Java week4

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**Switch Case statement in Java**

1. **Switch case statement** is used when we have number of options (or choices) and we may need to perform a different task for each choice.

## Break statement in Switch Case

Break statement is optional in switch case but you would use it almost every time you deal with switch case.

## Few points about Switch Case

1) Case doesn’t always need to have order 1, 2, 3 and so on. It can have any integer value after case keyword. Also, case doesn’t need to be in an ascending order always, you can specify them in any order based on the requirement.

2) You can also use characters in switch case

3) The expression given inside switch should result in a constant value otherwise it would not be valid.

4) Nesting of switch statements are allowed, which means you can have switch statements inside another switch. However nested switch statements should be avoided as it makes program more complex and less readable.

**Note :**

A- To summarize I will said that

1. For loop : The Java for loop is a control flow statement that iterates a part of the programs multiple times.
2. When to use ?
3. If the number of iteration is fixed, it is recommended to use for loop.

Syntax   
for(init;condition;incr/decr){

// code to be executed

do{

//code to be executed

}while(true);

**Syntax for infinitive loo**

for(;;){

//code to be executed

}

B -**While loop**

The Java while loop is a control flow statement that executes a part of the programs repeatedly on the basis of given boolean condition.

When to use.

If the number of iteration is not fixed, it is recommended to use while loop.

Syntax

while(condition){

//code to be executed

}

Example :

//while loop

int i=1;

while(i<=10){

System.out.println(i);

i++;

}

Syntax for infinitive loop :

while(true){

//code to be executed

Do while loop

The Java do while loop is a control flow statement that executes a part of the programs at least once and the further execution depends upon the given boolean condition.

When to use

If the number of iteration is not fixed and you must have to execute the loop at least once, it is recommended to use the do-while loop.

Syntax

do{

//code to be executed

}while(condition);

Example

//do-while loop

int i=1;

do{

System.out.println(i);

i++;

}while(i<=10);

Syntax for infinitive loop

do{

//code to be executed

}while(true);

**4 main point in loop**

initialize the variable, check condition and increment/decrement value. It consists of four parts:

1. **Initialization**: It is the initial condition which is executed once when the loop starts. Here, we can initialize the variable, or we can use an already initialized variable. It is an optional condition.
2. **Condition**: It is the second condition which is executed each time to test the condition of the loop. It continues execution until the condition is false. It must return boolean value either true or false. It is an optional condition.
3. **Statement**: The statement of the loop is executed each time until the second condition is false.
4. **Increment/Decrement**: It increments or decrements the variable value. It is an optional condition.