



SELECTION STATEMENT IN PROGRAMMING

with
C++ & JAVA

SELECTION IN PROGRAMMING

- A selection statement is a control statement that allows choosing between two or more execution paths in a program.
- Most modern programming languages include one way, two way and n-way (multiple) selectors.
- Used to evaluate expressions and direct the program execution based on the result.

- Types of selection statement:
 - (a)if statement
 - (b)if...else statement
 - (c)if...else...if...else statement
 - (d)switch case statement

IF STATEMENT

- Used to execute statements when the given condition is satisfied.
- Conditional statements within the block are executed when the condition in the if statement is satisfied.

SYNTAX

```
if(boolean expression)
{
    statement 1;
    statement 2;
    statement 3;
}
```

IF STATEMENT

Example of C++ and Java Programming

```
//program to apply if statement

#include<iostream>
using namespace std;

int main()
{
    int num;
    cout<<"Enter a number: ";
    cin>>num;

    if (num%2==0)
        cout<<"num is even number"<<endl;
}
```

C++ PROGRAMMING

```
//program to apply if statement

public class ifStatement {
    public static void main(String args[]) {
        int num = 8;
        if (num % 2 == 0) {
            System.out.println("Num is even number ");
        }
    }
}
```

JAVA PROGRAMMING

IF...ELSE STATEMENT

- Executes the set of statements in if block, when the given condition is satisfied.
- Executes the statements in the else block, when the condition is not satisfied.

SYNTAX

```
if(boolean expression){  
    statement for TRUE condition;  
} else  
    statement for FALSE condition;  
}
```

IF...ELSE STATEMENT

Example of C++ and Java Programming

```
//program to apply if...else statement

#include<iostream>
using namespace std;

int main()
{
    int num;
    cout<<"Enter a number: ";
    cin>>num;

    if (num%2==0)
        cout<<"The number is an even number."<<endl;
    else
        cout<<"The number is an odd number."<<endl;
}
```

C++ PROGRAMMING

```
//program to apply if...else statement

public class ifElseStatement {

    public static void main(String args[]) {
        int num = 9;
        if (num % 2 == 0) {
            System.out.println("Num is even number ");
        }
        else {
            System.out.println("Num is even odd ");
        }
    }
}
```

JAVA PROGRAMMING

IF...ELSE...IF...ELSE STATEMENT

- to make a choice between more than two alternatives

SYNTAX

```
if(boolean expression 1)
{
    statement for TRUE condition;
else if(boolean expression 2)
    statement for TRUE condition;
else
    statement for FALSE condition;
}
```

IF...ELSE...IF...ELSE STATEMENT

Example of C++ and Java Programming

```
//program to apply if...else...if...else statement

#include<iostream>
using namespace std;

int main() {
    string color="blue";

    if(color=="blue")
        cout<<"The color is blue."<<endl;
    else if(color=="red")
        cout<<"The color is red."<<endl;
    else if(color=="green")
        cout<<"The color is green."<<endl;
    else
        cout<<"Please choose the correct color.<<endl";
}
```

C++ PROGRAMMING

```
//to apply if...else...if...else statement

public class ifelseifelse {
    public static void main(String args[]) {
        String color = "blue";
        if (color == "blue") {
            System.out.println("The color is blue.");
        } else if (color == "red") {
            System.out.println("The color is red.");
        } else if (color == "green") {
            System.out.println("The color is green.");
        } else {
            System.out.println("Please choose the correct color.");
        }
    }
}
```

JAVA PROGRAMMING

SWITCH CASE STATEMENT

- Allow a variable to be tested for equality against a list of values
- Each value is called a CASE, and the variable being switched on is checked for each case
- The case statements are executed based on the value of the expression.
- A switch statement is used for any expressions that reduce to an integral value (char or int).

SYNTAX

```
switch(expression) {  
    case constant-expression:  
        statement(s);  
        break; //optional  
    case constant-expression:  
        statement(s);  
        break; //optional  
    default: //optional  
        statement(s);  
}
```

SWITCH CASE STATEMENT

Example of C++ and Java Programming

```
//program to apply switch case statement

#include<iostream>
using namespace std;

int main(){
    int day;
    cout<<"Enter any number (1 to 3): ";
    cin>>day;
    switch(day) {
        case 1:
            cout<<"It's Monday."<<endl;
            break;
        case 2:
            cout<<"It's Tuesday."<<endl;
            break;
        case 3:
            cout<<"It's Wednesday."<<endl;
            break;
        default:
            cout<<"Wrong number. Please enter any number from 1 to 3 only."<<endl;
    }
}
```

C++ PROGRAMMING

```
//to apply switch case statement
public class switchCase {
    public static void main(String args[]) {
        int day = 3;
        switch (day) {
            case 1:
                System.out.println("It's Monday");
                break;
            case 2:
                System.out.println("It's Tuesday");
                break;
            case 3:
                System.out.println("It's Wednesday");
                break;
            default:
                System.out.println("Wrong number. Please enter any number from 1 to 3 only");
        }
    }
}
```

JAVA PROGRAMMING