🔄 Day 3: The Power of Loops in Programming 🔄

"Every great project starts with a simple loop cycle of exploration, problem-solving, and creation!"

🌟Looping Structures in Java: The Code of Repetition!

What is a looping structure?

A looping structure is a block of statements that allows us to execute repeated actions based on specific conditions. It simplifies tasks, removes redundancy, and improves code efficiency.

🌟Why Use Loops?

Without loops, repetitive tasks would require writing the same code multiple times. loops reduce this effort by automating repetition, cleaner, and easier to maintain.

Java provides three main types of loops:

1️⃣ While Loop

-to create while loop we can use while keyword.

-to executes while loop , it requires boolean true value.

-to make condition, we can use relational & logical operator.

-while loop checks condition at beginning hence it is considered as an entry control loop.

2️⃣ Do-While Loop

-to create do while loop we can use do while keyword.

-to execute do while loop it require true boolean value.

-to make a condition we can use relational & logical operator.

-do while loop checkes at ends, here it is considered an exit control loop.

-do while loop execute because it is at least once, because it is exit control loop.

3️⃣ For Loop

- to create for loop, we can use for keyword.

1)Initialization phase:

-In initialize phase, we can Initialized number of require variables.

-here declared variables considered as local variable.

-here assignment & unary operator can he used.

-this phase executes once at beginning.

2)Conditional phase

-conditional phase requires boolean value true to get satisfied.

-to make a condition we can use relational & logical operator.

-this phase executes each time at beginning.

3) Increment I decrement phase

-in this phase assignment & unary operator con be used.

-this phase executes each time at ends.

To explore and experiment with loop examples, feel free to check out my GitHub repository:

https://github.com/swapnilnimbalkarofficial/Pattern\_Program

Here, you can find practical examples and code snippets to solidify your understanding of Java loops.