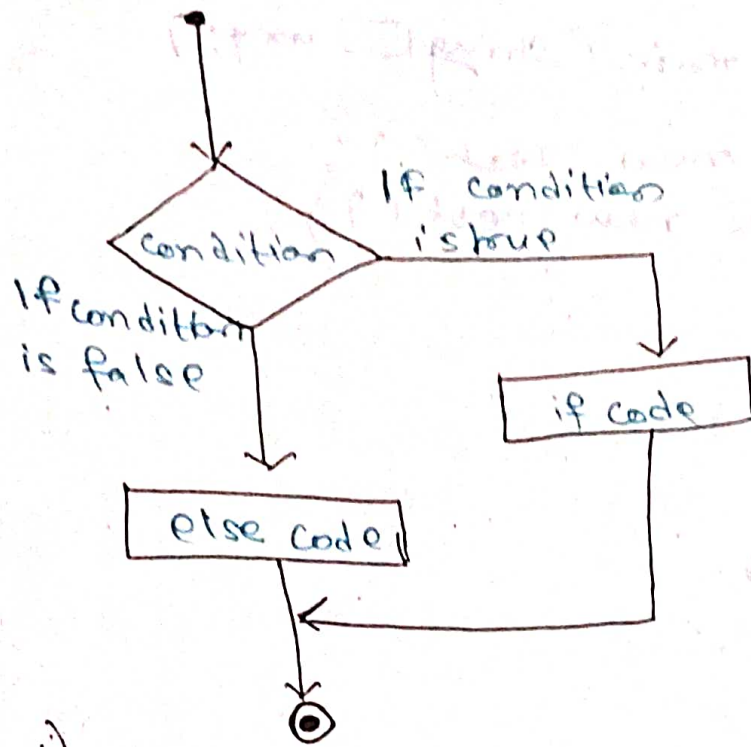# IF | Else condition


```
if (condion)
{ === }

else
{ = }
```

i)
```
Scanner scan = new Scanner (System.in);
System.out.println ("Enter your age");
int age = scan.nextInt
if (age>=18)
{
    System.out.println ("You are eligible
                         for voting").
}
else
{ System.out.println ("You are not
                       eligible for voting");
}
```

2)
```
if (age<0)
System.out.println (" Invalid Age");
if (age >=18)
System.out.println ("You are eligible
                     for voting");
else
System.out.println ("You are not
                     eligible for voting");
```

Output

Enter your age
-26
Invalid Age
You are not eligible for voting.

Nested If/Else

```
if (cond1).
{=
}
else if (cond 2)
{=
}
else if (cond 3)
{=
}
else
{=
}
```

कोई भी एक condition
true होगा फिर बाहर निकल
जायगा ।

1)
```
if (true)
System.out.println ("Jethalal loves
                              Babita ");

if (false)
System.out.println ("Kuch bhi likho,
        konsa point hona chai ye line");
```

Output

Jethalal loves babita.

```java
System.out.println("Enter your Marks");
int marks = scan.nextInt();
if (marks > 60)
        System.out.println("1st");
else if (marks > 45)
        System.out.println("2nd");
else if (marks > 33)
        System.out.println("3rd");
else
        System.out.println("failed");
```

Year	winner	Year	winner
1975	West Indies	1999	Austrailla
1979	"	2003	"
1983	India	2007	"
1987	Australia	2011	India
1992	Pakistan	2015	Australia
1996	Sri Lanka	2019	England.

```java
System.out.println("Enter Year");
Scanner scan = new Scanner(System.in);

int year = scan.nextInt();
switch (year)
{
   case 1975:
       System.out.println("West Indies");
       break;
   case 1979:
       System.out.println("West Indies");
       break;
   case 1983:
       System.out.print("India");
       break;
```

```java
case 1987:
    System.out.println("Australia");
    break;
...

case 2019:
    System.out.println("England");
    break;
default:
    System.out.println("There was no world cup
        happed in the year you entered")
```

OR

```java
int year = scan.nextInt
switch (year)
{
    case 1975:
    case 1979:
        System.out.println("West Indies");
        break;
    case 1983:
    case 2011:
        System.out.println("India");
        break;
    case 1987:
    case 1999:
    case 2003:
    case 2007:
    case 2015:
        System.out.println("Australia");
        break;
    case 1992:
        System.out.println("Pakis team");
        break;
    case 1996:
        System.out.println("Sri Lanka");
        break;
```

```java
        System.out.println("England");
        break;
    default:
        System.out.println("There was no wor
            cup happened in the year you
                entered");
}
```

```java
switch(1)
{
    case 1:
        System.out.println("print 1");
}
```

Output

Print 1

switch ਦੀ default value ਵੀ ਨਹੀ ਦੱਤੇ ਤੋ ਵੀ ਚੱ
chalega. but koi output nhi aayega
agar invalid input dege tab.

Using characters, constants & string in
                                    switch.

```java
switch('A')
{
    case 'A':
        System.out.println("123");
}
switch('A')
{
    Case 65:
        System.out.println("456");
}
switch(65)
{
    Case 65:
        System.out.println("789");
}
```

```
String name = "pqr";
switch (name)
{
    case "pqr";
        System.out.println(" String allowed ");
3.
```

Output

```
123
456
789
String allowed.
```

① The expression provided in the switch result in a constant value otherwise it would not be valid. The expression can be integer expression or a character expression.
An expression must always execute to a result.

Note : In JAVA even strings are allowed in switch and case.

Valid expression for switch:

//constant expressions allowed
```
switch (1+2 +23)
switch (1 * 2 + 3%4)
```
// Variable expression are allowed provided they are assigned with fixed values
```
switch (a*b + c*d)
switch (a+b+c)
```

② Case labels must be constants and unique. Duplicate case values are not allowed.

③ The default statement is optional. Even if the switch case statement do not have a default statement, it would run without any problem. Only one default statement is allowed

C

```c
#include <stdio.h>
int main()
{
    switch ("pgr")
    {
        case "pgr":
        printf("String Accepted");
    }
    return 0;
}
```

Output
~~Error~~ String are not allowed

C++

```cpp
#include <iostream>
using namespace std;
int main()
{
    switch ("pgr")
    {
        case "pgr":
        cout << "String Accepted";
    }
    return 0;
}
```

Output
Error String not allowed

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

⑤ Time Complexity : $O(1)$ Space Complexity : $O(1)$