

C PROGRAMMING

LECTURE 2

CONDITIONAL LOOPING AND DECISION MAKING

The if Statement:

Like most languages, C uses the keyword if to implement the decision control instruction. The general form of if statement looks like this:

if (this condition is true)

execute this statement ;

Some of the basic comparison expressions are :

this expression is true if

$x == y$	x is equal to y
$x != y$	x is not equal to y
$x < y$	x is less than y
$x > y$	x is greater than y
$x <= y$	x is less than or equal to y
$x >= y$	x is greater than or equal to y

if-else:

If (the conditon is satisfied)

```
        do this;

else

        do something else;
```

NESTED IF-ELSE:

```
if ( condition )

    do this ;

else

{

    if ( condition )

        do this ;

    else

    {

        do this ;

        and this ;

    }

}
```

THE ELSE-IF STATEMENT :

```
If ( check condition 1 is satisfied )

    do task1;

else if ( check conition 2 is satisfied)

    do task2;

else if ( check condition 3 is satisfied)

    do task 3;
```

else

do task 4;

SWITCH STATEMENT:

The value of variable "choice" is checked in each case.

switch (choice)

{

case 1 : task 1;

break;

case 2 : task 2;

break;

default : task to be done if none of above case satisfied.

break;

}

SUMMARY :

a) There are three ways for taking decisions in a program. First way is to use the if-else statement, second way is to use the conditional operators and third way is to use the switch statement.

b) The default scope of the if statement is only the next statement. So, to execute more than one statement they must be written in a pair of braces.

c) An if block need not always be associated with an else block. However, an else block is always associated with an if statement.

d) If the outcome of an if-else ladder is only one of two answers then the ladder should be replaced either with an else-if clause or by logical operators.

e) && and || are binary operators, whereas, ! is a unary operator. In C every test expression is evaluated in terms of zero and non-zero values. A zero value is considered to be false and a non-zero value is considered to be true.

f) Assignment statements used with conditional operators must be enclosed within a pair of parenthesis.