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Covered Topics Under UNIT-3 of "PPS-PROGRAMMING FOR PROBLEM SOLVING (BCS101 / BCS201)"

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Class Notes

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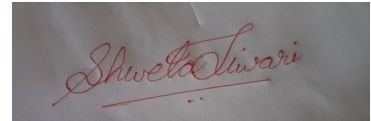
Iteration and Loop

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TOPIC On : UNIT-3: Difference between While Loop and do- While Loop in C

By SHWETA TIWARI
Under On: Iteration and Loop

PREPARED FOR
Engineering Students
All Engineering College

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Difference between while and do-while loop in C

while loop:

A while loop is a control flow statement that allows code to be executed repeatedly based on a given Boolean condition. The while loop can be thought of as a repeating if statement.

do-while loop:

do while loop is similar to while loop with the only difference that it checks for the condition after executing the statements, and therefore is an example of **Exit Control Loop**.

while loop vs do-while loop in C

Let's see some Comparison between the while loop and do-while loop in the C language

Sr.No	while loop	do-while loop
1.	While the loop is an entry control loop because firstly, the condition is checked, then the loop's body is executed.	The do-while loop is an exit control loop because in this, first of all, the body of the loop is executed then the condition is checked true or false.
2.	The statement of the while loop may not be executed at all.	The statement of the do-while loop must be executed at least once.
3.	The while loop terminates when the condition becomes false.	As long as the condition is true, the compiler keeps executing the loop in the do-while loop.

4.	In a while loop, the test condition variable must be initialized first to check the test condition in the loop.	In a do-while loop, the variable of test condition is initialized in the loop also.
5.	In a while loop, at the end of the condition, there is no semicolon. Syntax: while (condition)	In this, at the end of the condition, there is a semicolon. Syntax: while (condition);
6.	While loop is not used for creating menu-driven programs.	It is mostly used for creating menu-driven programs because at least one time; the loop is executed whether the condition is true or false.
7.	In a while loop, the number of executions depends on the condition defined in the while block.	In a do-while loop, irrespective of the condition mentioned, a minimum of 1 execution occurs.
8.	Syntax of while loop: while (condition) { Block of statements; } Statement-x;	Syntax of do-while loop: do { statements; } while (condition); Statement-x;

9.	<p>Program of while loop: Program of while loop:</p> <pre>#include #include Void main() { int i; clrscr(); i = 1; while(i<=10) { printf("hello"); i = i + 1; } getch(); }</pre>	<p>Program of do-while loop:</p> <pre>#include #include Void main() { int i; clrscr(); i = 1; do { printf("hello"); i = i + 1; } while(i<=10); getch(); }</pre>
10.	<p>Flowchart of while loop:</p>	<p>Flowchart of do-while loop:</p>

