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Q.1 (a)

Ans: 3 Reasons:

(1) It helps a developer explain logic of the code.

(2) They are added with the purpose of making the source code easier for humans to understand

(3) These comments give the user an idea of how the code is working.

In C++ there are two types of comments

(1) Single line Comment :-
it is represent by //

(2) Multi-line Comment
it is represented by
/*any text*/ start with
forward slash and asterisk (/*)
and end with asterisk and
forward slash (*//)

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Q 1 (b)

Ans:

Method no 1:

To insert a new line you can use the \n character. Two \n characters after each other will create a blank line.

Method 2:

Another way to insert a new line, is with the endl manipulator.

Q: 1 C

Ans:-

if else statement: A conditional

structure that executes one block of statements if a certain condition is true, and a second block of statements if it is false. we refer to each block as a branch.

General Syntax:

```
if (<test>) {  
    <statement(s)>;  
}  
else {  
    <statement(s)>;  
}
```

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Example.

```
#include <stdio.h>
int main()
{
    // True if remainder is 0
    if (number % 2 == 0)
        printf("%d is a even integer.",
            number);
    else
        printf("%d is an odd integer.",
            number);
    return 0;
}
```

output:-

```
Enter an integer: 7
7 is an odd integer
```

Nested if else statement.

When an if else statement is present inside the body of another "if" or "else" then this is called nested if else.

Syntax of Nested if is:

= if (1st logical test, 1st value true,
if (2nd logical test, 2nd value
true, value false))

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example:-

```
#include <stdio.h>
int main ( )
{
    int num = 1;
    if (num < 10) {
        if (num == 1) {
            printf ("the value is : %d\n",
                num);
        }
        else {
            printf ("the value is greater than 10");
        }
    }
    return 0;
}
```

Q:1 d

Ans:- Nested loop:-

A nested loop is a loop within a loop an inner loop within the body of an outer one. then the second pass of the outer loop triggers the inner loop again. this repeats untill the outer loop finishes. of course, a break within either the inner or outer loop would interrupt this process.

Example:-

```
#include <iostream.h>
void main ( )
{
    int i, j;
    for (i=1; i<5; i++)
```

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```
{
    cout << "\n";
    for (i=1; i<i; i++)
        cout << "*";
    }
}
```

Q:2

Ans:

```
#include <iostream>
using namespace std;
int main ()
{
    int a [10];
    int temp;
    int counter = 0;
    int answer = 1;
    for (int i=0; i<10; i++)
    {
        cout << "enter number " << i+1 << ": ";
        cin >> temp;
        if (temp >= 0) {
            a [i] = temp;
            counter++;
        }
        else {
            break;
        }
    }
    for (int j=0; j<counter; j++)
    {
        answer = answer * a [j];
    }
    cout << answer;
    return 0;
}
```

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output:

```
enter number 1 : = 2
enter number 2 : = 3
enter number 3 : = 4
enter number 4 : = 5
enter number 5 : = 6
enter number 6 : = -1
```

72.0

Q.3 a

Ans = Correct Programme

```
#include <iostream>
using namespace std;
int main ( )
{
    float 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";
}
```

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output: -

enter a number; 15

enter another number; 10

average is; 12.5

Q3 (b)

Ans:-

output

= 32767