

SHORT QUESTIONS

Q.1 Define loop?

Ans. It is a statement that is used to repeat a set of statements up to a fixed number of times or until a given condition is satisfied. There are three types of Loops

Conditional Loop (while and do-while loop)

Counter loop (For Loop)

Q.2 What is a Conditional Loop?

Ans. It is a loop that executes a set of statements as long as a given condition remains true. There are two types of conditional loops

While Loop

do-while Loop

Q.3 What is while Loop?

Ans. While loop statement is used to repeat a set of statements until a given condition is satisfied.

Syntax:

While (Relational or logical expression i.e. condition)

{

Statements (Body of loop)

}

Q.4 What is the working of while loop?

Ans. When while-loop is executed, the computer checks the given condition written in parentheses. If the given condition is true then the statements enclosed in the braces (body of loop) are executed. After the completion of first iteration control is shifted to while and the condition is again tested. This process is repeated until the condition is true. If the condition is false then control is transferred the statement that comes after the body of loop.

Q.5 What is an infinite loop?

Ans. If the condition of loop never false then the loop never terminates and it is called infinite loop; for infinite loop there must be a statement in loop body such that the condition in while loop always true.

Q.6 Why we use of while loop?

Ans. It is useful where the programmer does not know in advance how many times the body of loop will be executed.

Q.7 What is Loop control variable?

Ans. A variable whose value controls the number of iterations is known as loop control variable. Loop control variable is always initialized before starting of the loop and incremented and decremented inside the loop body.

Q.8 What is do-while Loop?

Ans. It is similar to while loop i.e. do-while loop is used to repeat a set of statements until a given condition is satisfied. In do-while loop condition is tested after the end of loop body. In do-while the condition is written at the end of loop body therefore loop is executed at least once.

Syntax:

```
do                                //keyword and starting of loop
{                                // beginning of loop body
    Statements
}                                // end of loop body
While (Relational or logical expression i.e. condition);
```

Q.9 What is a Counter Loop?

Ans. Counter loop is used to repeat a set of statements for a specified number of times.
Example: for loop

Q.10 What is a For Loop?

Ans. This loop is used to repeat a set of statements for a fixed number of times i.e. in for we know how many times the body of loop is executed.

Syntax:

```
for( initialization; condition; increment/decrement)
{
    Statements (loop body)
}
```

Q.11 What is Nested Loop?

Ans. Nested loop mean loop inside the body of another loop is called nested loop. Nesting can be done up to any level. Nested loop increases the complexity of the program. There is no restriction on the type of loops that may be placed in the body of other loops.

Q.12 What is Sentinel controlled loop?

Ans. The values are used to end the loop are called sentinel values and the loop that ends with a sentinel value is called sentinel controlled loop. Sentinel loop is used when exact number of repetitions is unknown. General form of sentinel controlled loop:

Get a data value.

Compare data value with sentinel value.

If it is not sentinel value then process the data.

Get another statement of data using loop.

Q.13 What is a goto Statement?

Ans. The goto statement performed unconditional transfer of control to the named label. The label must be in the same function.

Syntax:

goto label;

label: statement

Q.14 What is an array?

Ans. It is a collection of variables stored in a contiguous portion of memory having common name and same data type. Each element of an array has separate subscript. The index always starts with 0.

Data_type array_name[size]; // Declaration of the array: