1. if statement
2. switch statement
3. conditional operator statement (? : operator)
4. goto statement

**Decision making with if statement**

The if statement may be implemented in different forms depending on the complexity of conditions to be tested. The different forms are,

1. Simple if statement
2. if....else statement
3. Nested if....else statement
4. Using else if statement

**Switch Statement**

When you want to solve multiple option type problems, where one value is associated with each option and you need to choose only one at a time, then, switch statement is used.

**Rules for using switch statement**

The expression (after switch keyword) must yield an **integer** value i.e the expression should be an integer or a variable or an expression that evaluates to an integer.

The case **label** values must be unique.

The case label must end with a colon(:)

Ex 1 :

#include <stdio.h>

int main()

{

int option = 0;

printf("enter number between 1 and 3\n");

scanf("%d",&option);

switch(option){

case 1 : printf("one");

break;

case 2 : printf("two");

break;

case 3 : printf("three");

break;

default : printf("none");

break;

}

return 0;

}

Ex 2 :

switch('1'){

case '1' : printf("one");

break;

case '2' : printf("two");

break;

case '3' : printf("three");

break;

default : printf("none");

break;

}

//output : one

Note : You cannot **use** the **switch statement in C** with the value of a **string** or character array.

**Conditional Operator**

1. Conditional operators return one value if condition is true and returns another value is condition is false.
2. This operator is also called as ternary operator.

**Ex:**

#include <stdio.h>

int main()

{

int x=1, y ;

y = ( x ==1 ? 2 : 0 ) ;

printf("x value is %d\n", x);

printf("y value is %d", y);

return 0;

}

Output : x =1 , y =2

**Goto Statement**

When a goto statement is encountered in a C program, the control jumps directly to the label mentioned in the goto statement.

**Syntax:**

goto label\_name;  
..  
..  
label\_name: C-statements

**Ex program**

#include <stdio.h>

int main()

{

int sum=0;

for(int i = 0; i<=10; i++){

sum = sum+i;

if(i==5){

goto addition;

}

}

addition:

printf("%d", sum);

return 0;

}

//output : sum= 15;

// 1+2+3+4+5 = 15

**Note :**

The goto statement is rarely used because it makes program confusing, less readable and complex. Also, when this is used, the control of the program won’t be easy to trace, hence it makes testing and debugging difficult.