Aim: Decision Making and Looping

Decision making in C programming language is done using conditional statements. The conditional statements are used to make a decision based on a condition. The three conditional statements in C programming language are:

1. If statement:

If statement is used to execute a block of code if a condition is true. The basic syntax of the if statement is:

if (condition)

{

//code to be executed if the condition is true

}

2. If-else statement:

If-else statement is used to execute a block of code if a condition is true and another block of code if the condition is false. The basic syntax of the if-else statement is:

if (condition)

{

//code to be executed if the condition is true

}

else

{

//code to be executed if the condition is false

}

3. Switch statement:

Switch statement is used to execute a block of code based on multiple conditions. The basic syntax of the switch statement is:

switch (expression)

{

case value1:

//code to be executed if the expression matches value1

break;

case value2:

//code to be executed if the expression matches value2

break;

.

.

.

default:

//code to be executed if the expression does not match any of the cases

}

Looping in C Programming Language:

Looping is a process of executing a set of statements repeatedly until a certain condition is met. The three types of loops used in C programming language are:

1. For loop:

For loop is used to execute a set of statements repeatedly for a fixed number of times. The basic syntax of the for loop is:

for (initialization; condition; increment/decrement)

{

//code to be executed

}

2. While loop:

While loop is used to execute a set of statements repeatedly until a certain condition is true. The basic syntax of the while loop is:

while (condition)

{

//code to be executed

}

3. Do-while loop:

Do-while loop is used to execute a set of statements repeatedly until a certain condition is true. The difference between while loop and do-while loop is that do-while loop executes the statements at least once before checking the condition. The basic syntax of the do-while loop is:

do

{

//code to be executed

} while (condition);