Java Refresher
01 - Conditionals, loops (Patterns)

14:08

Agenda

1. If-Else
2. While
3. For

IF-Else

```
if(is coffee available ? ){
 //   serve coffee
}
else{
 // serve tea
}
```

While Loop

```
initialization

while(Condition)
{
   // loop work
   updation
}
```

For Loop

```
for(initialization; condition; update) {
   loop work;
}
```

Break And Continue Statement

Explanation of Break statement

The break statement is used to exit or terminate the nearest enclosing loop prematurely. When the break statement is encountered inside a loop, it immediately stops the loop's execution and transfers control to the statement following the loop. It helps avoid unnecessary iterations and is often used to terminate a loop early based on a specific condition.

Explanation of Continue statement
Comment
The continue statement is used to skip the rest of the current iteration in a loop and move on to the next iteration immediately. When the continue statement is encountered inside a loop, it interrupts the current iteration's execution and starts the next iteration of the loop.

Patterns

Q1. Given N Print * n times

```
for(int i=0; i<N; i++){
    System.out.print("*");
}
```

Q2. Given N, print * nXn times

```
for(int i=0; i<N; i++){
    for(int j=0; j<N; j++){
        System.out.print("*");
    }
    System.out.println();
}
```

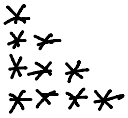
Q3. Given N,M as input, print a rectangle of size N * M containing * in each cell.

For N=4, M=3 O/P→

```
For(int i=0; i<n; i++){
        For(int j=0; j<m; j++){
                System.out.println("*");
        }
        System.out.println();
}
```

Q4. Given N as input, print a staircase pattern of size N.

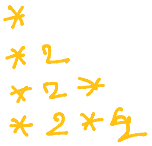
For N=4



```
For(int i=1; i<=n; i++){
        For(int j=1; j<=i; j++){
                System.out.print("*");
        }
        System.out.println();
}
```

Q5. Given N as Input print the following pattern

For N=4, O/P→



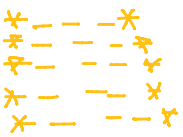
Observation

For odd print *

For even print 2

Q6. Given n as input print the following pattern

for N=5,

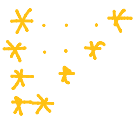


Q7. Given n as input print the pattern given below.

for n=3,

Q8. Given n as input print the following pattern.

For n=3



Q9. Given n as input, print the following pattern.

for n=3

Q10. Given n as input print the following pattern

For n=3

Q11. Print a pyramid

For n=4