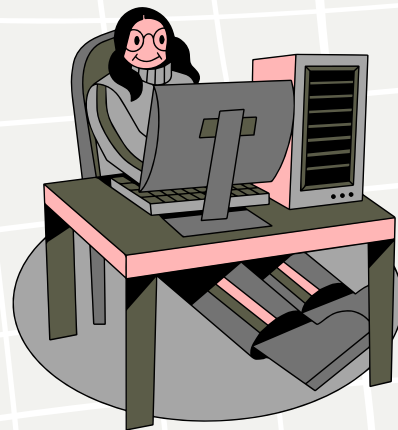


Short Notes

Looping



LOOPING

Loop means when we want to perform some task again and again, it is called a loop.

- **There are two types of loop**

Entry Control Loop

- ➡ In an entry control loop, first we check the condition, and then decide whether the loop will run or not.

Types of entry control loops:

- While loop
- For loop

Exit Control Loop

- ➡ In an exit control loop, first the loop executes once, and then the condition is checked.

Type of exit control loop:

- Do-while loop

Important Points for Any Loop

1. Initialization: Starting point of the loop.
2. Condition: Decides how many times the loop will run.
3. Increment or Decrement: Controls the gap between each loop round.

- **while loop.**

While loop means repeat work again and again until the condition becomes false.

Syntax:

```
Initialization;  
while(condition) {  
    // code to execute  
    Increment or Decrement  
}
```

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Example:

```
import java.util.Scanner;  
public class Demo {  
    public static void main(String[] args) {  
        int i = 1;    // starting point  
        while(i <= 5) {    // condition  
            System.out.println("Number: " + i);  
            i++;    // increase value by 1  
        }  
    }  
}
```

Output:

```
D:\SHRADDHESH-08>javac Demo.java  
D:\SHRADDHESH-08>java Demo  
Number: 1  
Number: 2  
Number: 3  
Number: 4  
Number: 5
```

- **For Loop**

For loop is a same like as while loop with syntax difference

Syntax

```
for(initialization; condition;  
increment/decrement) {  
    // body of the loop  
}
```

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Example

```
class Demo {  
    public static void main(String[] args) {  
        for(int i = 1; i <= 5; i++) {  
            System.out.println(i);  
        }  
    }  
}
```

Output:

```
D:\SHRADDHESH-08>javac Demo.java
```

```
D:\SHRADDHESH-08>java Demo
```

```
1  
2  
3  
4  
5
```

```
D:\SHRADDHESH-08>
```

- **Do-While Loop**

This means: the loop body executes first, and then the condition is checked.

So, the loop will always run at least once, even if the condition is false.

Syntax:

```
do {  
    // loop body  
} while(condition);
```

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Output:

```
class Demo {  
    public static void main(String[] args) {  
        int i = 1;  
        do {  
            System.out.println(i);  
            i++;  
        } while(i <= 5);  
    }  
}
```

Example:

```
D:\SHRADDHESH-08>javac Demo.java
```

```
D:\SHRADDHESH-08>java Demo
```

```
1
```

```
2
```

```
3
```

```
4
```

```
5
```

```
D:\SHRADDHESH-08>
```