



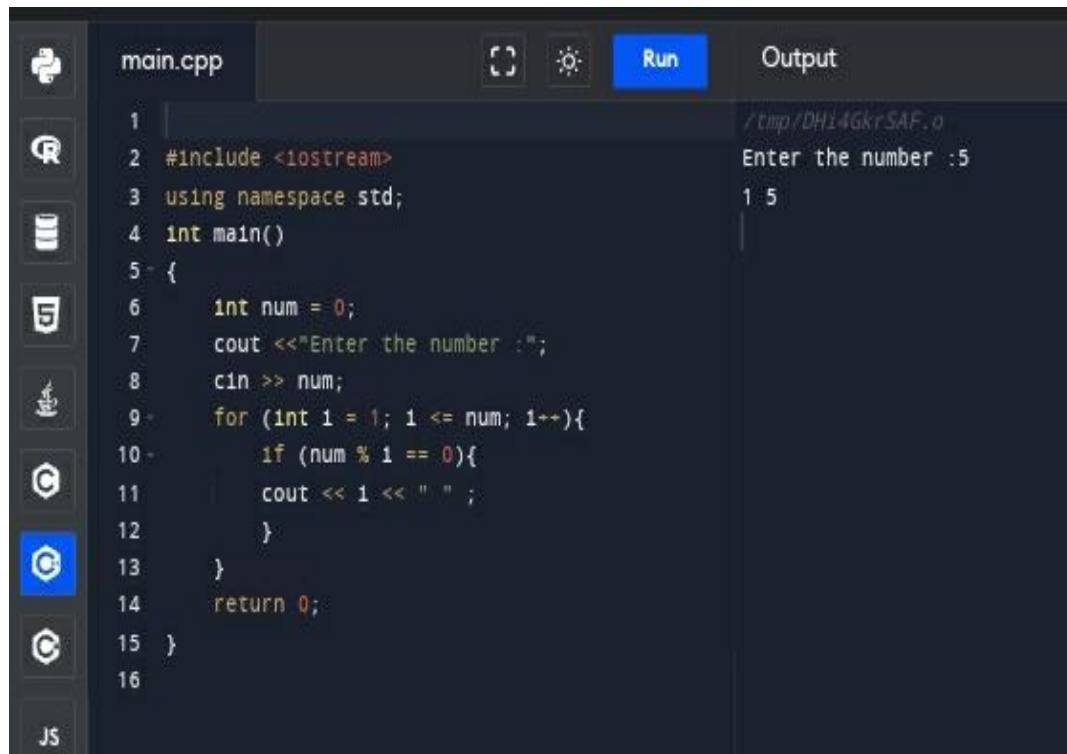
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**Class:480469 ©**

**Assignment no 1**

**Date:23 Nov 23**

## Q1



The screenshot shows a C++ IDE with a file named `main.cpp`. The code is as follows:

```
1 //tmp/DH14GkrSAF.o
2 #include <iostream>
3 using namespace std;
4 int main()
5 {
6     int num = 0;
7     cout << "Enter the number :";
8     cin >> num;
9     for (int i = 1; i <= num; i++){
10         if (num % i == 0){
11             cout << i << " ";
12         }
13     }
14     return 0;
15 }
```

The output window on the right shows the execution results:

```
Enter the number :5
1 5
```

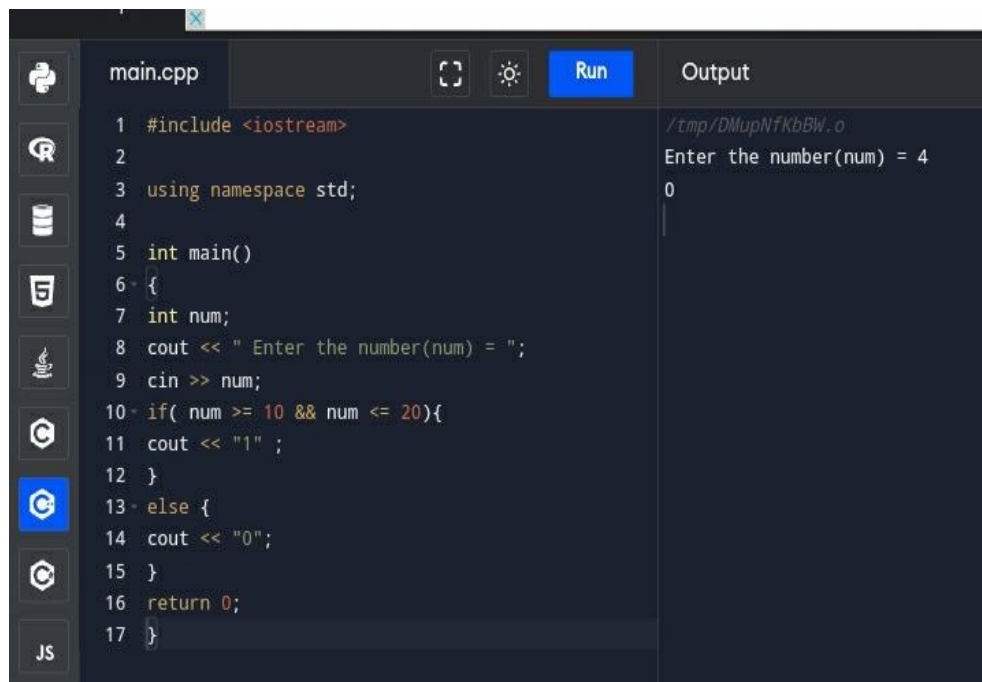
## Q2. Write output to the following code.

```
#include <iostream>
int main()
{
    int x = 5;
    int y = 10;
    if (x%5)
        if (y == 10) std::cout << "x is 5 and
        y is 10" << std::endl; else std::cout
        << "x is not 5" << std::endl;
    return 0;
}
```

## OUTPUT:

x is 5 and y is 10.

## Q3



The screenshot shows a C++ IDE with a file named `main.cpp`. The code in the editor is as follows:

```
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     int num;
8     cout << " Enter the number(num) = ";
9     cin >> num;
10    if( num >= 10 && num <= 20){
11        cout << "1" ;
12    }
13    else {
14        cout << "0";
15    }
16    return 0;
17 }
```

The IDE has a toolbar with icons for file operations, a `Run` button, and a settings icon. On the left, there is a sidebar with icons for various languages and tools, with C++ selected. On the right, the `Output` pane shows the program's execution:

```
/tmp/DMupNfKbBW.o
Enter the number(num) = 4
0
```

## Q4

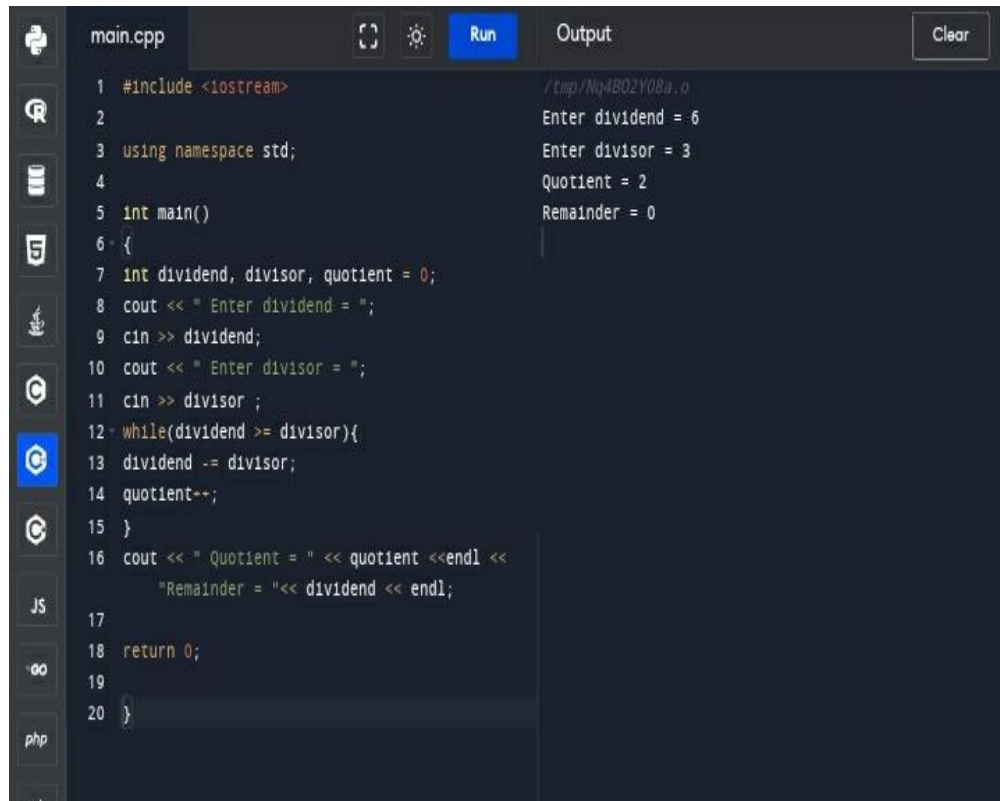
```
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     int N = 0;
8     cout << "Enter numbwer(N) = ";
9     cin >> N;
10    int count = 2;
11    int i = 1;
12    int largestPrime = 1;
13    bool isPrime = true;
14
15    while (count<=N) {
16
17        isPrime = true;
18        i = 2;
19        while (i<count && isPrime==true) {
20            if (!(count % i == 0)){
21                isPrime = true;
22            }
23            else
24            {
25                isPrime = false;
26            }
27            i++;
28        }
29        if (isPrime==true) {
30            largestPrime = count;
31        }
32        count++;
33    }
34    cout << "The largest prime number less than or
        equal to "<< N << " is "<< largestPrime <<
35    endl;
36    return 0;
37 }
```

Q5

```
main.cpp Run Output Clear
1 #include <iostream>
2 using namespace std;
3 int main()
4 {
5     const int SIZE = 100;
6     char str1[SIZE], str2[SIZE];
7     cout << "Enter the first string = ";
8     cin >> str1;
9     cout << "Enter the second string = ";
10    cin >> str2;
11
12    int i = 0;
13
14    while (str1[i] != '\0' && str2[i] != '\0' &&
        str1[i] == str2[i]) {
15        i--;
16    }
17    if (str1[i] == '\0' && str2[i] == '\0') {
18        int len = 0;
19        while (str1[len] != '\0') {
20            len--;
21        }
22        char temp = str1[0];
23        for (int j = 0; j < len - 1; j++) {
24            str1[j] = str1[j + 1];
25        }
26        str1[len - 1] = temp;
27        cout << "After rotation, the first string = "
            << str1 << endl;
28        cout << "The second string remains = " << str2
            << endl;
29    } else
30    {
31        cout << "The strings are not equal." << endl;
32    }
33    return 0;
34 }
```

/tmp/Nq4BO2Y08a.o  
Enter the first string = 5  
Enter the second string = 7  
The strings are not equal.

## Q6



The image shows a C++ IDE with a file named `main.cpp`. The code implements a program to calculate the quotient and remainder of two integers. It uses a `while` loop to repeatedly subtract the divisor from the dividend until the dividend is less than the divisor. The quotient is incremented for each subtraction, and the final dividend is the remainder.

```
1 #include <iostream>
2
3 using namespace std;
4
5 int main()
6 {
7     int dividend, divisor, quotient = 0;
8     cout << " Enter dividend = ";
9     cin >> dividend;
10    cout << " Enter divisor = ";
11    cin >> divisor ;
12    while(dividend >= divisor){
13        dividend -= divisor;
14        quotient++;
15    }
16    cout << " Quotient = " << quotient << endl <<
17         "Remainder = " << dividend << endl;
18    return 0;
19 }
20 }
```

The **Output** pane on the right shows the execution results:

```
/tmp/Nq4BOZY0Ba.o
Enter dividend = 6
Enter divisor = 3
Quotient = 2
Remainder = 0
```

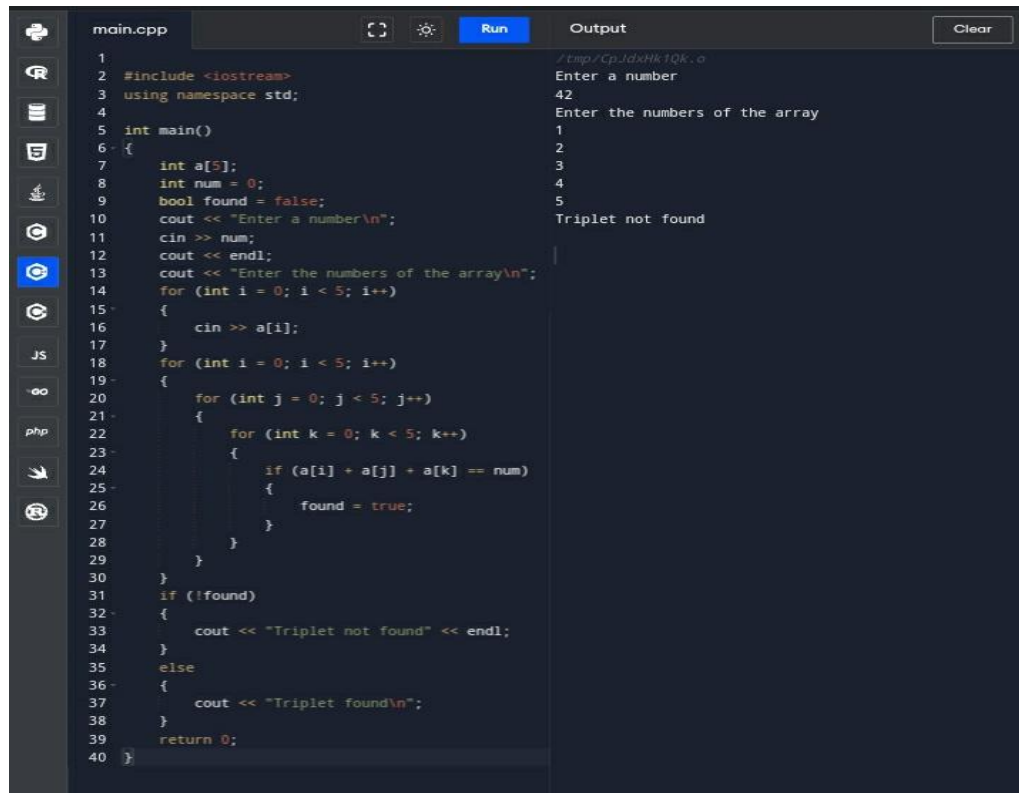
## Q 8

main.cpp	Run	Output
<pre>1 2 #include &lt;iostream&gt; 3 using namespace std; 4 int main() 5 { 6     int a[10] = { 1,2,3,4,5 }; 7     int num = 0; 8     for (int i = 0; i &lt;= 9; i++) 9     { 10         cin &gt;&gt; a[i]; 11     } 12     for (int i = 0; i &lt;= 9; i++) 13     { 14         cout&lt;&lt;a[i]&lt;&lt;endl; 15     } 16 } 17</pre>		<pre>/tmp/Nq4B02Y08a.o 12345</pre>

[Q7](#)

main.cpp	Run	Output	Clear
<pre>1 #include &lt;iostream&gt; 2 using namespace std; 3 int main() { 4     string input; 5     cout &lt;&lt; "Enter a string: "; 6     cin&gt;&gt; input ; 7 8     string result = ""; 9 10    for (char c : input) { 11        if (result.find(c) == string::npos) { 12            result += c; 13        } 14    } 15 16    cout &lt;&lt; "The string without         duplicatcharacters is: " &lt;&lt; result &lt;&lt;         endl; 17 18    return 0; 19 }</pre>		<pre>/tmp/veKnu8ZohR.o Enter a string: 6 The string without duplicatcharacters is: 6</pre>	

Q9



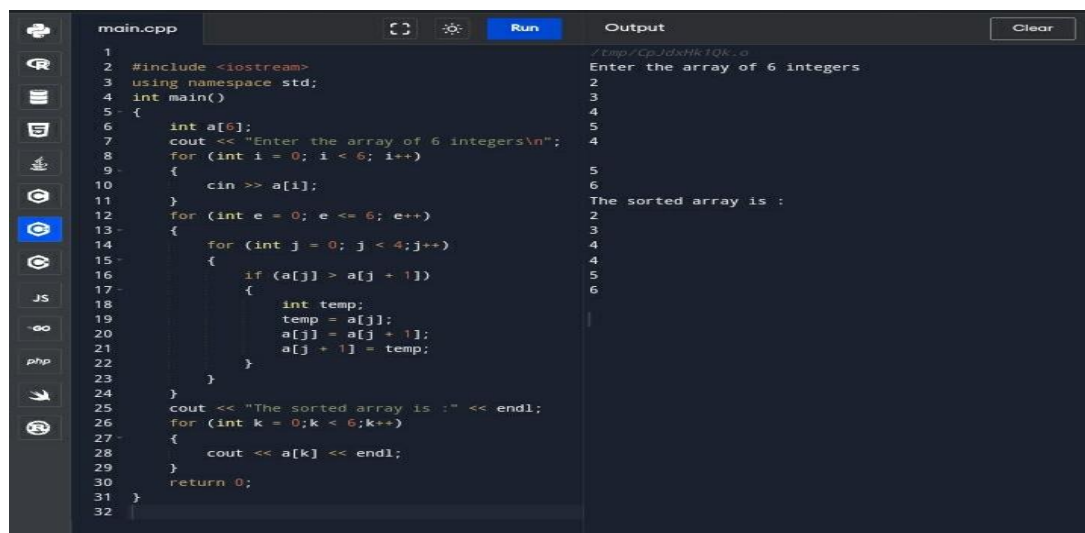
The screenshot shows a C++ IDE with a file named `main.cpp`. The code implements a function to find a triplet in an array that sums up to a given number. The output window shows the program's execution with user input and the resulting output.

```
1 //tmp/CpJdxHK1Qk.o
2 #include <iostream>
3 using namespace std;
4
5 int main()
6 {
7     int a[5];
8     int num = 0;
9     bool found = false;
10    cout << "Enter a number\n";
11    cin >> num;
12    cout << endl;
13    cout << "Enter the numbers of the array\n";
14    for (int i = 0; i < 5; i++)
15    {
16        cin >> a[i];
17    }
18    for (int i = 0; i < 5; i++)
19    {
20        for (int j = 0; j < 5; j++)
21        {
22            for (int k = 0; k < 5; k++)
23            {
24                if (a[i] + a[j] + a[k] == num)
25                {
26                    found = true;
27                }
28            }
29        }
30    }
31    if (!found)
32    {
33        cout << "Triplet not found" << endl;
34    }
35    else
36    {
37        cout << "Triplet found\n";
38    }
39    return 0;
40 }
```

Output:

```
Enter a number
42
Enter the numbers of the array
1
2
3
4
5
Triplet not found
```

Q10



The screenshot shows a C++ IDE with a file named `main.cpp`. The code implements a sorting algorithm (likely bubble sort) to sort an array of 6 integers. The output window shows the program's execution with user input and the resulting output.

```
1 //tmp/CpJdxHK1Qk.o
2 #include <iostream>
3 using namespace std;
4 int main()
5 {
6     int a[6];
7     cout << "Enter the array of 6 integers\n";
8     for (int i = 0; i < 6; i++)
9     {
10        cin >> a[i];
11    }
12    for (int e = 0; e <= 6; e++)
13    {
14        for (int j = 0; j < 4; j++)
15        {
16            if (a[j] > a[j + 1])
17            {
18                int temp;
19                temp = a[j];
20                a[j] = a[j + 1];
21                a[j + 1] = temp;
22            }
23        }
24    }
25    cout << "The sorted array is : " << endl;
26    for (int k = 0; k < 6; k++)
27    {
28        cout << a[k] << endl;
29    }
30    return 0;
31 }
32
```

Output:

```
Enter the array of 6 integers
2
3
4
5
6
The sorted array is :
2
3
4
4
5
6
```