

Dear Students!!

In this e-book of [12th class](#), study material of computer science is being sent to you as per new syllabus (2023-24). You can easily prepare your test / papers by reading these notes and watching the video lectures given below. Following are the links of the video lectures in blue colour. Watch these video lectures by clicking on the relevant link of chapter to have better understanding of various concepts.

**12th Class - Monthly distribution of Computer Science Syllabus & Video Lecture Links (Pbi)**

Month	Chaper & Its Name	Link of Video Lecture
April	Chapter-1 Office Automation & Typing (Explanation)	https://youtu.be/HEJpX01lwpM
	Chapter-1 Office Automation & Typing (Solution)	https://youtu.be/LwOpv8j92bo
May	Chapter -2 Control Statements (Explanation)	https://youtu.be/T6zvUn61x-k
	Chapter -2 Control Statements (Solution)	https://youtu.be/JXe2kGAJ7WY
July	Chapter -3 Computer Networks	https://youtu.be/6YULI1naDZI
Aug	Chapter -4 Current Trends in Information Technology	https://youtu.be/YHtjpOWi-ZY
Oct	Chapter -5 Artificial Intelligence & Expert System	https://youtu.be/rvn2FpS1PKQ
Nov	Chapter -6 Digitalization	https://youtu.be/galuEBdTkul
Dec	Chapter -7 E Governance (Part-2)	Under Preparation
Jan	Chapter -8 Image Editing & File Conversion Tools	Under Preparation
Feb	Chapter -9 Audio & Video Editing	Under Preparation

Practical Video Lectures for Chapter -2 (Control Statements)

C Language Practical -1	https://youtu.be/8hg3BJAyBqE
C Language Practical -2	https://youtu.be/v_lw8wmfIP4
C Language Practical -3	https://youtu.be/RBq--darc0I

Following is the Link of Playlist for detailed Lectures on C Programming

<https://youtube.com/playlist?list=PLja3EaJFAjmYjeAcDs0ZQdVmx7liCtg5P>

PLEASE DO NOT FORGET TO LIKE, SHARE AND SUBSCRIBE OUR YOUTUBE CHANNEL

 **YouTube** <http://youtube.com/c/computersciencepunjab>

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Please use the following link to download the study material/e-books/e-contents for 6th to 12th classes:

<http://cspunjab.nirmancampus.co.in/study.php>

Q:1 Objective Type Multiple Choice Questions:**1. Which of the following statement is also called as conditional statement?**

- a. for b. break c. if d. while

2. switch-case is similar to _____ statement

- a. if else b. if else if c. break d. goto

3. Which statement can be used to terminate a case in the switch statement?

- a. continue b. goto c. if d. break

4. Which of the following is an example of Post Test loop?

- a. for b. while c. do while d. continue

5. Which of the following is not a jumping statement?

- a. while b. continue c. goto d. break

Q:2 Fill in the Blanks:

- In _____ loops, the control conditions are tested before the body of loop
- In _____ loops, the control conditions are tested after the body of loop
- _____ statement is used to skip some statements inside the loop
- _____ is a multi-way conditional control statement
- The break statement can be used to terminate a case in the _____ statement.

Ans: 1. **Pre-Test** 2. **Post-Test** 3. **continue** 4. **Switch case** 5. **switch**

Q:3 Write True or False

- Writing if statement with-in another if is called Nested Loop.
- Control statements in C programming are used for altering the normal flow of a program.
- continue statement is sometimes desirable to skip some statements inside the loop?
- Looping statements provide a way to repeat commands?

Ans: I. **False** II. **True** III. **True** IV. **True**

Q:4 Short Answer Type Questions:**Q:1 Define Branching? Name its different control statements?**

Ans: Those control statements which are used for decision making purpose or for making multi-way selection in the program are called Branching Statements. These statements choose to follow one branch or another during execution in the program. Branching statements are of the following two types:

- Conditional Control Statements (if else)
- Multiway Conditional Control Statement (switch case)

Q:2 What is looping? Name three different types of looping statements?

Ans: Those control statements which are used to repeat a set of statements in the program are called looping statements. Looping statements are also called Iterative Statements. Following three looping statements are used in the C programming:

- for loop
- while loop
- do while loop

Q:3 What is nested if statement? Write its syntax?

Ans: When one if statement is used within another if statement, it is known as nested if statement. Syntax of nested if statement is shown in the figure.

```

if (test_condition_1)
{
    if (test_condition_2)
    {
        statements;
    }
}

```

Q:4 What is if-else statement? Write a program of if-else statement?

Ans: if else statement is a branching statement. It is used for decision making purpose in the C programs. Following program shows the usage of if else statement:

```
#include<stdio.h>
void main()
{
int marks=45;
    if(marks>=35)
        printf("Pass");
    else
        printf("Fail");
}
```

Output:
Pass

Q:5 What is while statement? Write its syntax?

Ans: while statement is a looping statement. It is used for repeating set of statements in the program. It is a type of pre-test loop in which test condition is tested before the execution of body of the loop. The syntax of the while statement is shown in the given figure.

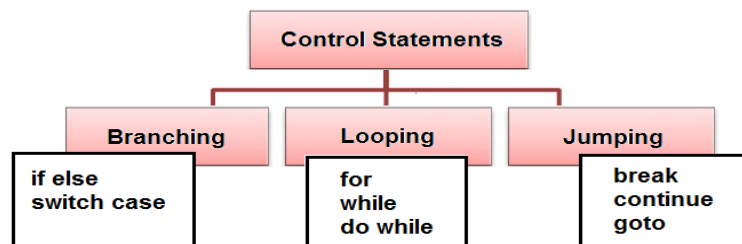
```
while (test_condition)
{
    statements;
}
```

Q:5 Long Answer Type Questions:

Q:1 What are Control Statements? Explain their types.

Ans: When a program executes line by line in the given sequence, it is called Sequential Execution of the program. We can control this execution flow in the program as per our requirements. Those statements that control the flow of execution of statements in the program are called Control Statements. These statements can be classified into following three categories:

- Branching Statements (if else and switch case)
- Looping Statements (for, while and do while)
- Jumping Statements (goto, break and continue)



Different Types of Control Statements in C

Q:2 What is for loop? What are the two different categories of loops?

Ans: Looping statements are also called Iterative Statements. Sometimes we face situations that require repeated execution of statements in the program. In such situations, loops help us to repeat statements in the program. Loops can be categorized into following two types:

- **Pre-Test Loops:** Pre-Test loops are also called Entry-Controlled loops. In these loops, test condition is tested before the body of the loop. ‘for’ and ‘while’ loops are the examples of pre-test loops.
- **Post-Test Loops:** Post-Test loops are also called Exit-Controlled loops. In these loops, test condition is tested after the body of the loop. ‘do while’ loop is an example of post-test loop.

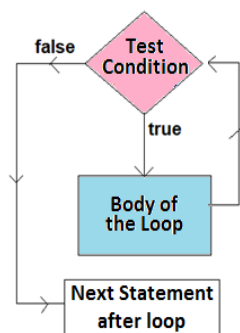


Fig: Pre-Test Loop

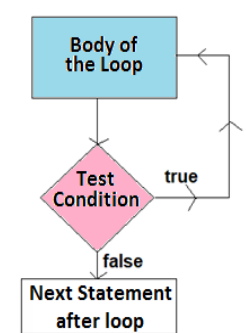
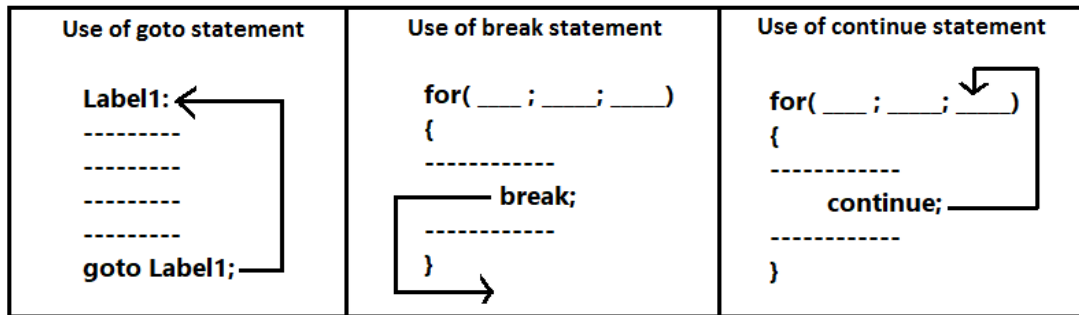


Fig: Post-Test Loop

Q:3 What is jumping statement? Explain its types?

Ans: Jumping statements in the C programming are used to change the normal execution flow of the program. We can transfer the execution flow from one location to some other location in the program. Following jumping statements are used in the C programming:

- **goto statement:** For using these statements, we have to use labels in the program. This statement transfers the execution control at the label specified after the goto statement.
- **break statement:** This statement is used to terminate the execution of a loop or switch statement and transfer the execution control immediately after the loop or switch statement.
- **continue statement:** Sometimes it is beneficial to skip statements in the loop. continue statement is used in such situations.



Q:4 What is do while loop? How it differs from while loop?

Ans: ‘do while’ loop is a post test loop. The ‘do while’ loop is the only loop which is known as the post-test loop in C programming. In ‘do while’ loop, test-condition is tested after the execution of body of the loop. In this loop, minimum number of executions for the body of the loop will be one. It is so because whenever this loop is executed for the first time, its body gets executed without executing the test-condition of the loop.

‘do while’ loop is different from the ‘while’ loop. ‘while’ loop is a pre-test loop in which test condition is tested before the execution of body of loop. The minimum number of executions for the body of the loop will be zero. It is so because whenever this loop is executed, its body can not be executed without executing the test-condition even once.

