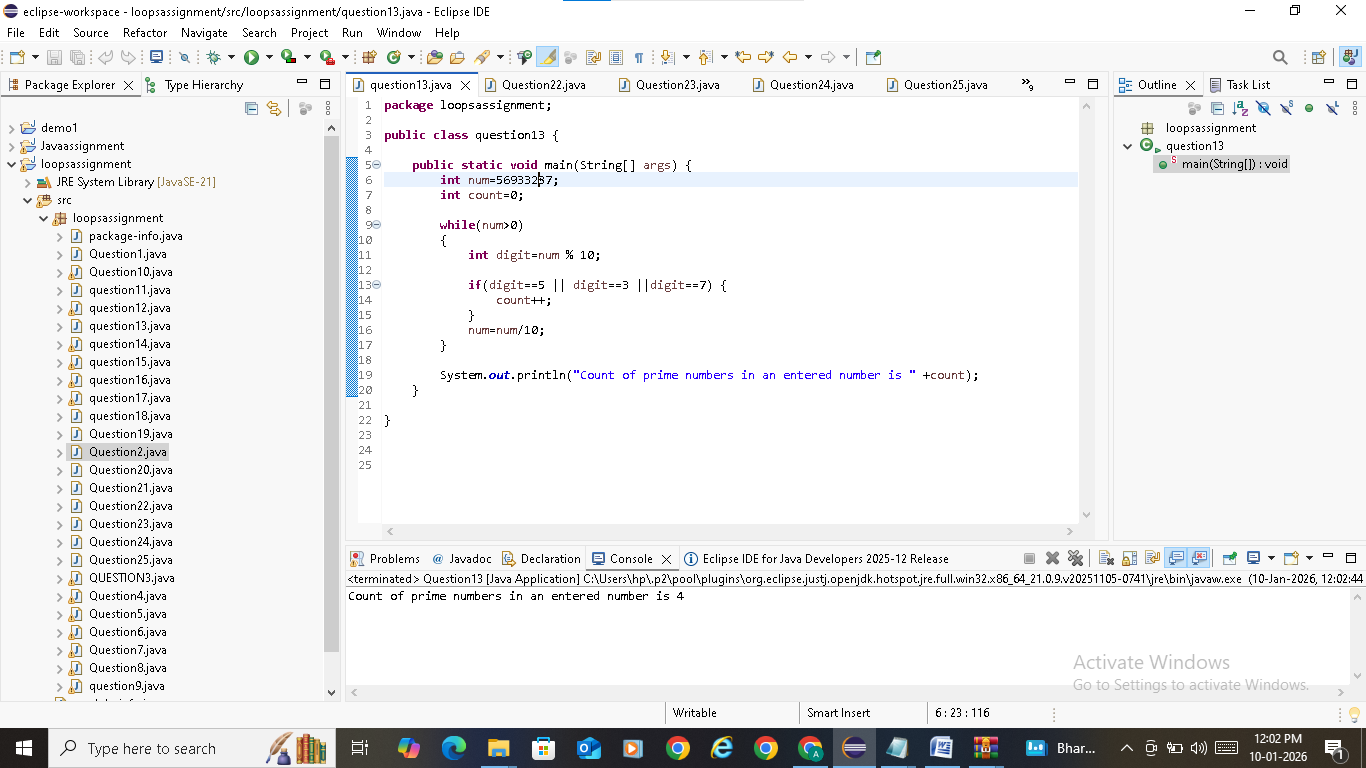
Write a program to reverse a number using while, but:Stop reversing if digit 0 is encountered





13.

Find the count of prime digits in a number using while loop only

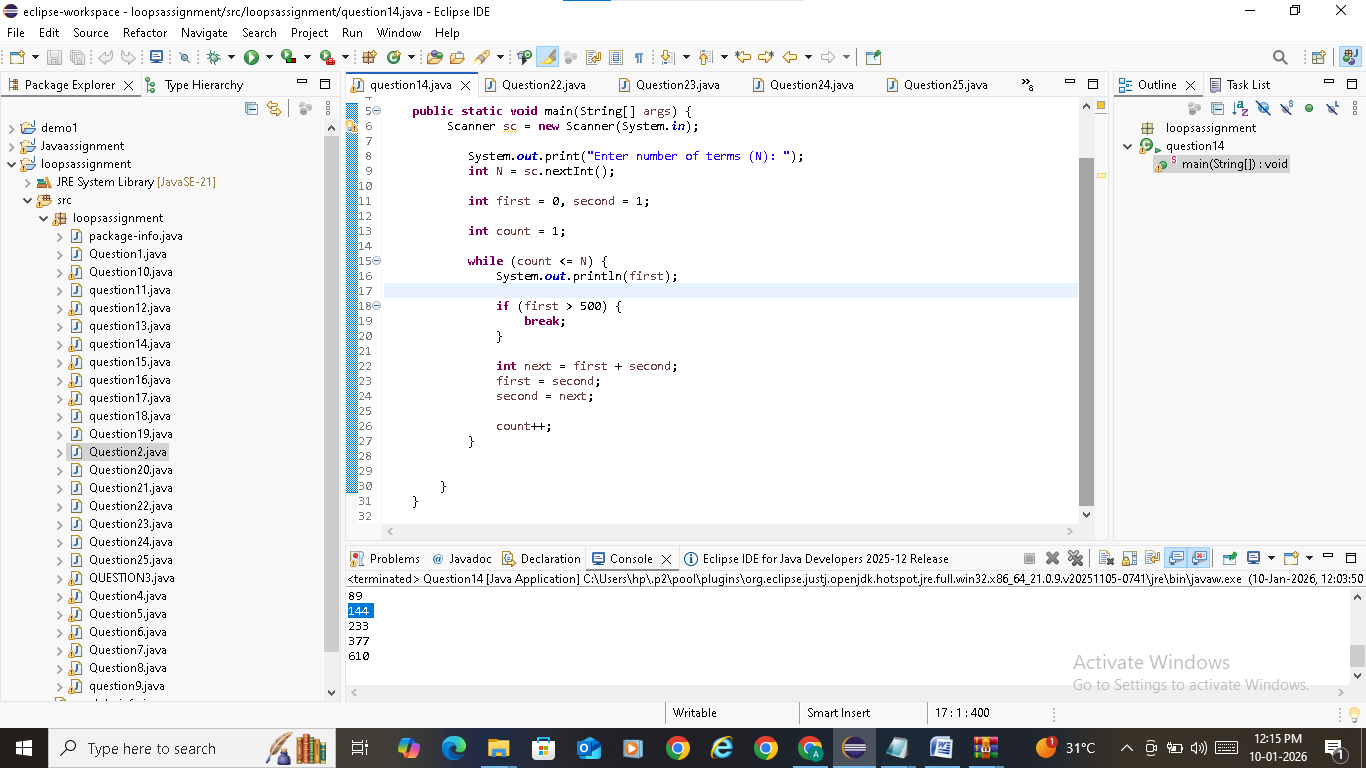


14.

Write a program that prints the Fibonacci series up to N terms, but:

Stop printing when a number exceeds 500





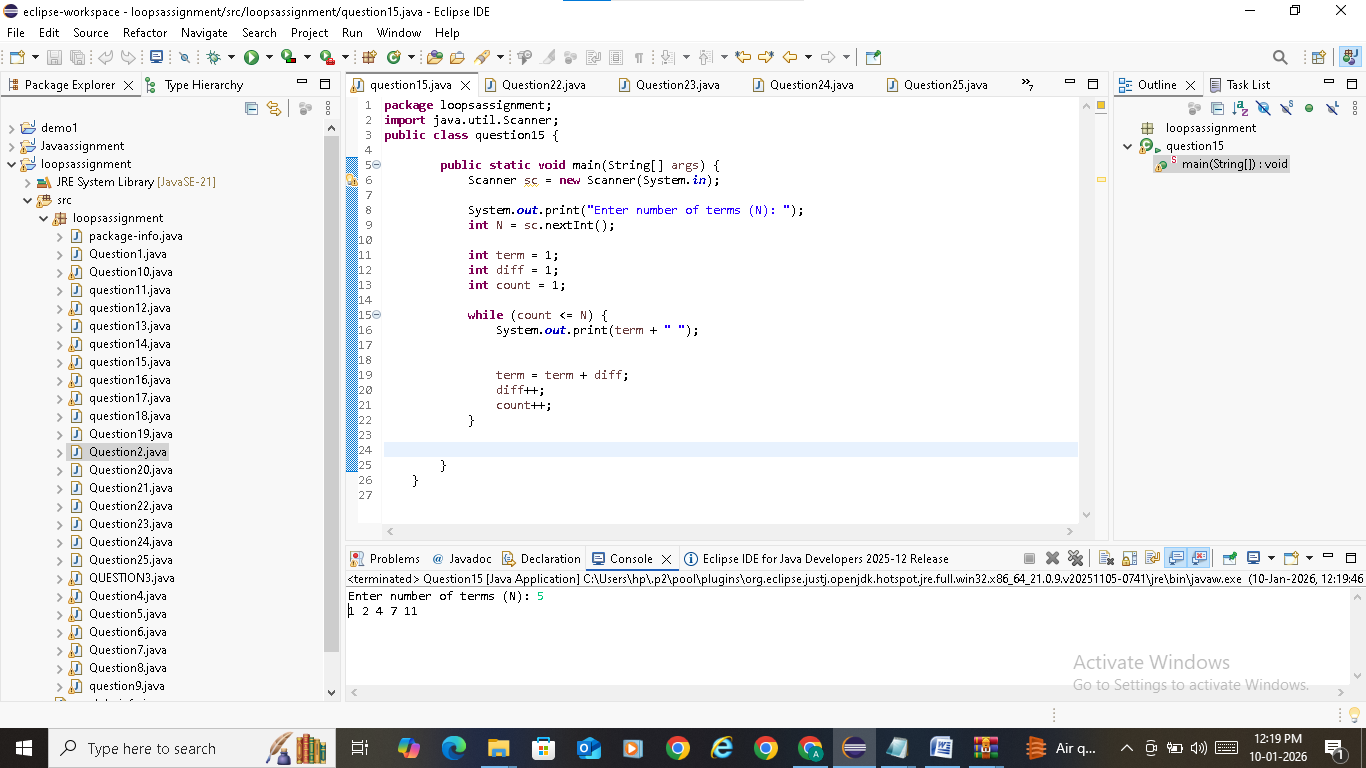
15.

Using while, print the following sequence:

1 2 4 7 11 16 22 ...

(up to N terms)

🔹 DO–WHILE LOOP (Edge Cases)



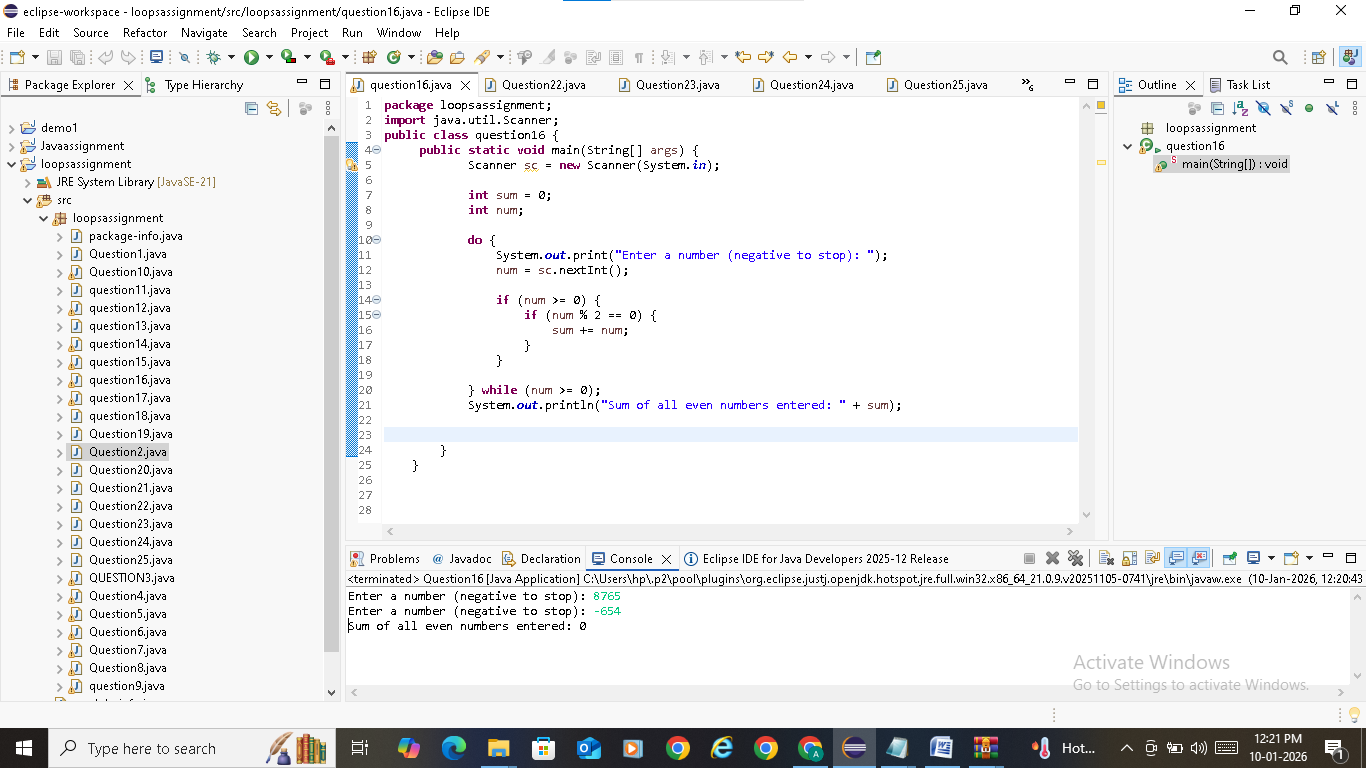
16.

Write a program that:

Takes user input until a negative number is entered

Prints sum of all even numbers entered

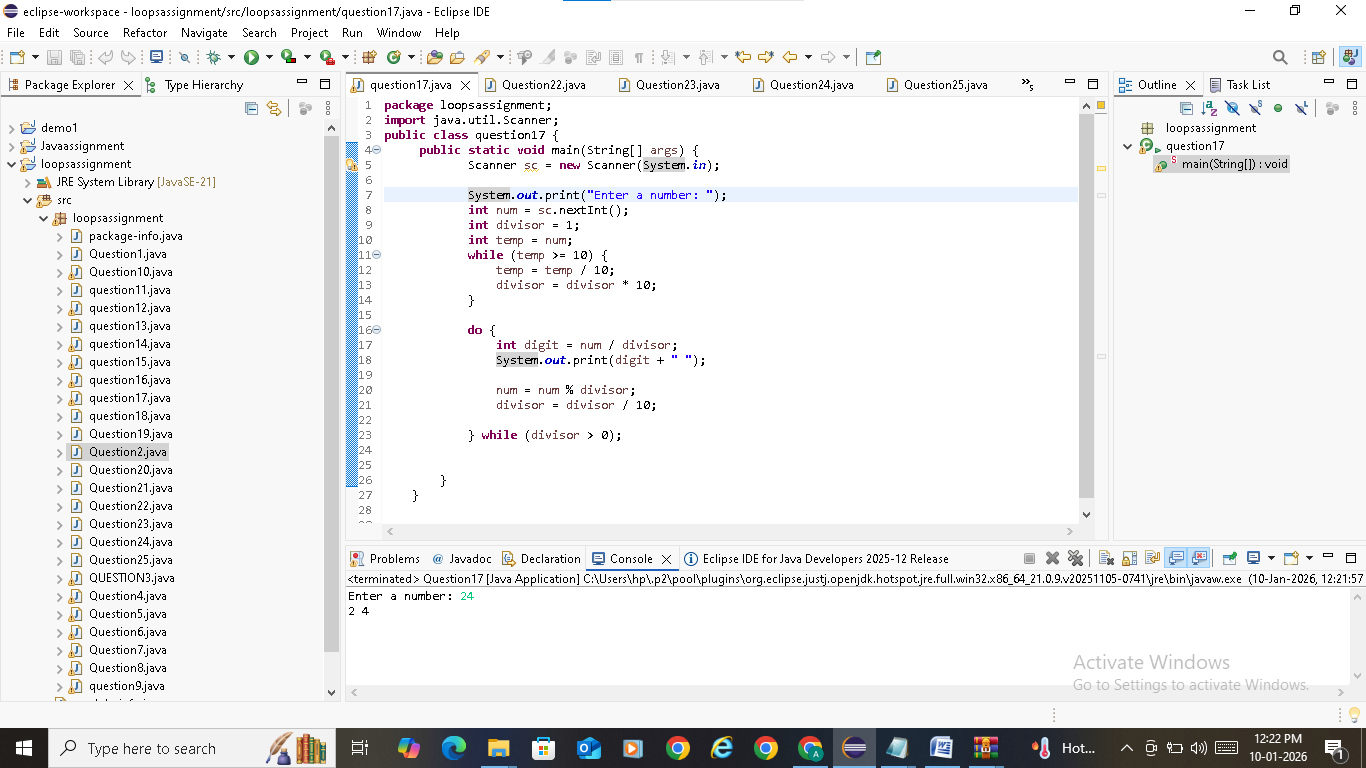
➡️ Use do–while



17.

Using do–while, print digits of a number from left to right

(No strings, no arrays)

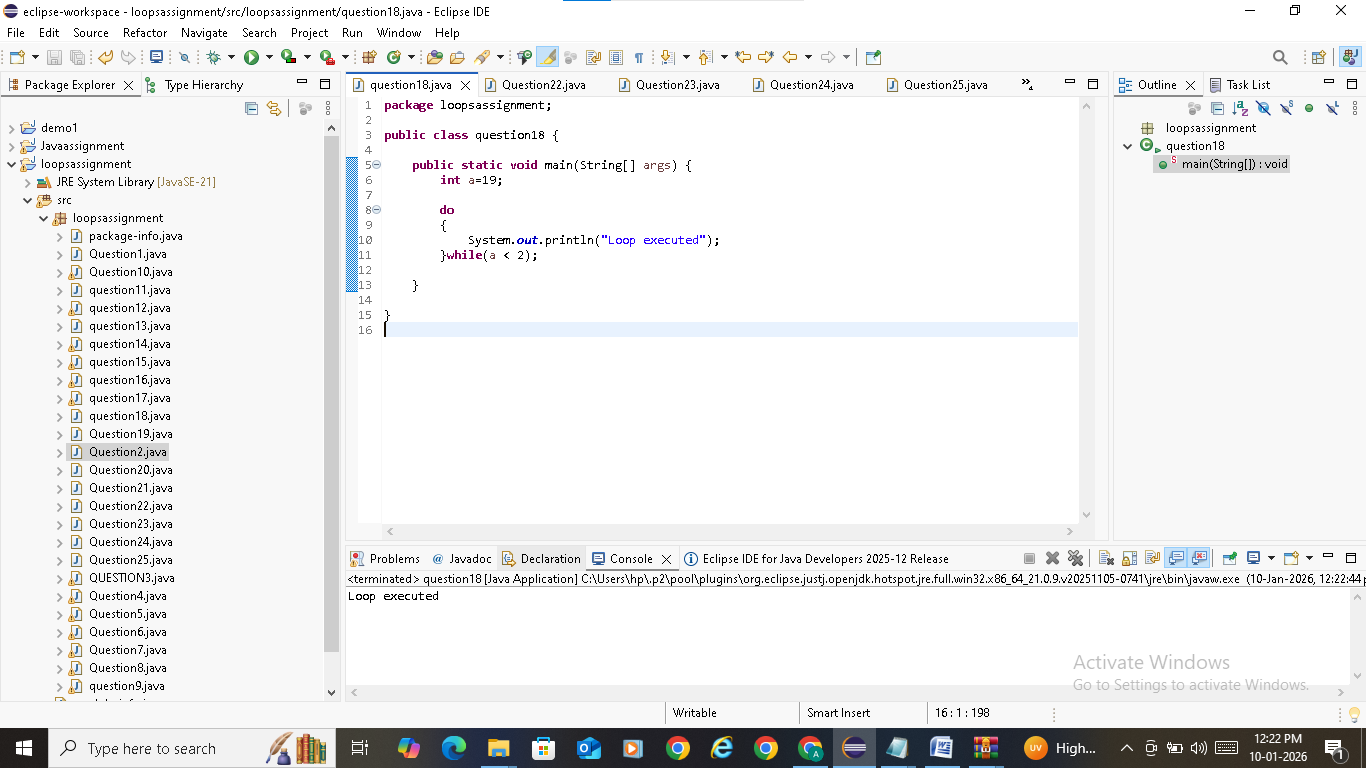


18.

Write a program that executes at least once, even if condition is false, and prints:

Loop Executed

➡️ Modify condition logically



19.

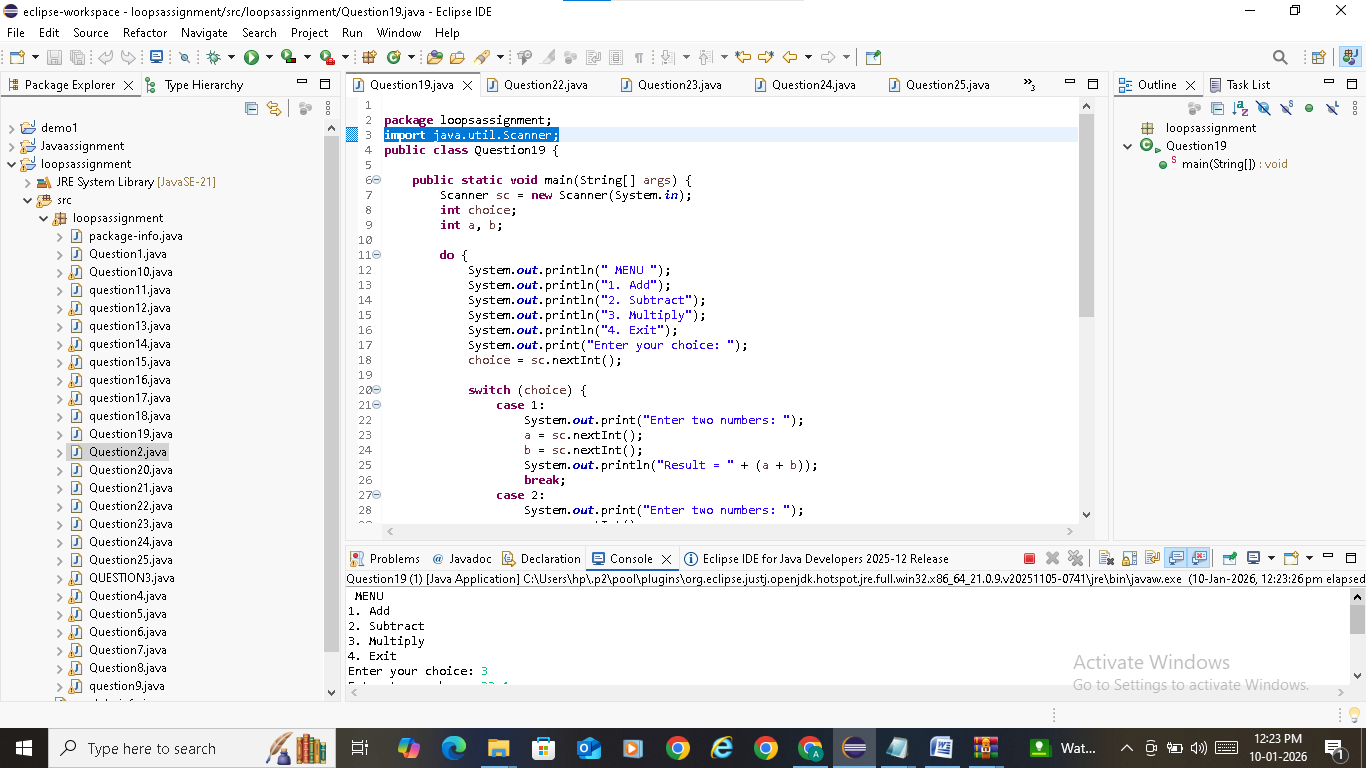
Create a menu-driven program using do–while:

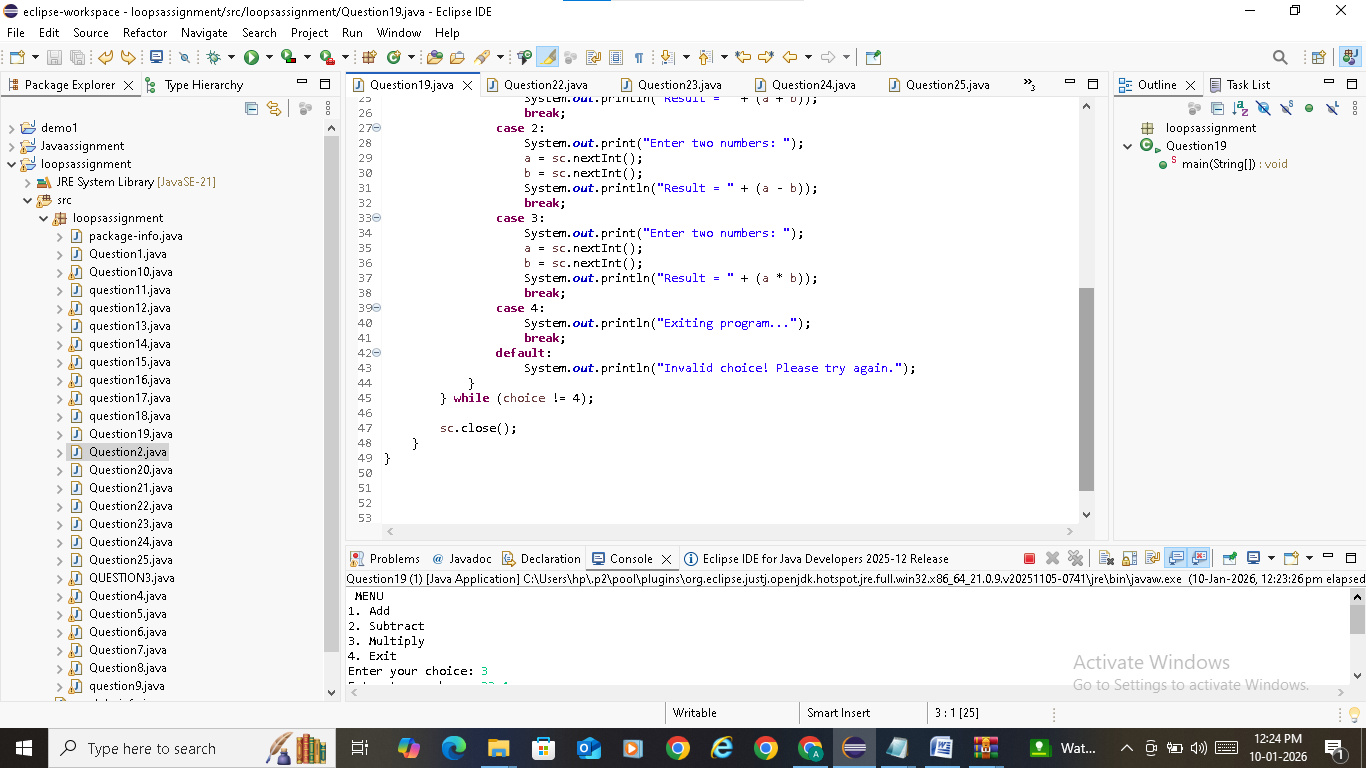
Add

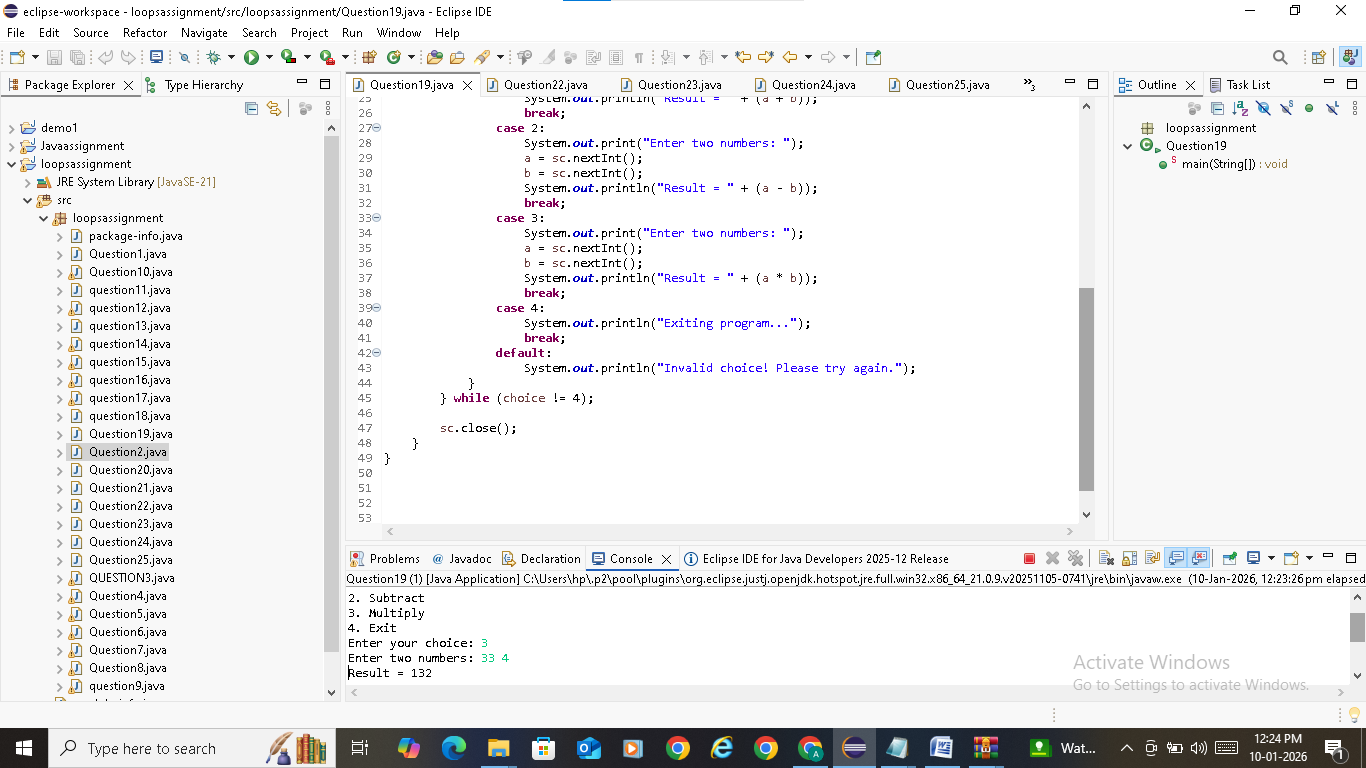
Subtract

Multiply

Exit





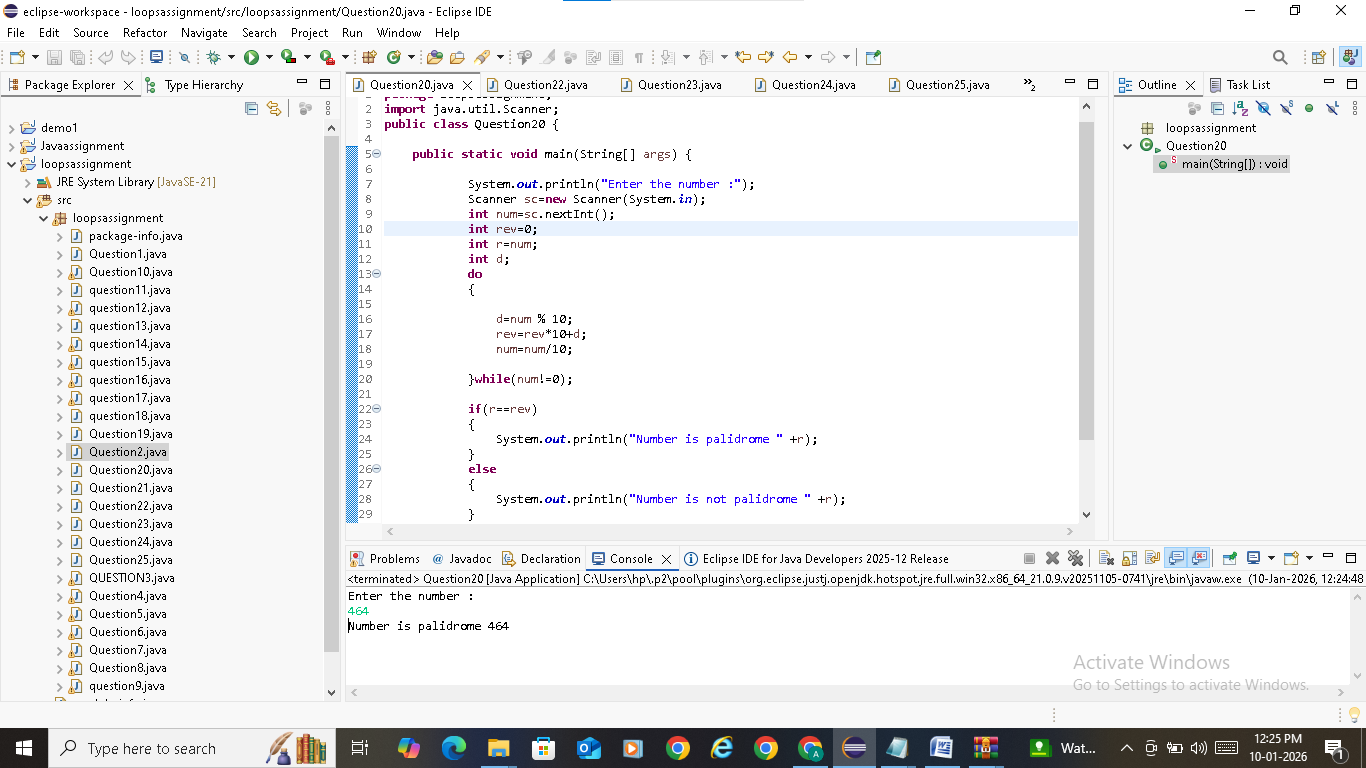


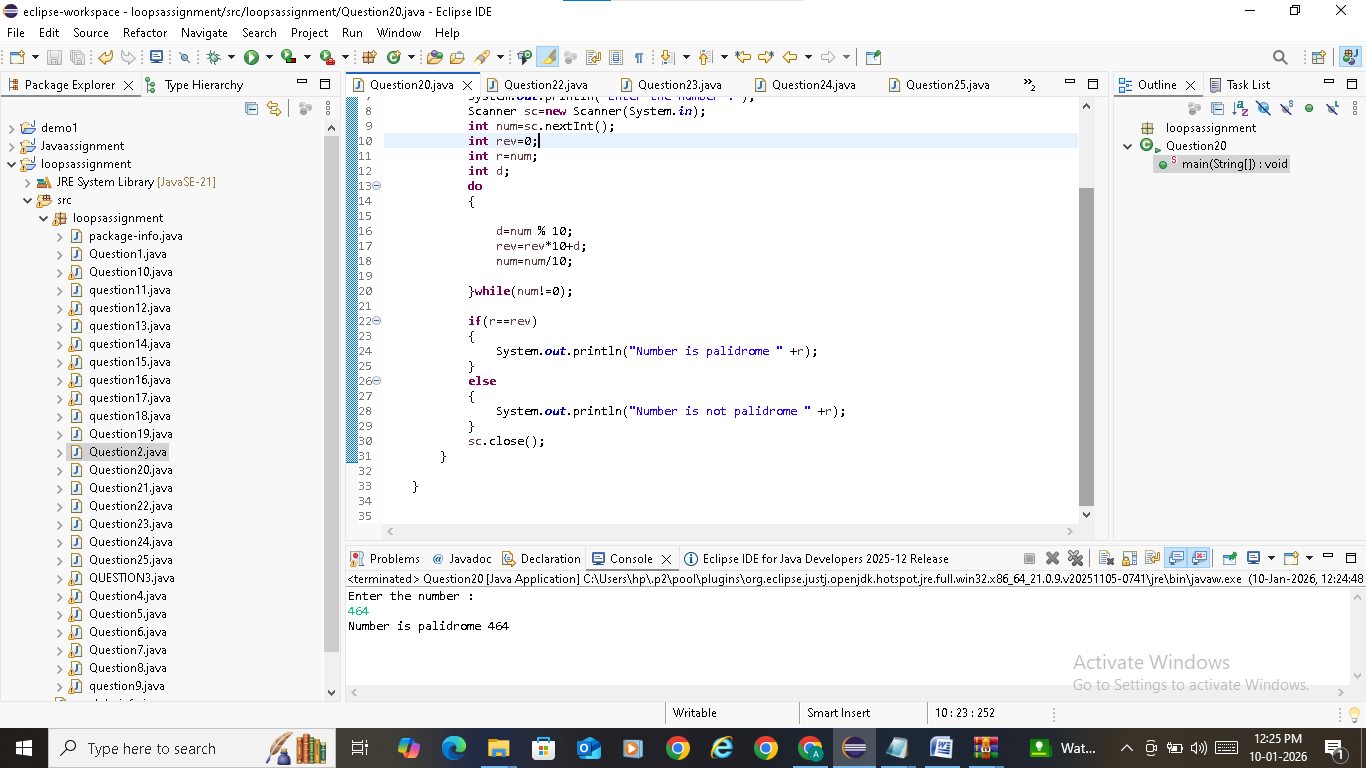
20.

Using do–while, find whether a number is palindrome, but:

Exit loop early if mismatch is found

🔹 FOR LOOP (Advanced Logic)

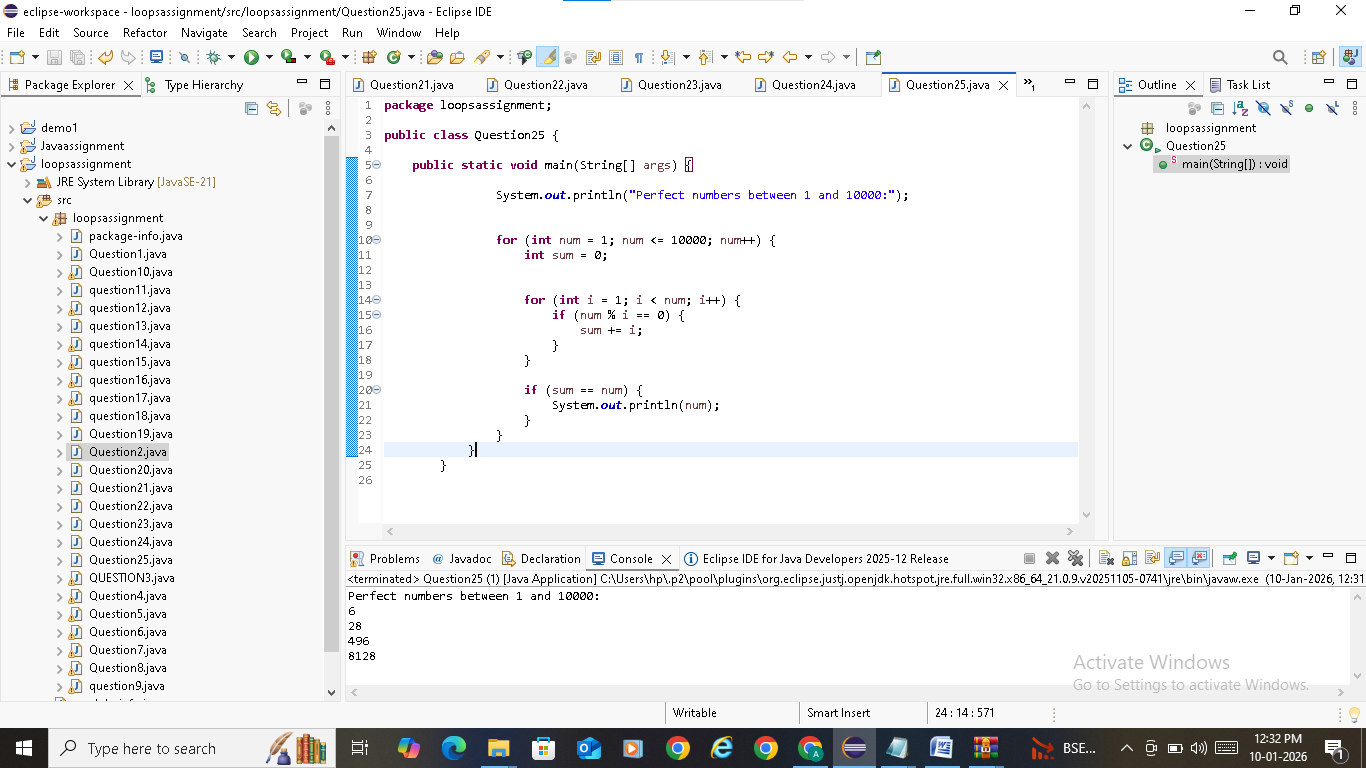




21.

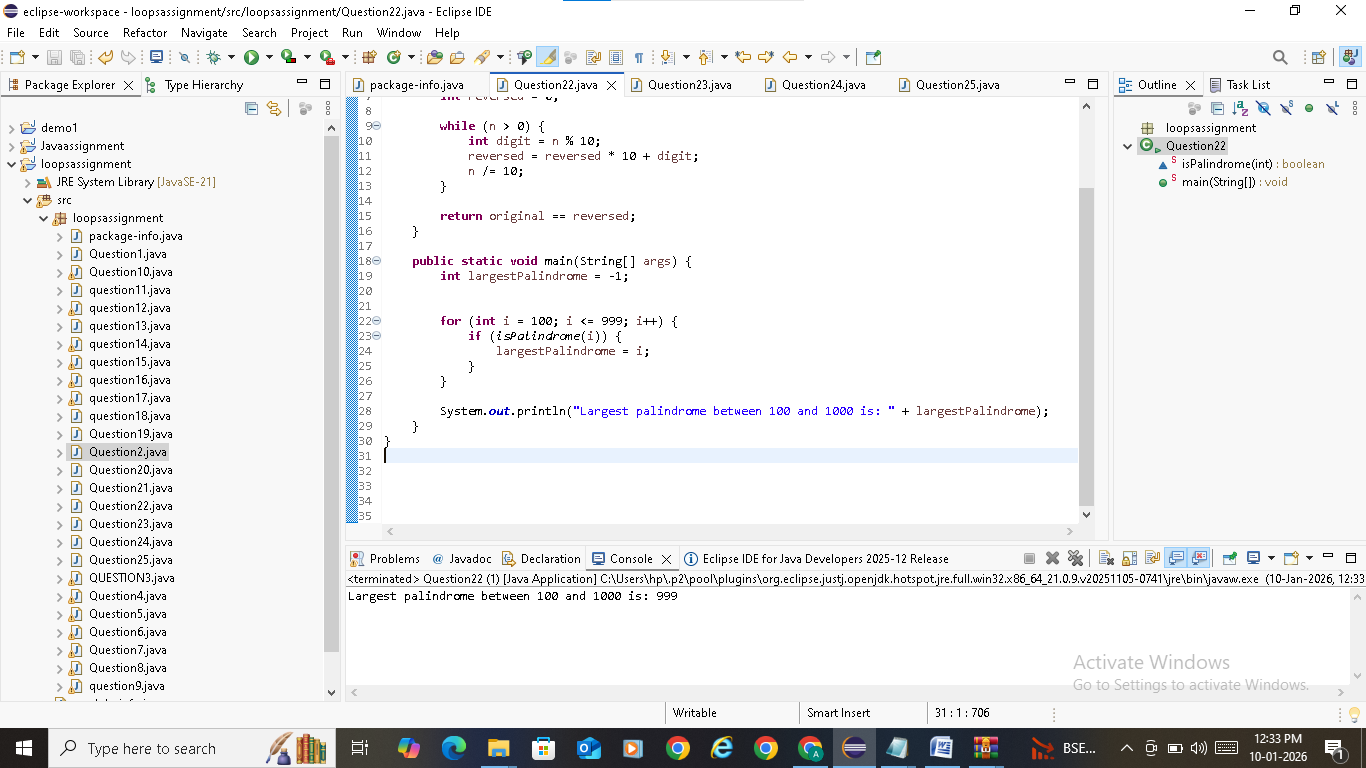
Print all numbers between 1 and 500 that:

Have exactly 3 divisors



22.

Using for, find the largest palindrome number between 100 and 1000



23.

Print this pattern using nested for:

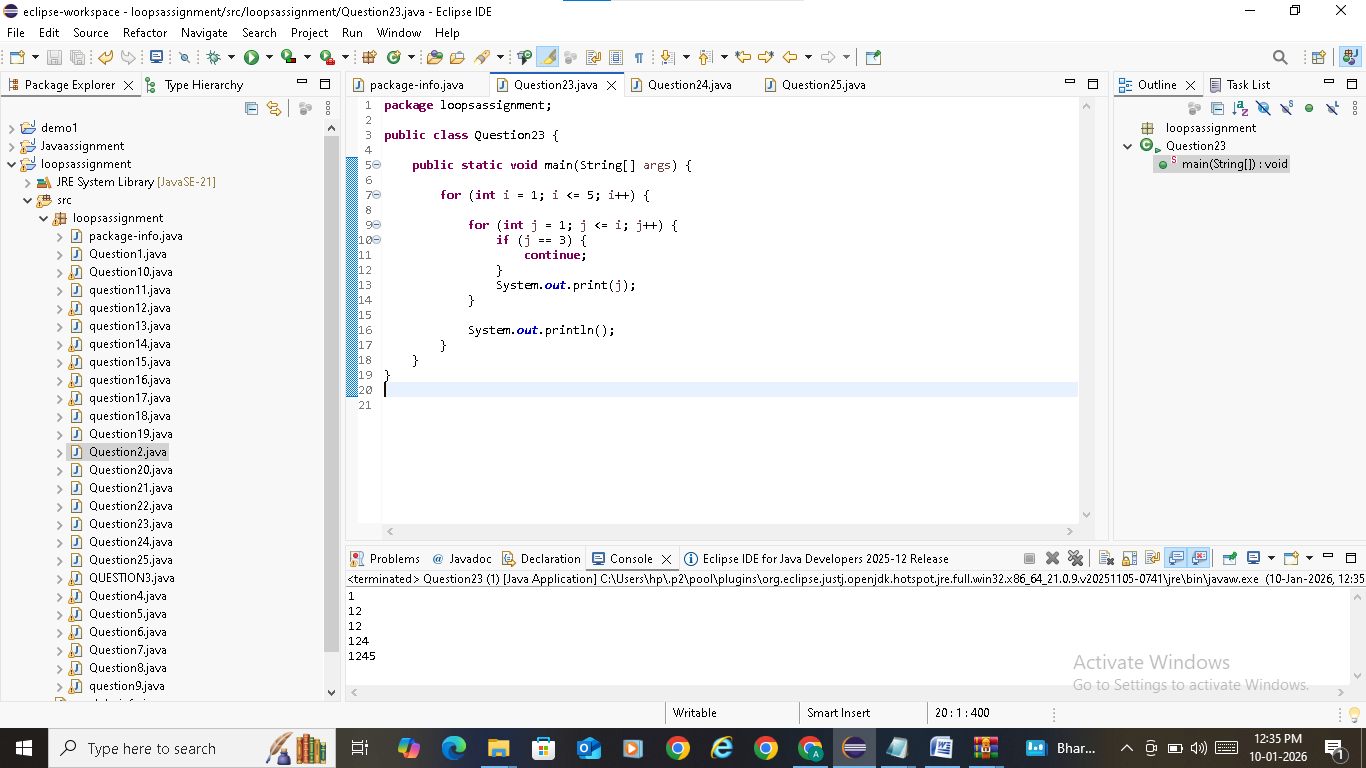
1

12

123

1234

12345



But skip printing 3 in all rows

24.

Using nested for, print:

5 4 3 2 1

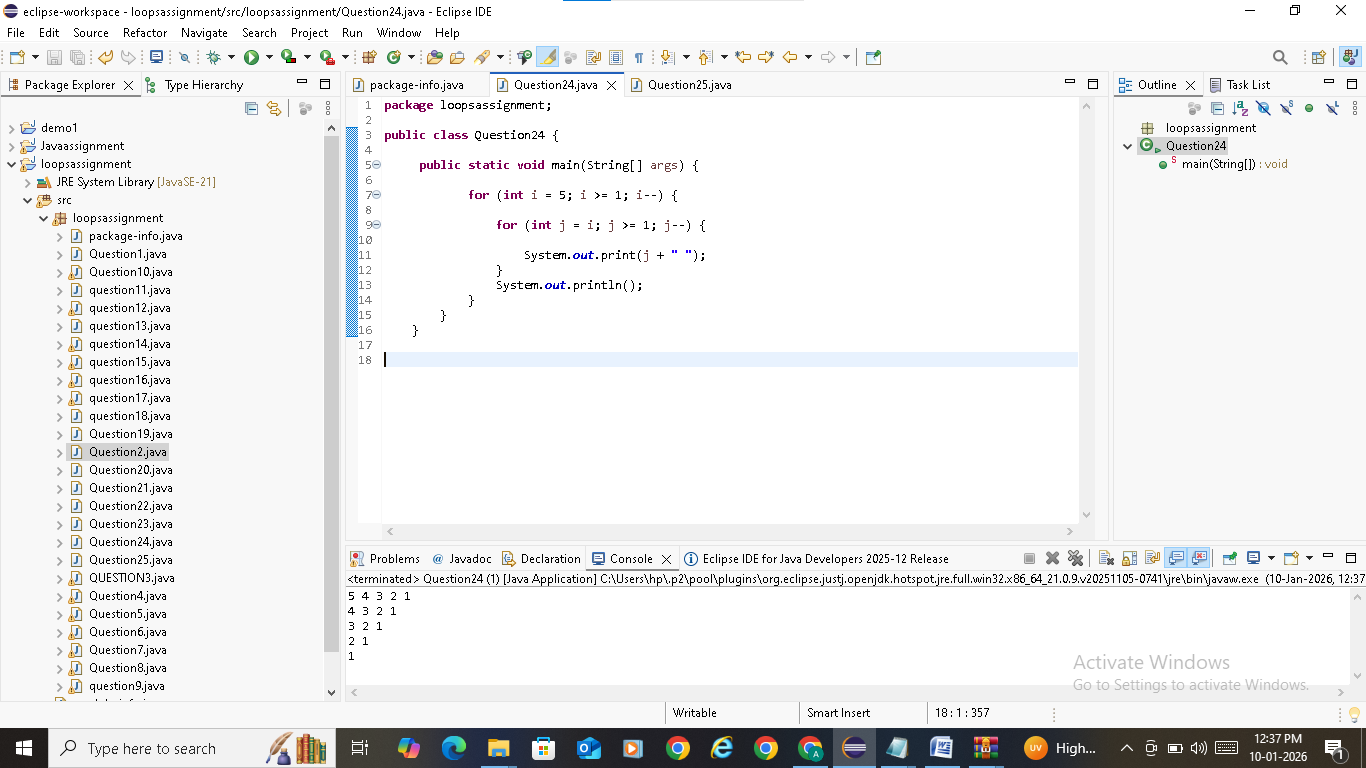
4 3 2 1

3 2 1

2 1

1

But do NOT use subtraction operator (-)



25.

Write a program to print all perfect numbers between 1 and 10000 using:

Nested for

if condition only

