

-: COURSE DETAILS:-

Course Title :- Programming  
Fundamentals.

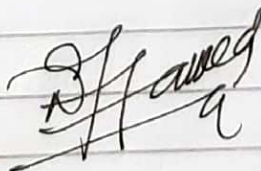
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Module :- 2<sup>nd</sup>

-: Student Details:-

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Q No. 1:- (A):-

Give 3 reasons why it's important to comment your code - What are the 2 different ways to comment in C++ and how are they different?

Ans:-

Reason 1:-

In an organization, we work in a team; there are many programmers who work on the same project. So, the well commented functions/logics are helpful to other programmers to understand the code better. They can easily understand the logic behind solving any problem.

Reason 2:-

If you see/edit code later, Comments may help you to memorize your logic that you have written while writing that code.

Reason 3:-

If we comments on code so the code will be organized easily.

↳ The two different ways to comment in C++ are given below:-

- ① Single-line comments
- ② Multi-line comments



↳ Differences between these two Comments.

↳ Sing-line Comments:-

Start with // and continue until the end of the line. If the last character in a comment line is a  | the comment will continue in the next line.

↳ Multi-line Comments.

Start with /\* and end with \*/.

Q NO 1:-

(B)

What are the two differ commands used to output a newline in C++?

Ans:- The two differ commands used to output a newline in C++ are given below:-

① \n                      ② endl

From both we can used to output a newline in C++.

QNO 1

①

Show the difference between IF-ELSE and nested IF condition?

IF-ELSE :-

IF-ELSE statements in C++ is used to control the program flow based on some condition, only the difference is: it's used to execute some statement code block if the expression is evaluated to true, otherwise executes else statements code block-

Nested IF:-

A Nested IF in C is an if statement that is the target of another if statement - Nested IF statement means an IF statement inside another IF statement -



QNO. 1

Q

What is a nested loop? Given a nested FOR loop example and the exact number of the times the loop will run-

Ans:-

Nested loops-

Nested loop means a loop statement inside another loop statement - that is why nested loops are also called "loop inside loop" -

Examples-

```
for (i = 0; i < Row; i++) {
```

```
    for (j = 0; j < col; j++)
```

```
        cout << matrix[i][j]
```

```
    cout << "\n";
```

Q NO. 2 :- Write a program (starting from #include) ..... Asimip run should appear on the screen like the text below.

Ans:-

```
#include <iostream>
using namespace std;
int main ( ) {
    int i;
    int a = 1;
    for (int s = 0; s < 10; s++) {
        cout << "Enter a number: ";
        cin >> i;
        if (i >= 0) {
            a = i * a;
        }
        else {
            break;
        }
    }
    cout << "The product of all your positive number
            is : " << a;
}
```



Output:-

Enter a number = 3

Enter a number = 4

Enter a number = 2

Enter a number = 1

Enter a number = -5

The product of all your positive numbers  
is : 24.

Q NO 3:-

The program below is supposed to compute the average of two numbers. The program compiles without error, but does not correctly ~~compute~~ compute the average.

(A):-

Ans:-

```
#include <iostream>
using namespace std;
void main () {

    int total = 0;
    cout << "Enter a number:";
    int a;
    cin >> a;
    total = total + a;
    cout << "Enter another number:";
    int b;
    cin >> b;
    total = total + b;

    double average = total / 2;

    cout << "The average is" << average << "\n";
}
```



↳ The problem is with the code of the programme as we can see that after  
`cin >> b;`

The `total = total + a;` In here the code does not add the number we entered for the integer `b` earlier in the result average does not have value of the `b` which leads us towards incorrect output.

↳ Part (B):-

The above code won't give us any result because the C++ language is case sensitive, As we can see that `in I` has a capital `I` while the loop contain a small `i` so the code won't run and will give us a error.