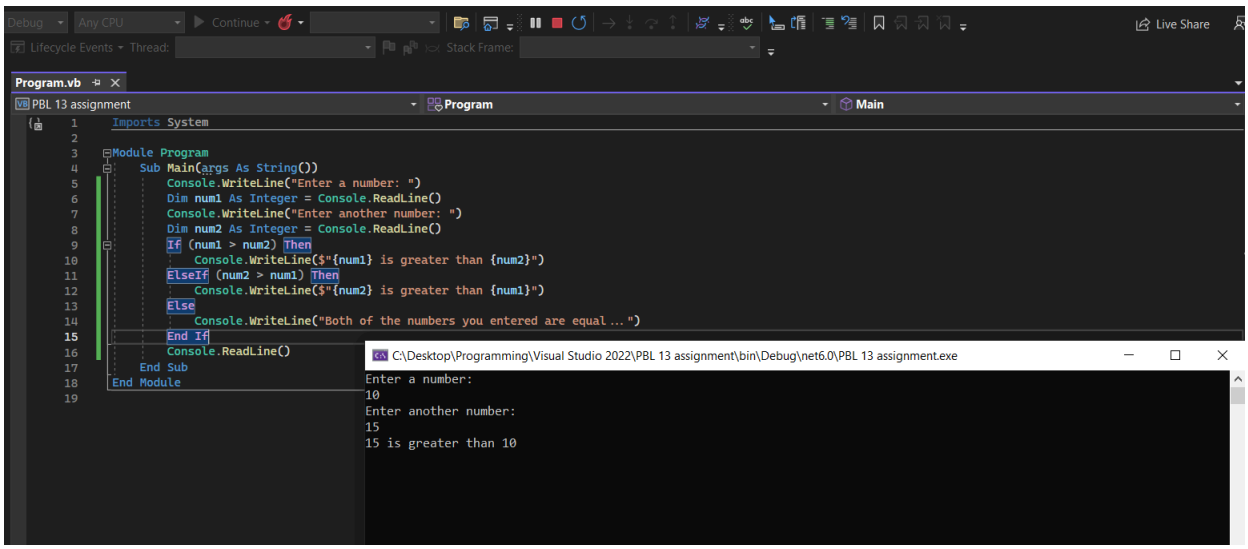
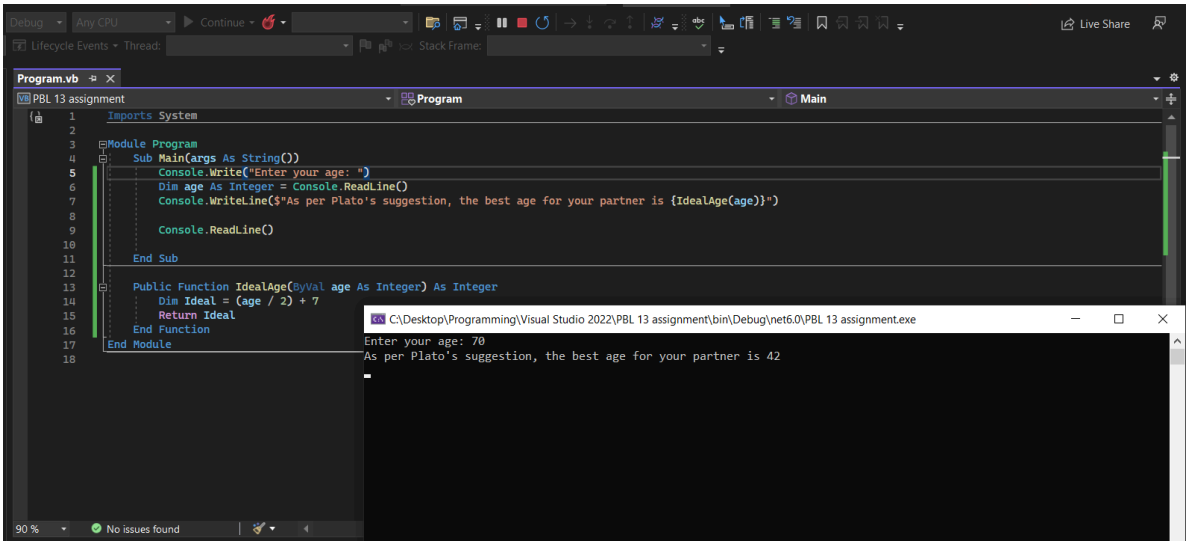
PBL 13 – Functions

1. Write a program that uses a function called *Min* that returns the smallest of two integers.

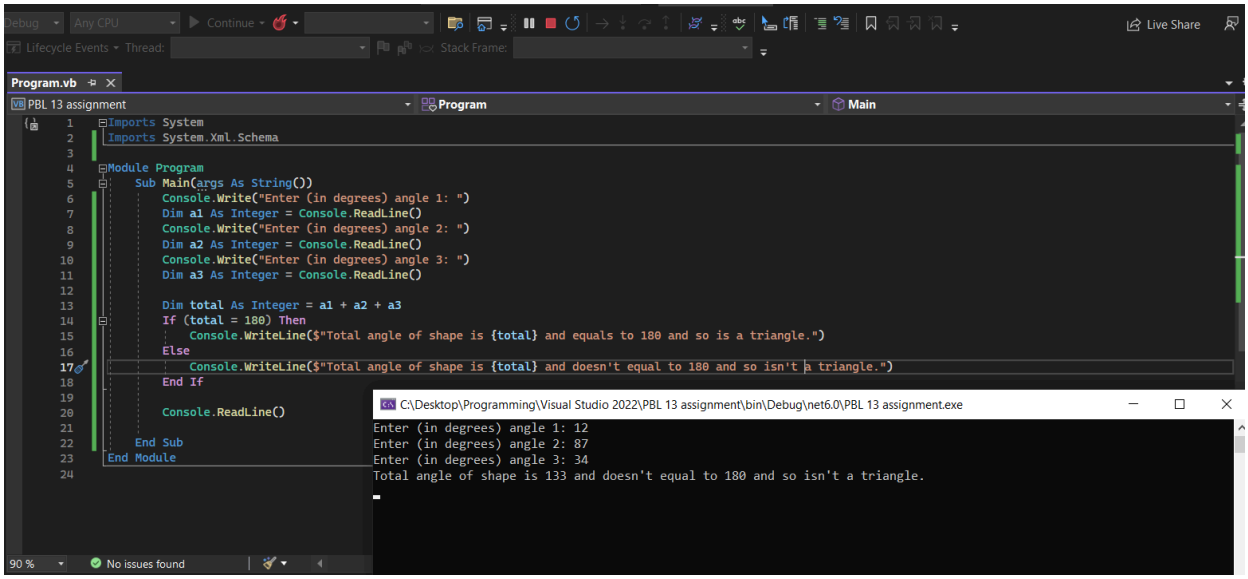


2. According to Plato, a man should marry a woman whose age is half his age plus seven years. Write a program that requests a man's age as input and gives the ideal age of his wife. The function *IdealAge* will accept the man's age as the parameter and returns the ideal age of wife.



3. To check a Triangle, the program reads three angles as real numbers, checks by adding the angles to confirm that their sum is equal to 180 degrees.

   Write the function *Triangle* that takes the three angles as parameters and return a Boolean result.

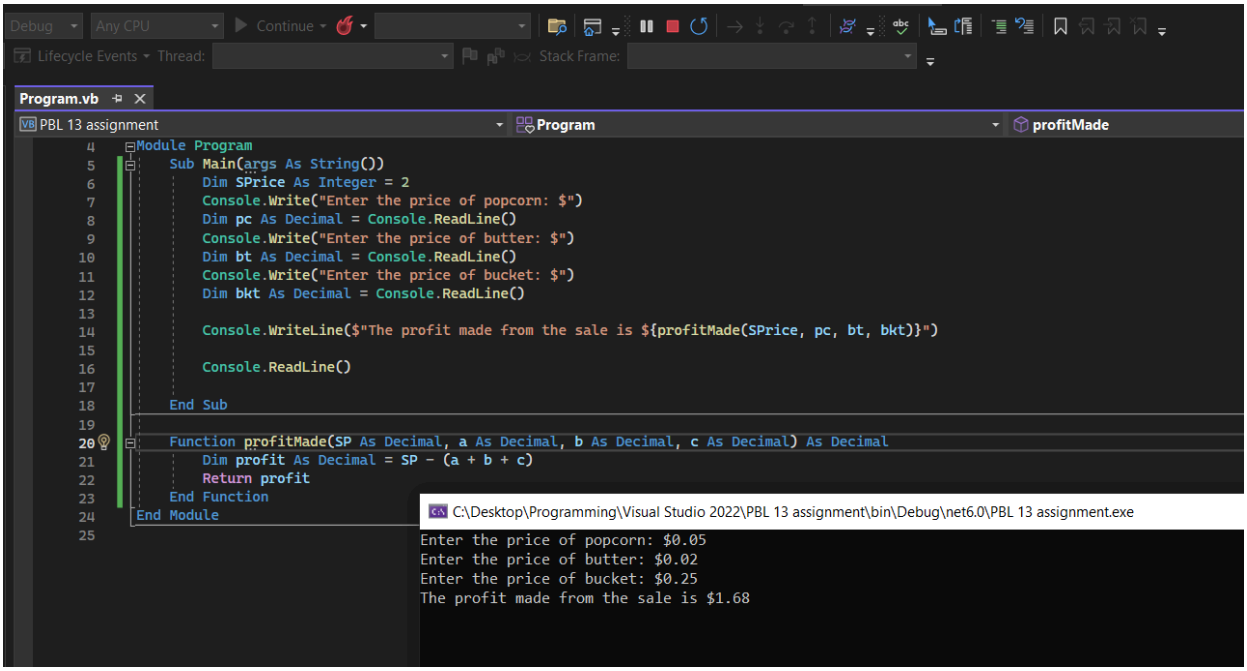


```
Imports System
Imports System.Xml.Schema

Module Program
    Sub Main(args As String())
        Console.Write("Enter (in degrees) angle 1: ")
        Dim a1 As Integer = Console.ReadLine()
        Console.Write("Enter (in degrees) angle 2: ")
        Dim a2 As Integer = Console.ReadLine()
        Console.Write("Enter (in degrees) angle 3: ")
        Dim a3 As Integer = Console.ReadLine()

        Dim total As Integer = a1 + a2 + a3
        If (total = 180) Then
            Console.WriteLine($"Total angle of shape is {total} and equals to 180 and so is a triangle.")
        Else
            Console.WriteLine($"Total angle of shape is {total} and doesn't equal to 180 and so isn't a triangle.")
        End If

        Console.ReadLine()

    End Sub
End Module
```

```
C:\Desktop\Programming\Visual Studio 2022\PBL 13 assignment\bin\Debug\net6.0\PBL 13 assignment.exe
Enter (in degrees) angle 1: 12
Enter (in degrees) angle 2: 87
Enter (in degrees) angle 3: 34
Total angle of shape is 133 and doesn't equal to 180 and so isn't a triangle.
```

4. The three ingredients for a serving of popcorn at a movie theater are popcorn, butter substitute, and a bucket. Write a program that requests the cost of these three items and the price of the serving as input and then displays the profit.

   (Test the program where the popcorn costs 5 cents, butter substitute costs 2 cents, the bucket costs 25 cents, and the selling price is $2The function *Costing* will accept the cost and price as parameters



```
Module Program
    Sub Main(args As String())
        Dim SPrice As Integer = 2
        Console.Write("Enter the price of popcorn: $")
        Dim pc As Decimal = Console.ReadLine()
        Console.Write("Enter the price of butter: $")
        Dim bt As Decimal = Console.ReadLine()
        Console.Write("Enter the price of bucket: $")
        Dim bkt As Decimal = Console.ReadLine()

        Console.WriteLine($"The profit made from the sale is ${profitMade(SPrice, pc, bt, bkt)}")

        Console.ReadLine()

    End Sub

    Function profitMade(SP As Decimal, a As Decimal, b As Decimal, c As Decimal) As Decimal
        Dim profit As Decimal = SP - (a + b + c)
        Return profit
    End Function
End Module
```

```
C:\Desktop\Programming\Visual Studio 2022\PBL 13 assignment\bin\Debug\net6.0\PBL 13 assignment.exe
Enter the price of popcorn: $0.05
Enter the price of butter: $0.02
Enter the price of bucket: $0.25
The profit made from the sale is $1.68
```

and returns the profit amount.