

The most basic and simple kind of conditional operator is the if else. It is of four types

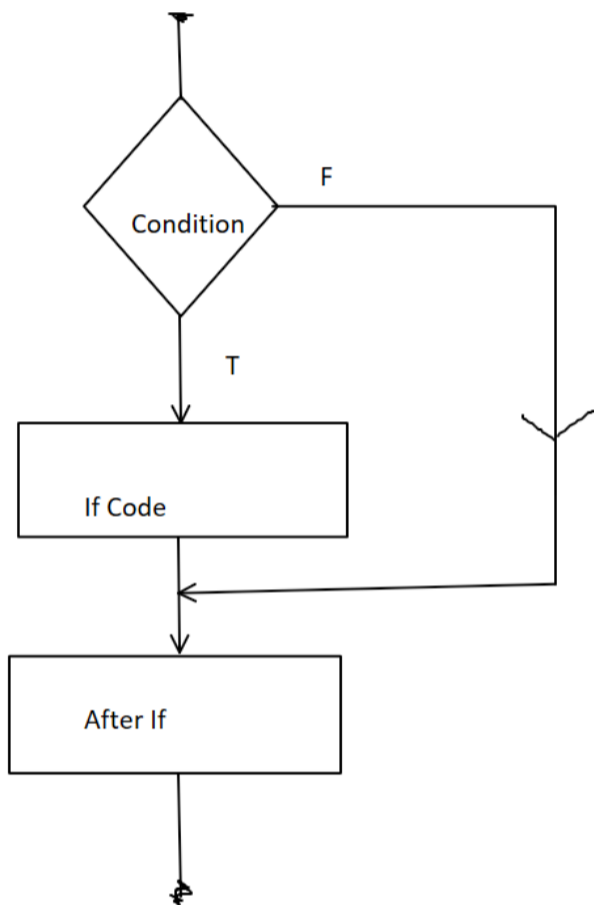
1. If statement:

This checks if a certain condition is true and then executes a block of statement otherwise not.

Syntax:

```
If(condition)
{
//Code to be executed
}
```

Here if you do not give the { } then the statement right after the if statement is considered for execution.



Example for if statement

```
#include<stdio.h>
int main(){
    int age;
    printf("\nEnter your age : ");
    scanf("%d", &age);
    if (age > 18)
    {
        printf("\nYou are eligible for vote.");
    }
    printf("\nThank you for using voting service.");
}
```

Output:

```
Enter your age : 37
You are eligible for vote.
Thank you for using voting service.
```

2. If-else statement:

It is quite similar to the if statement the difference comes when condition is false in that case the block of commands in the else is executed.

Syntax:

```
If(condition)
{
    //Code to be executed when condition is true
}
else
{
    //Code to be executed when condition is false
}
```

```
#include <stdio.h>
int main()
{
    int age;
    printf("\nEnter your age : ");
    scanf("%d", &age);
    if (age > 18)
    {
        printf("\nYou are eligible for vote.");
    }
    else
    {
        printf("\nYou are not eligible for vote.");
    }
    printf("\nThank you for using voting service.");
    return 0;
}
```

Q. Write a program to input an amount and then print the total number of different notes.

For example:

Input:

Enter amt: 2442

Output:

Total number of notes =

2000 = 1

500 = 0

100 = 4

50 = 0

20 = 2

10 = 0

5 = 0

2 = 1

1 = 0

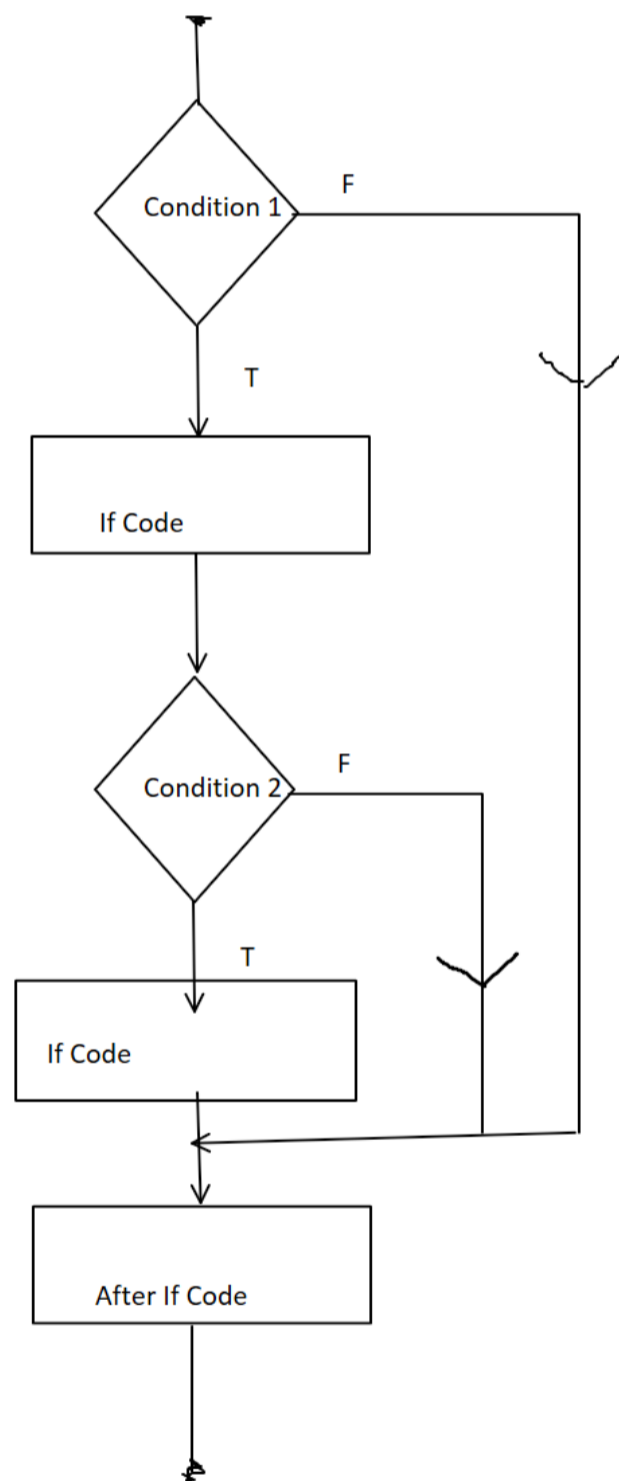
<https://youtu.be/77LKPoTEIII>

3. Nested If statement:

Here an if statement is placed inside another if statement. the syntax for it is given below:

Syntax:

```
If(condition1)
{
    //Code to be executed when condition1 is true
    If(condition2)
    {
        //Code to be executed when condition2 is true
    }
}
```



Q. Write a program to check if a triangle is valid when the user enters the three sides.

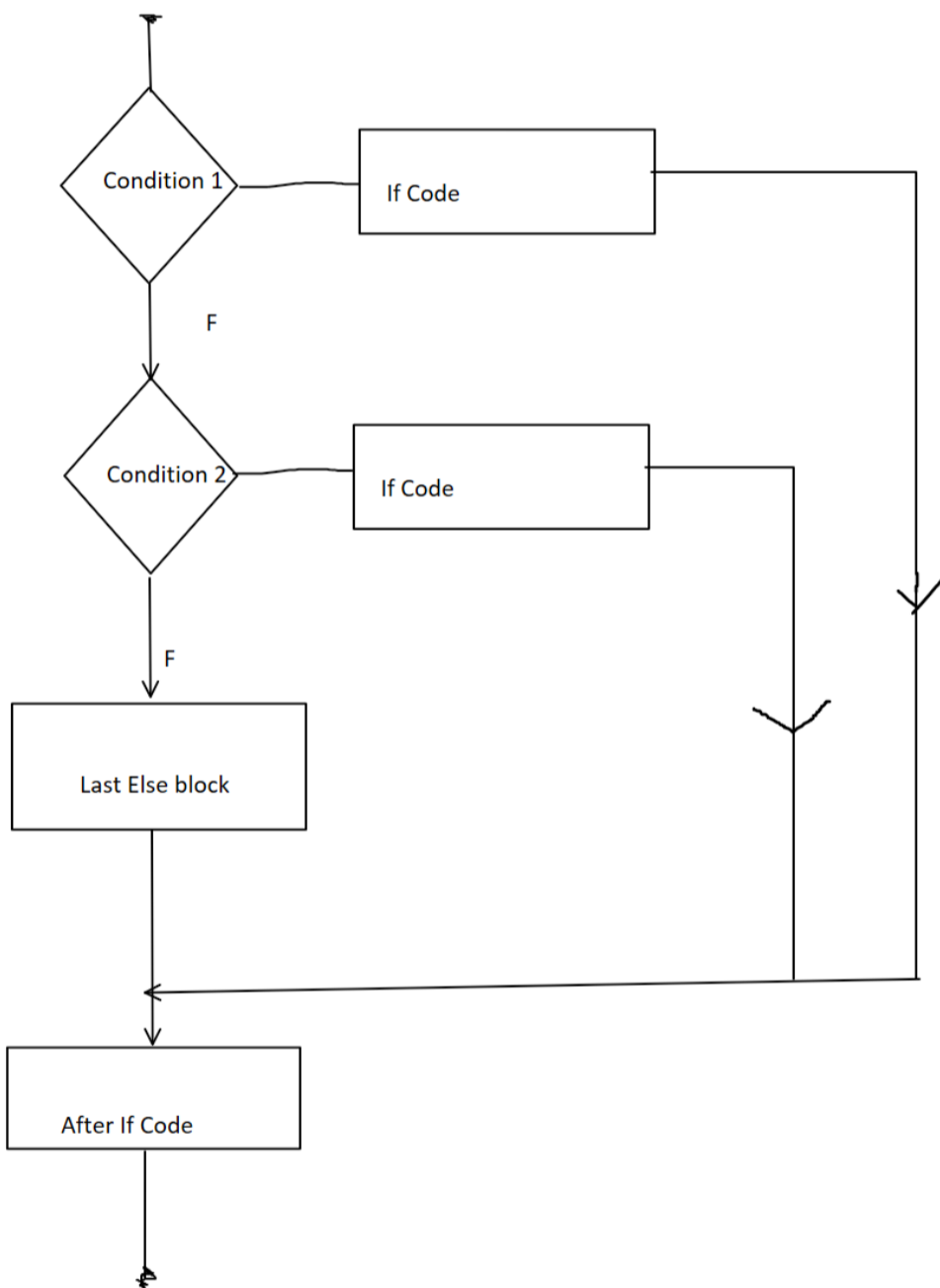
Hint: In a triangle if the sum of any two sides is greater than the 3rd then the triangle is said to be valid.

<https://youtu.be/R2beowWrNFY>

4. if-else-if ladder statement:

If any of the conditions is true, then the statements in that particular if block is executed. The statements in the last else block is executed if and only if none of the above conditions is true. The syntax for if else if ladder is given below.

```
if(condition1)
{
    //Code to be executed when condition1 is true
}
else if(condition2)
{
    //Code to be executed when condition2 is true
}
else
{
    //Code to be executed when all the conditions is false
}
```



Q. Write a program to print profit or loss with the respective percentage when the user enters the cost price and the selling price.

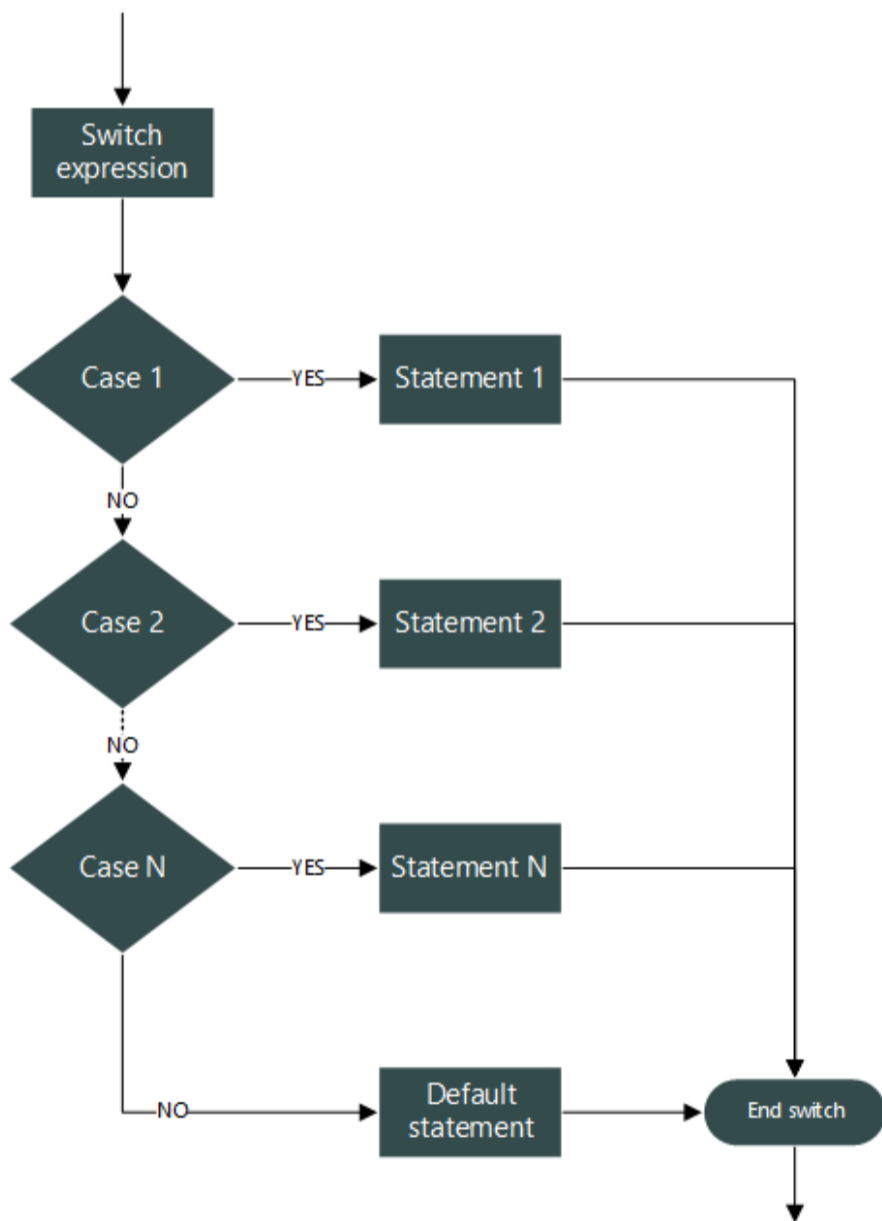
<https://youtu.be/XyifxM2bb3Y>

4. Switch Statement:

The switch statement is used when the else-if ladder becomes too long and complex. Switch is a multi-branch statement. It is one of the only statement that allows the value to change control of execution.

Syntax:

```
switch(variable)
{
    case value1: //code to be executed
    break;
    case value2: //code to be executed
    break;
    case value3: //code to be executed
    break;
    case value4: //code to be executed
    break;
    default: //code to be executed when none of the above matches
}
```



Q. Write a program to make a virtual character with using only switch statement.

https://youtu.be/prO_Dq-UiXQ