



# SNS COLLEGE OF TECHNOLOGY

Coimbatore-35  
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**COURSE NAME : 19CST102 & Object Oriented Programming**

**I YEAR/ II SEMESTER**

**UNIT – II BASICS FEATURES OF JAVA**

***Topic: Control structures***

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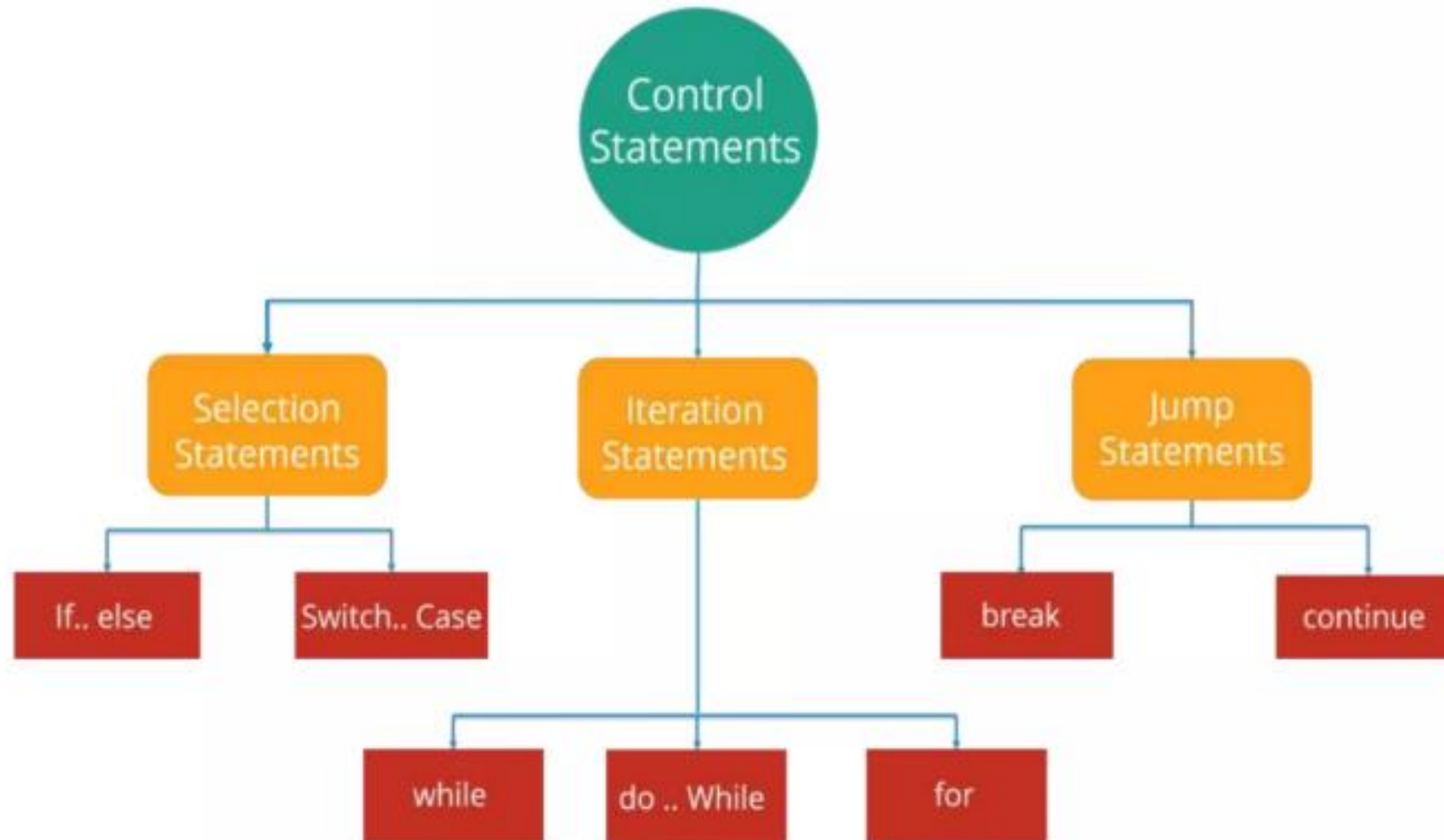
# Control Statements

- The control statements are used to **control the flow of execution** of the program.
- This execution order depends on the supplied **data values** and the **conditional logic**.
- In a Java program, control structure can be divided into three parts:
  1. **Selection statement**
  2. **Iteration statement**
  3. **Jumps in statement**





# Control Statements





# Selection Statements



- Also called as Decision making Statements
- 2 Types
  - If Statement
  - Switch Statement
- Based on condition it control the program execution
- Provide power & Flexibility





# If Statements

- Used to test the condition
- It check Boolean condition: true or false
- Conditional branch statements
- Route program execute through 2 different paths
- If types
  - If
  - If-else
  - Nested if else
  - If-else-if

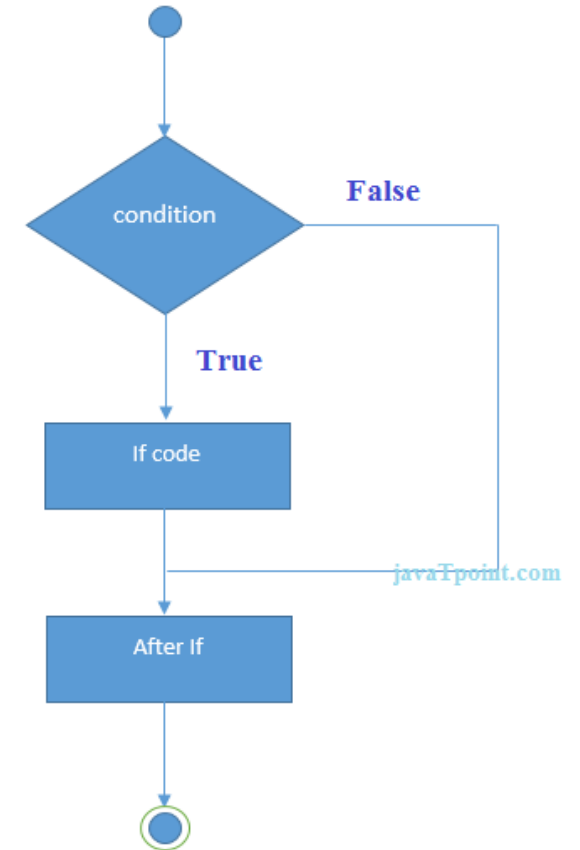




# If Statements

- Used to test the condition
- It executes if block if condition is true
- Syntax

```
if(condition)
{
    // Code block
}
```





# If Statements

- Example

```
class Main {  
    public static void main(String[] args) {  
        int x = 20;  
        int y = 18;  
        if (x > y) {  
            System.out.println("x is greater than y");  
        }  
    }  
}
```

- Output

x is greater than y

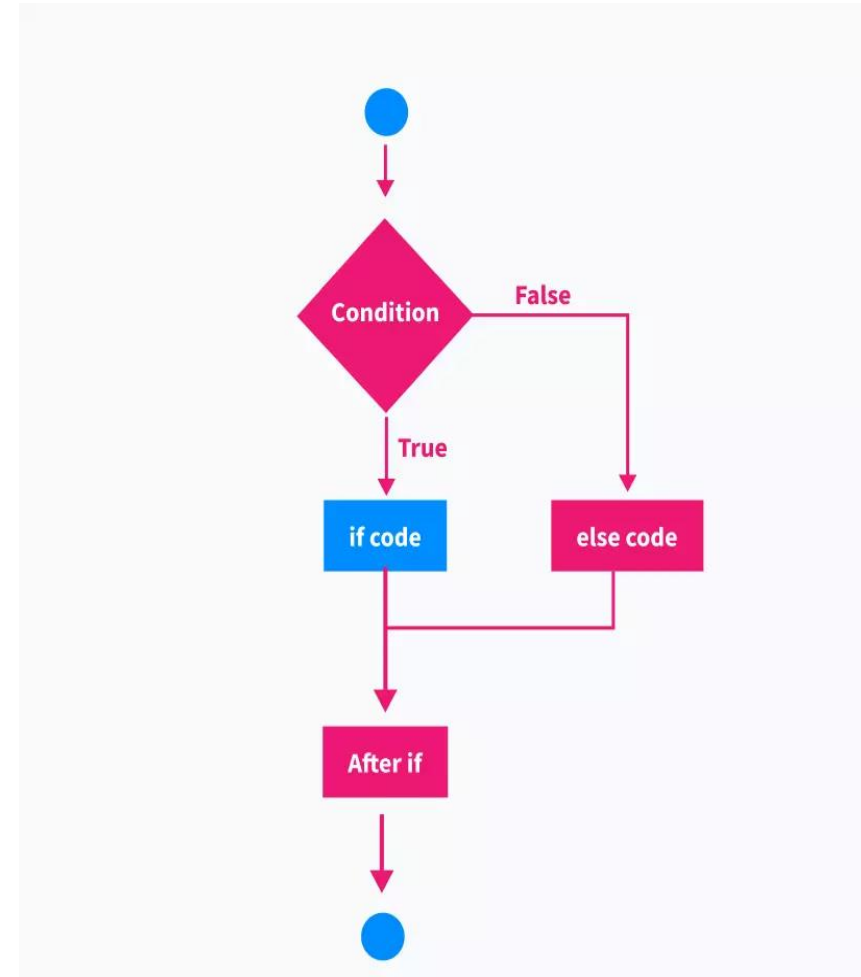




# If-else Statements

- Used to test the condition
- It executes if block if condition is true otherwise else block will be executed
- Syntax

```
if(condition)
{
    // Code block
}
else
{
    // Code block
}
```







# If-else Statements

- Example

```
class Main {  
    public static void main(String[] args) {  
        int num = 10;  
        if (num%2==0) {  
            System.out.println(num+ "is even");  
        } else {  
            System.out.println(num+ "is odd");  
        }  
    }  
}
```

- Output

10 is even

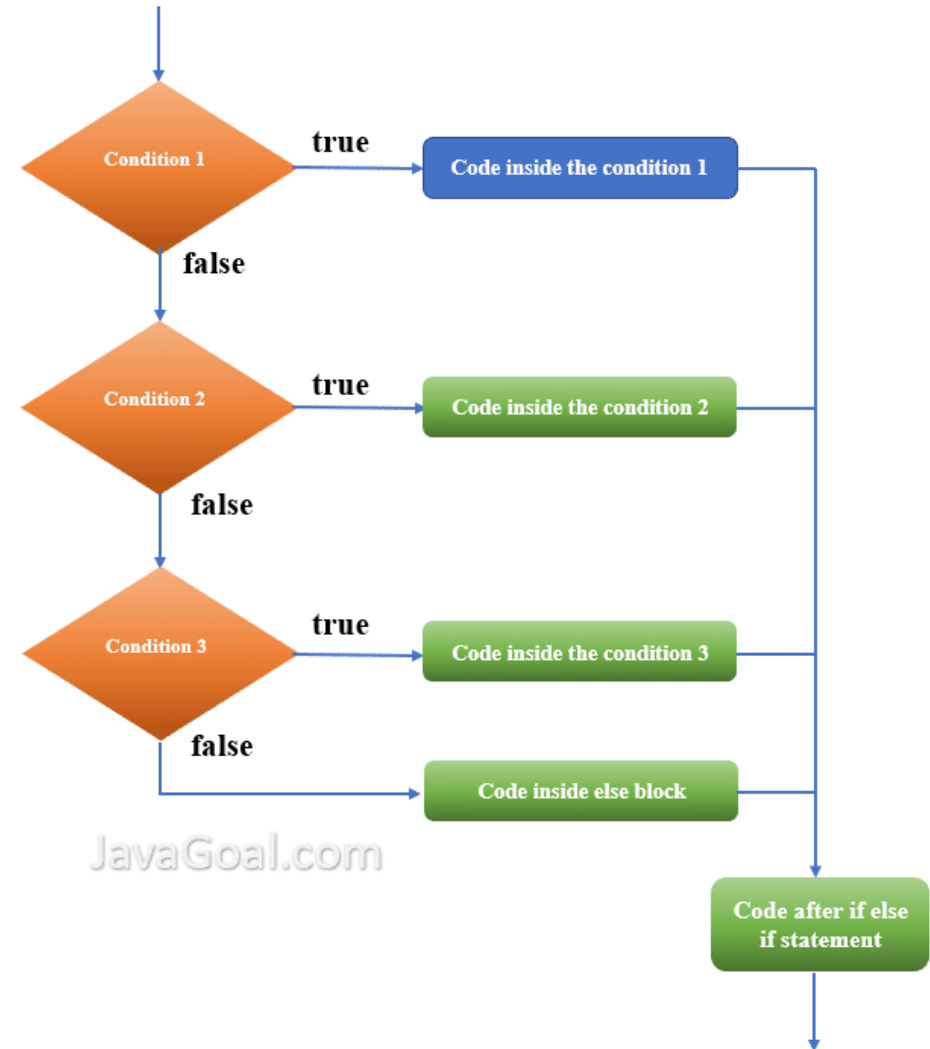




# Nested If-else Statements

- Executes one if or else if statement inside another if or else if statement
- Syntax

```
if(condition1)
{
    // Code block
    if(condition2)
    {
        // Code block
    }
else
{
    // Code block
}
}
```



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# Nested If-else Statements

- Example

```
class largest {  
    public static void main(String[] args) {  
        double n1=-4.5, n2=3.9, n3=5.5;  
        if (n1>=n2) {  
            if (n1>=n2)  
                System.out.println(n1 is largest no);  
            else  
                System.out.println(n3 is largest no);  
        }  
        else {  
            if (n2>=n3) {  
                if (n1>=n2)  
                    System.out.println(n2 is largest no);  
                else  
                    System.out.println(n3 is largest no);  
            }  
        }  
    }  
}
```

- Output

n3 is largest no



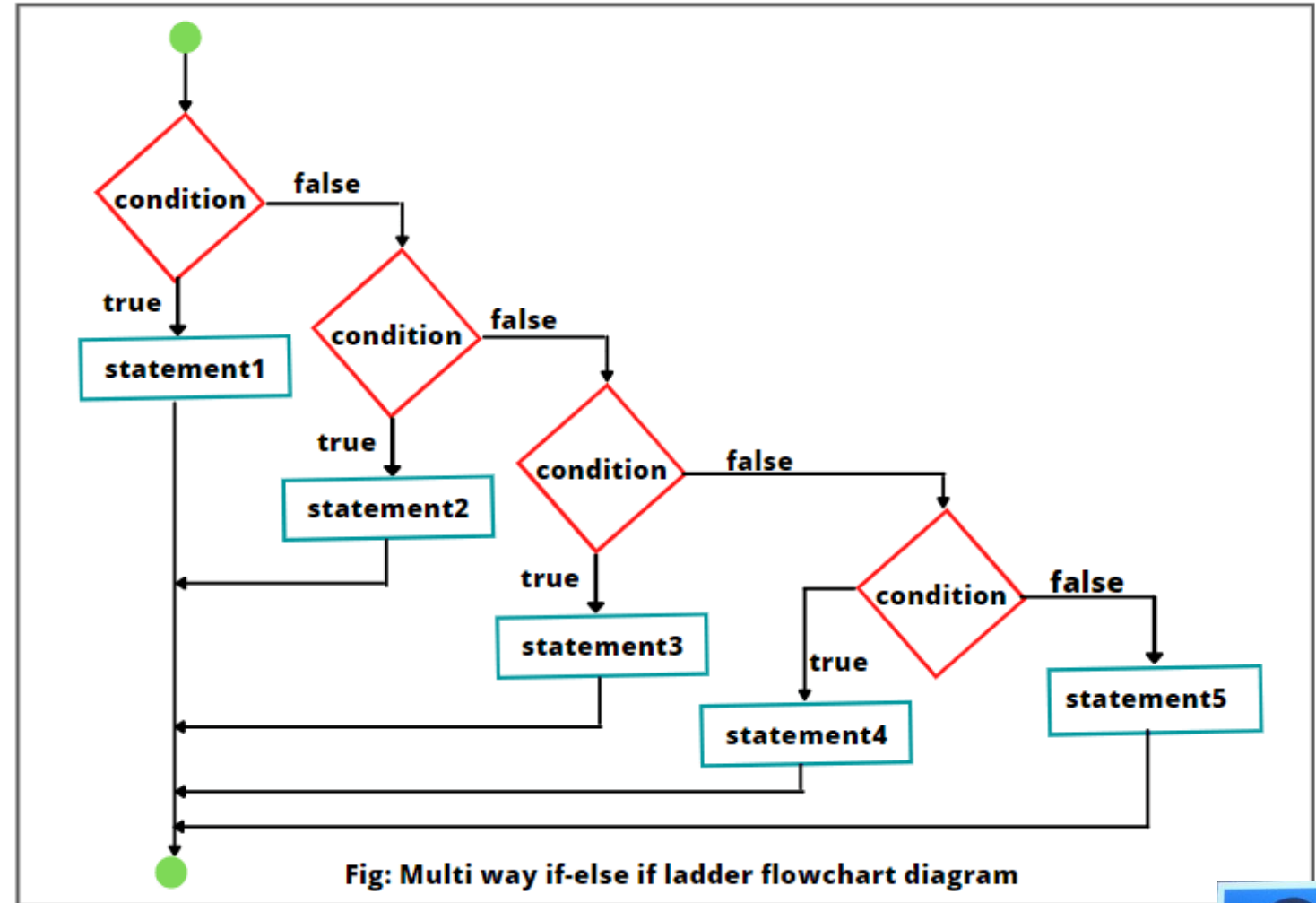


# if-else-if Statements

- Executes one if or else if statement inside another if or else if statement

- Syntax

```
if(condition)
    Statement1;
elseif(condition)
    Statement2;
elseif(condition)
    Statement3;
elseif(condition)
    Statement4;
else
    Statement5;
}
```





# if-else-if Statements

- Example

```
class largest
{
    public static void main(String[] args) {
        int n1=10, n2=20, n3=15;
        if (n1>=n2 && n1>=n3)
            System.out.println(n1 is largest no);
        elseif (n2>=n1 && n2>=n3)
            System.out.println(n2 is largest no);
        else
            System.out.println(n3 is largest no);
    }
}
```

- Output

n3 is largest no





# Switch Statements

- Executes one statement from multiple conditions
- Syntax

```
switch(expression)  
{
```

Case 1:

```
    Statements;  
    Break;
```

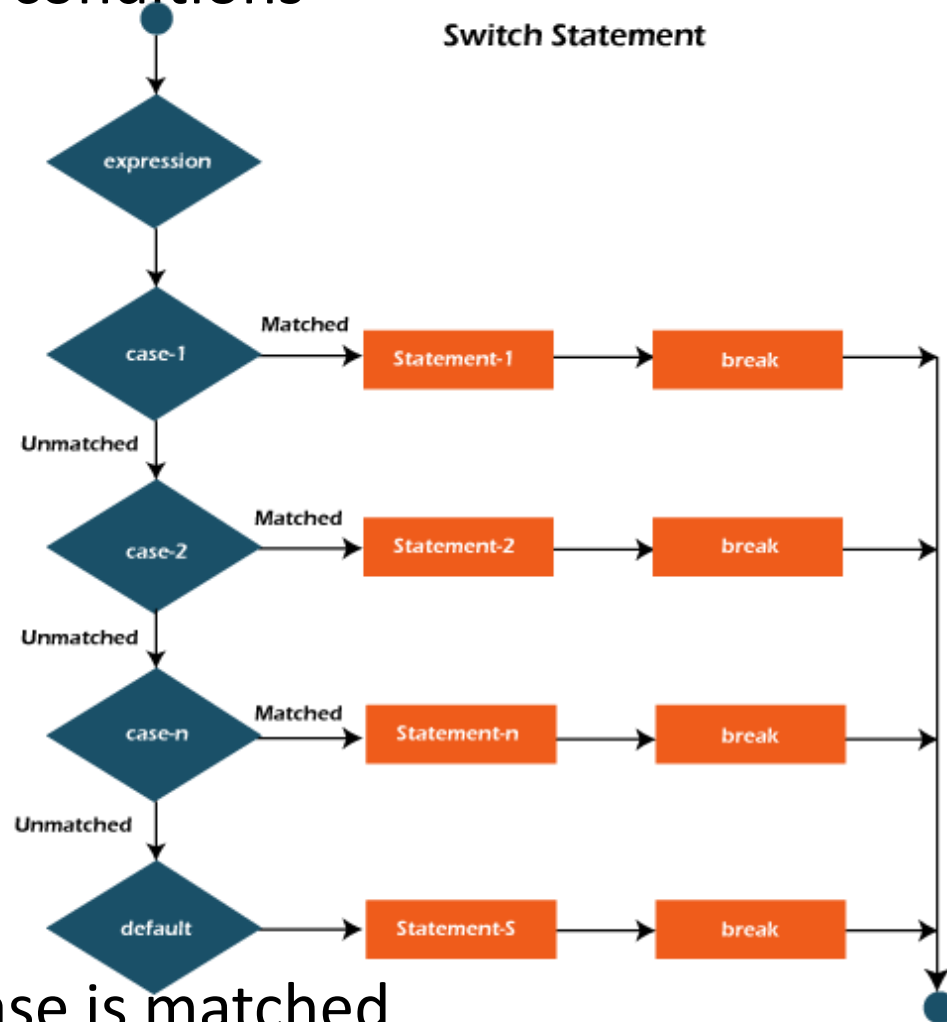
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default:

```
    execute when no case is matched
```

```
}
```

Switch Statement





# switch Statements



- Example

```
public class Main {  
    public static void main(String[]  
args) {  
        int day = 4;  
        switch (day) {  
            case 1:  
  
                System.out.println("Monday");  
                break;  
            case 2:  
  
                System.out.println("Tuesday");  
                break;  
            case 3:  
  
                System.out.println("Wednesday")  
                ;  
                break;
```

case 4:

```
                System.out.println("Thursday");  
                break;  
            case 5:  
                System.out.println("Friday");  
                break;  
            case 6:  
  
                System.out.println("Saturday");  
                break;  
            case 7:  
  
                System.out.println("Sunday");  
                break;  
        }  
    }  
}
```

- Output

Thursday





# References



- Java : the complete Reference ( Eleventh Edition), Herbert Schildt, 2018.





