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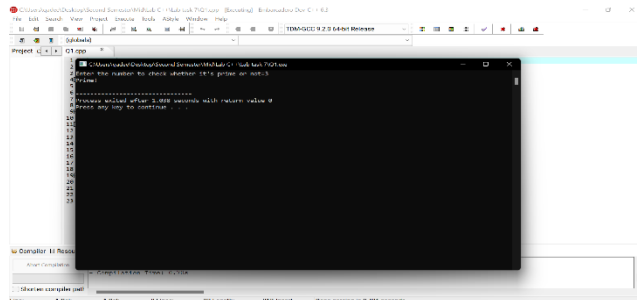
## LAB TASK 7

**Question 1: Write a program in which take an integer number as input from user and determine whether this number is prime or not.**

**Code:**

```
#include<iostream>
using namespace std;
int main()
{
    int a,b=2,counter=0;
    cout<<"Enter the number to check whether it's prime or not=";
    cin>>a;
    while(a>b)
    {
        if(a%b==0)
        {
            cout<<"Not prime!\n";
            counter++;
            break;
        }
        b++;
    }
    if(counter==0)
    {
        cout<<"Prime!\n";
    }
}
```

**Output:**

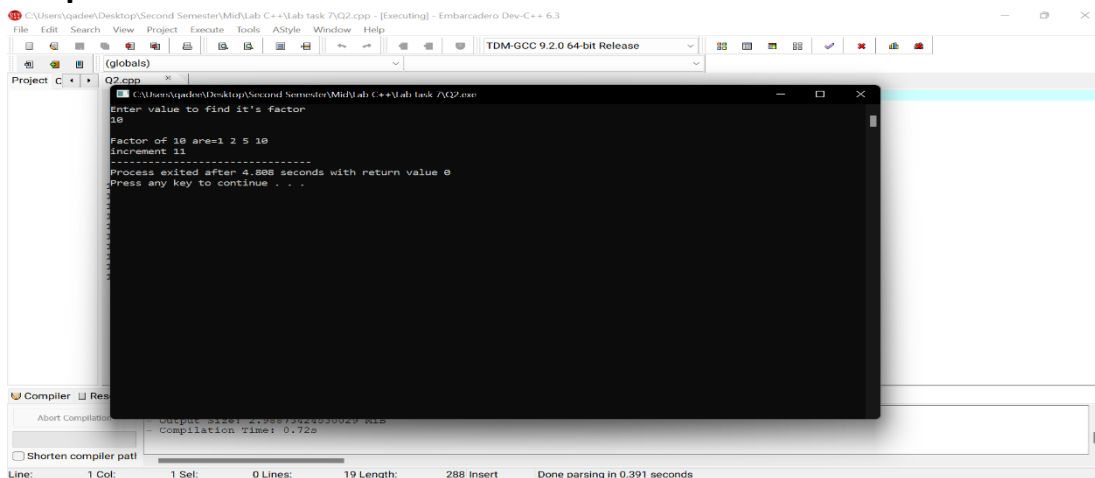
The screenshot shows a Windows IDE window titled 'TahaTanvir.cpp' with a C++ program. The program prompts the user to enter a number to check if it's prime. The user has entered '13'. The output window shows the program's execution, confirming that 13 is a prime number. The IDE interface includes a menu bar, a toolbar, and a status bar at the bottom showing line and column numbers.

**Question 2: Write a program in which take an integer number as input from user and find the factors of this number.**

**Code:**

```
#include<iostream>
using namespace std;
int main()
{
    int val1,i=1;
    cout<<"Enter value to find it's factor\n";
    cin>>val1;
    cout<<"\nFactor of "<<val1<<" are=";
    while(i<=val1)
    {
        if(val1%i==0)
        {
            cout<<i<<" ";
        }
        i++;
    }
    cout<<endl;
    cout<<"increment "<<i;
}
```

**Output:**

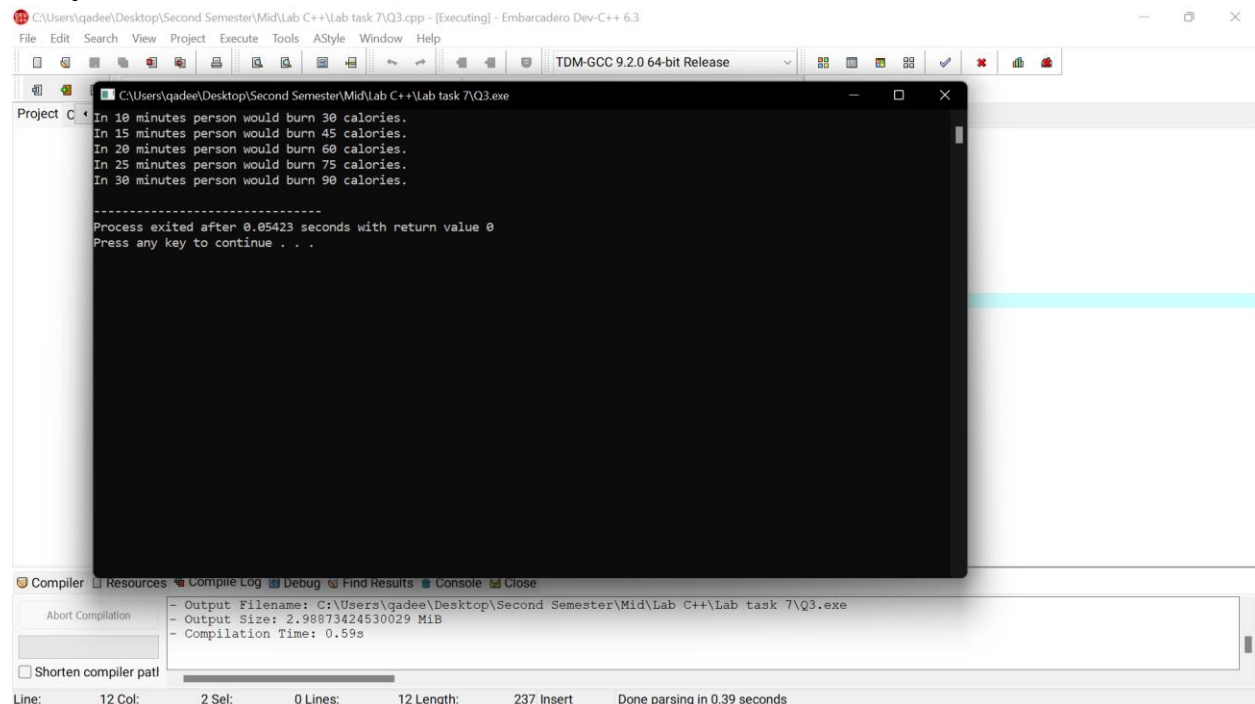
The screenshot shows a C++ IDE window titled "C:\Users\vpade\Desktop\Second Semester\Mid\Lab C++\Lab task 7\Q2.cpp - [Executing] - Embarcadero Dev-C++ 6.3". The IDE has a menu bar (File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, Help) and a toolbar. The main window displays the output of the program. The output text is: "Enter value to find it's factor\n10\nFactor of 10 are=1 2 5 10\nIncrement 11\n-----\nProcess exited after 4.888 seconds with return value 0\nPress any key to continue . . .". The IDE also shows a "Compiler" window at the bottom with the message "Compilation Time: 0.72s". The status bar at the bottom indicates "Line: 1 Col: 1 Sel: 0 Lines: 19 Length: 288 Insert Done parsing in 0.391 seconds".

**Question 3: Running on a particular treadmill you burn 3.6 calories per minute. Write a program that uses a loop to display the number of calories burned after 5, 10, 15, 20, 25, and 30 minutes.**

**Code:**

```
#include<iostream>
using namespace std;
int main()
{
    int caloriesburned,i=10,cal=3.6;
    while(i<=30)
    {
        caloriesburned=i*cal;
        cout<<"In "<<i<<" minutes person would burn "<<caloriesburned<<"
calories."<<endl;
        i=i+5;
    }
}
```

**Output:**



```
CAUsers\qadee\Desktop\Second Semester\Mid\Lab C++\Lab task 7\Q3.cpp - [Executing] - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 64-bit Release
C:\Users\qadee\Desktop\Second Semester\Mid\Lab C++\Lab task 7\Q3.exe
Project C++
In 10 minutes person would burn 36 calories.
In 15 minutes person would burn 54 calories.
In 20 minutes person would burn 72 calories.
In 25 minutes person would burn 90 calories.
In 30 minutes person would burn 108 calories.
-----
Process exited after 0.05423 seconds with return value 0
Press any key to continue . . .
Compiler Resources Compile Log Debug Find Results Console Close
Abort Compilation
Shorten compiler path
- Output Filename: C:\Users\qadee\Desktop\Second Semester\Mid\Lab C++\Lab task 7\Q3.exe
- Output Size: 2.98873424530029 MiB
- Compilation Time: 0.59s
Line: 12 Col: 2 Sel: 0 Lines: 12 Length: 237 Insert Done parsing in 0.39 seconds
```

**Question 4: Write a program in which you have to implement simple Arithmetic Calculator that is always ready to take input from user and perform selected operation (+,-,\*,/) on given operands.**

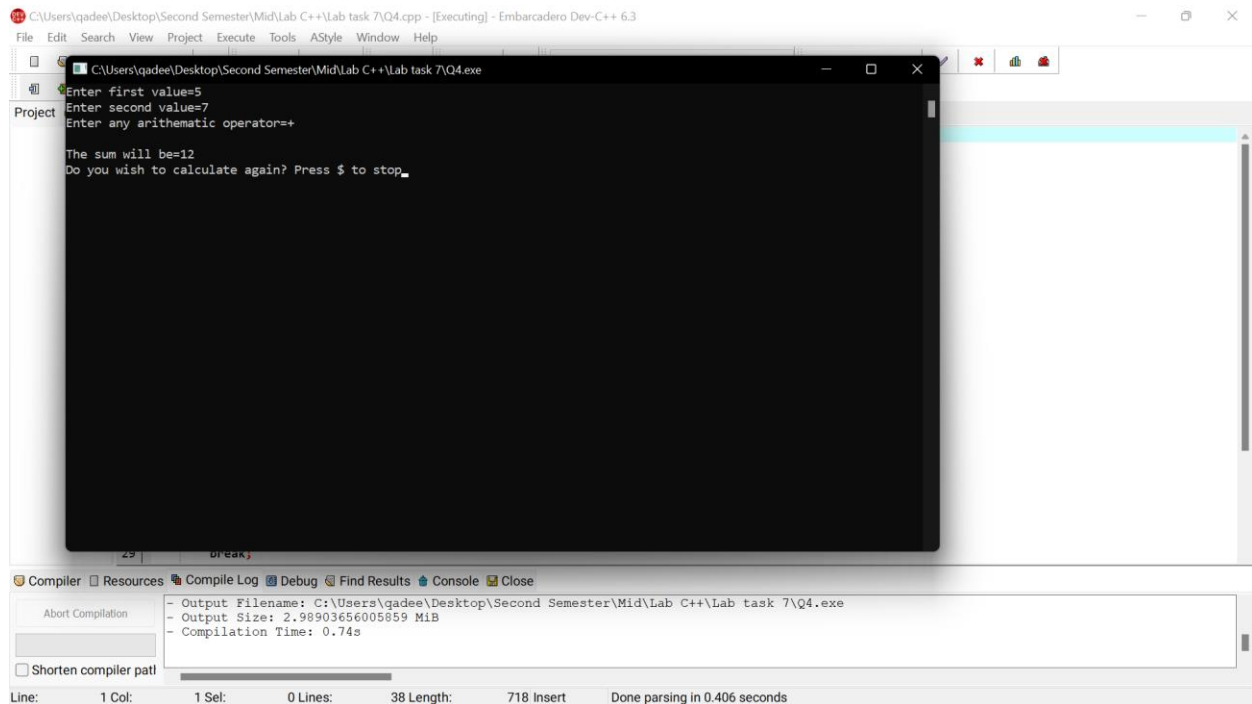
**Code:**

```
#include<iostream>
using namespace std;
int main()
{
    int val1,val2;
    char ch='a',op;
    cout<<"Enter first value=";
    cin>>val1;
    cout<<"Enter second value=";
    cin>>val2;
    cout<<"Enter any arithmetic operator=";
    cin>>op;

    while(ch!='$')
    {
        switch(op)
        {
            case '+':
                cout<<"\nThe sum will be="<<val1+val2;
                break;
            case '-':
                cout<<"\nThe subtract will be="<<val1-val2;
                break;
            case '*':
                cout<<"\nThe product will be="<<val1*val2;
                break;
            case '/':
                cout<<"\nThe division will be="<<val1/val2;
                break;
            default:
                cout<<"invalid input";
        }
        cout<<"\nDo you wish to calculate again? Press $ to stop";
        cin>>ch;
    }
    cout<<"\nCalculator is stopped Thank you!!";
```

```
}
```

## Output:



**Question 5: Write a program to find LCM of a number given by user, by using do while loop.**

### Code:

```
#include <iostream>
using namespace std;
int main()
{
    int val1, val2, max;

    cout << "Enter two numbers: ";
    cin >> val1 >> val2;
    max = (val1 > val2) ? val1 : val2;
    do
    {
        if (max % val1 == 0 && max % val2 == 0)
        {
            cout << "LCM = " << max;
            break;
        }
    }
}
```

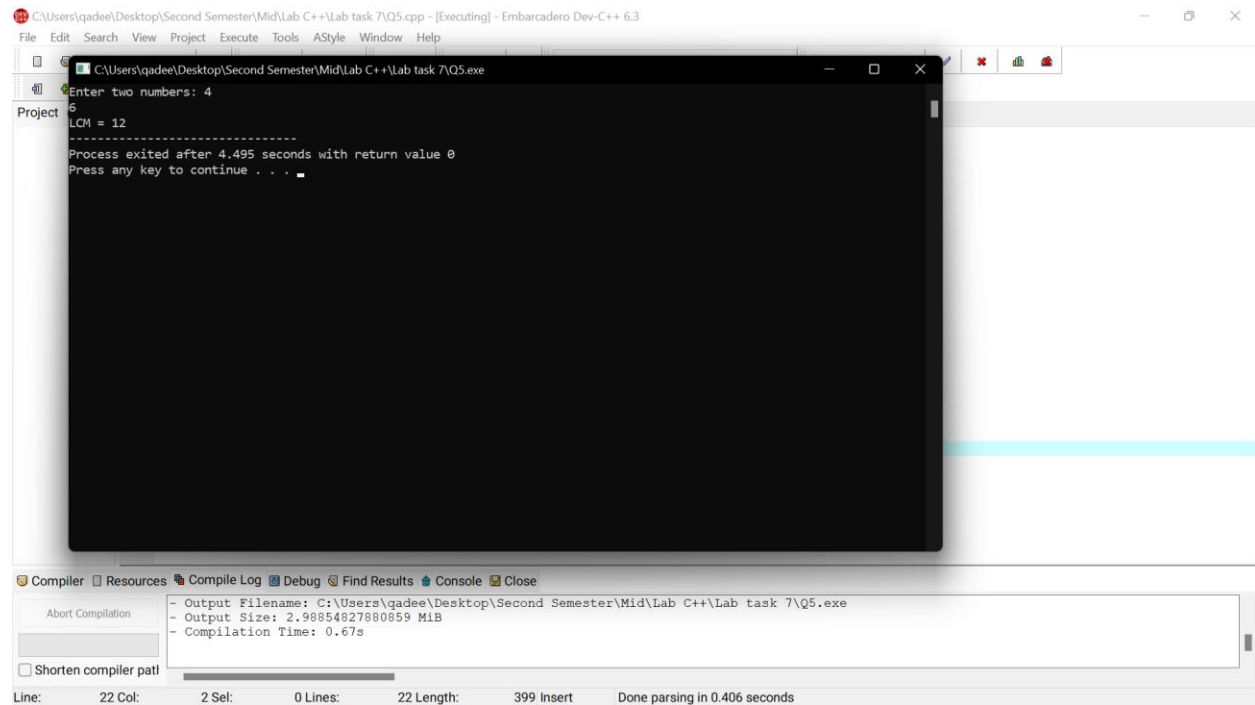
```

    }
    else
        ++max;
} while (true);

return 0;
}

```

### Output:



**Question 6: Write a program to find upper half diamond of stars.**

### Code:

```

#include<iostream>
using namespace std;
int main()
{
    int a,k,i,j;
    cout<<"Enter number of rows: ";
    cin>> a;
    for(i=1;i<=a;i++)
    {
        for(k=i;k<a;k++)
        {
            cout <<" ";

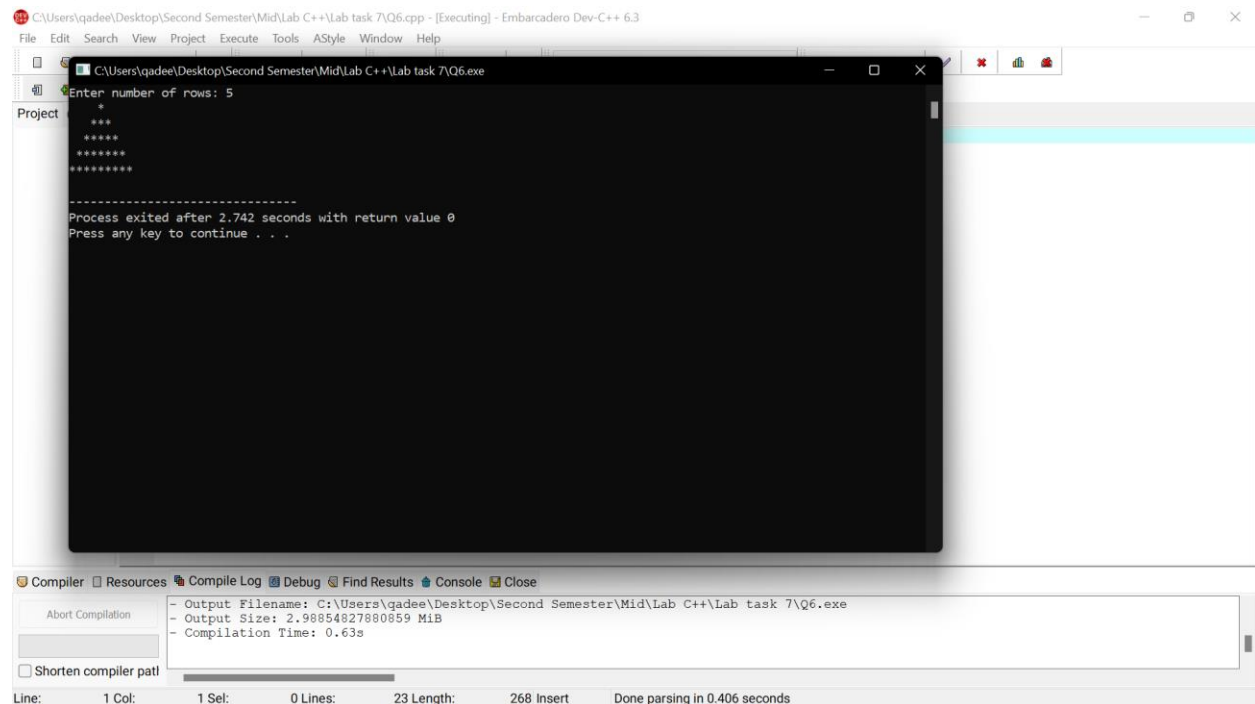
```

```

    }
    for(j=1;j<=(2*i-1);j++)
    {
        cout << "*";
    }
    cout << "\n";
}
}

```

### Output:



**Question 7: Write a program to form right triangle of alphabets. Just as follows.**

### Code:

```

#include<iostream>
using namespace std;
int main()
{
    int a = 6;
    for (int i = 0; i < 6; i++)
    {
        for (int s=0;s<i+1;s++)
        {
            cout<<char(i + 65);
        }
    }
}

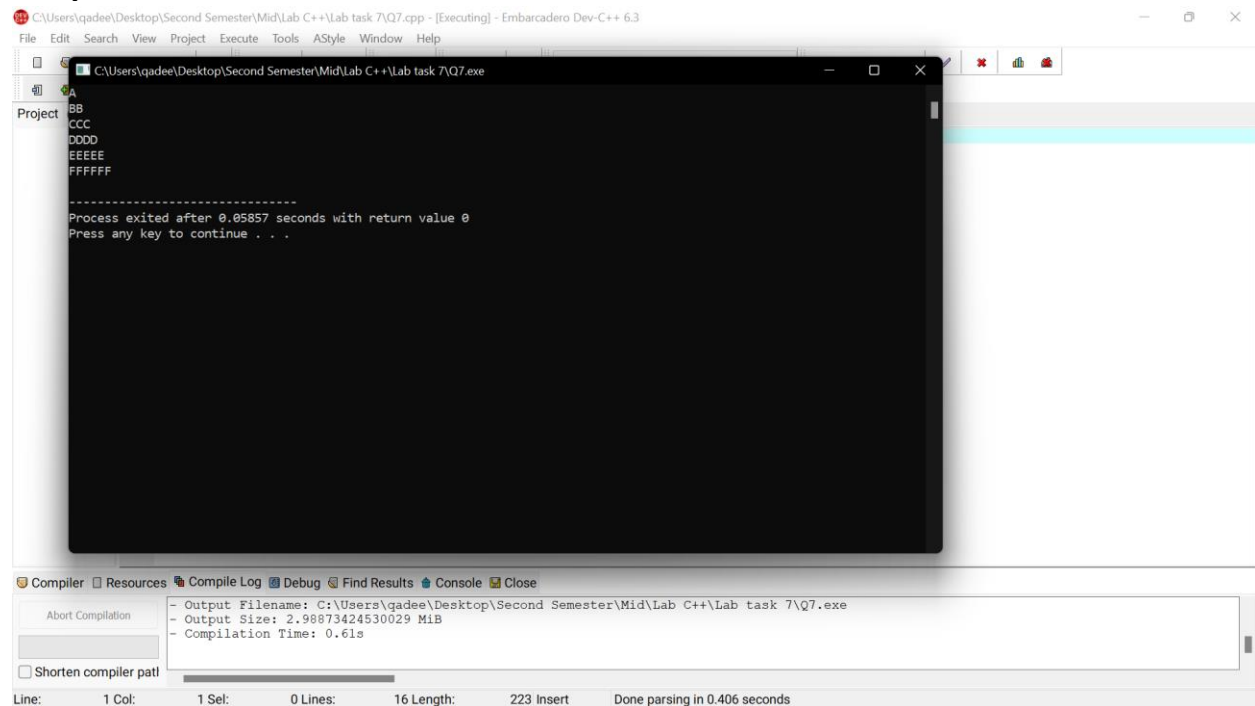
```

```

a--;
cout<<endl;
}
}

```

### Output:



**Question 8: Write a program in which print stars in descending order.**

### Code:

```

#include<iostream>
using namespace std;
int main()
{
    int i, k, a;
    cout<<"How many rows you want to enter=";
    cin>>a;
    cout<<endl;
    for(i=a;i>=1;i--)
    {
        for(k=1;k<(i*2);k++)
        {
            cout<<"*";
        }
        cout<<"\n";
    }
}

```



**Output:**

### Output:



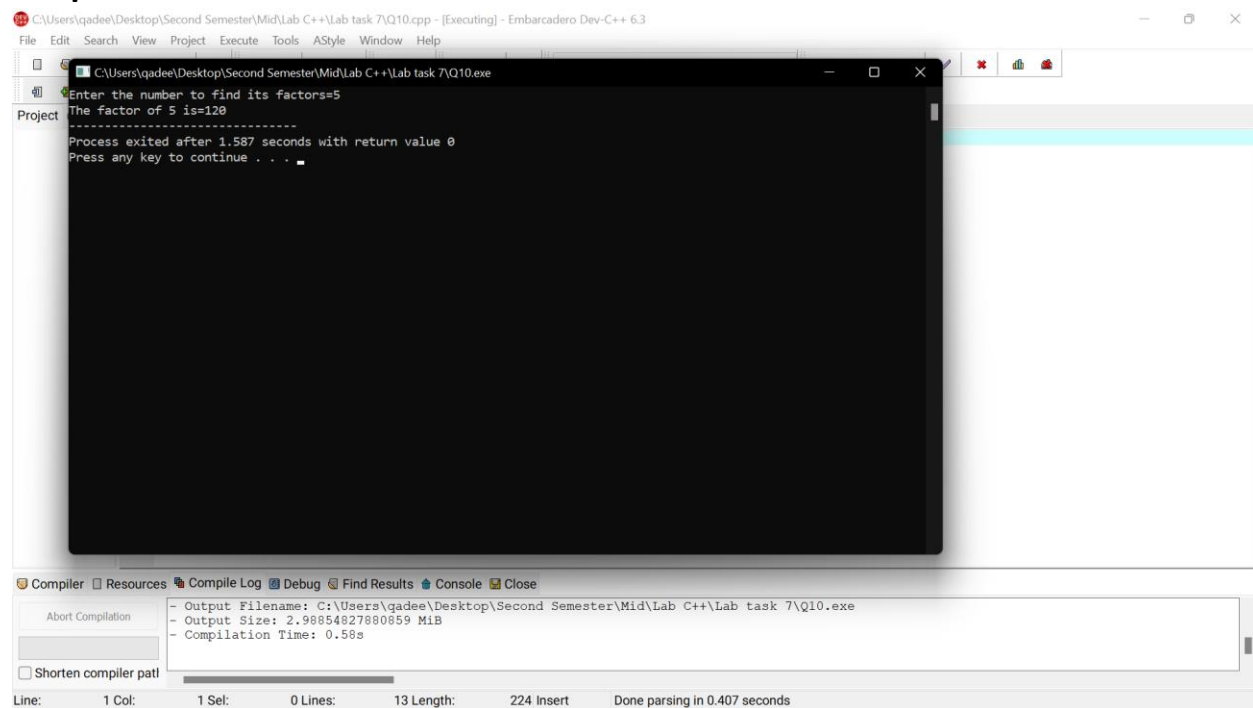
```
#include<iostream>
using namespace std;
int main()
{
```

```

    int y,fact=1;
    cout<<"Enter the number to find its factors=";
    cin>>y;
    for(int x=1;x<=y;x++)
    {
        fact=fact*x;
    }
    cout<<"The factor of "<<y<<" is"<<fact;
}

```

## Output:



**Question 11: Write a program in which take input a value from user and print it in reverse order as follows. Input: 321654 Output: 456123.**

## Code:

```

#include <iostream>
using namespace std;
int main()
{
    int n, reverse=0, rem;
    cout<<"Enter a number= ";
    cin>>n;
    while(n!=0)

```

```
{  
    rem=n%10;  
    reverse=reverse*10+rem;  
    n=n/10;  
}  
cout<<"Reversed Number= "<<reverse<<endl;  
}
```

## Output:

