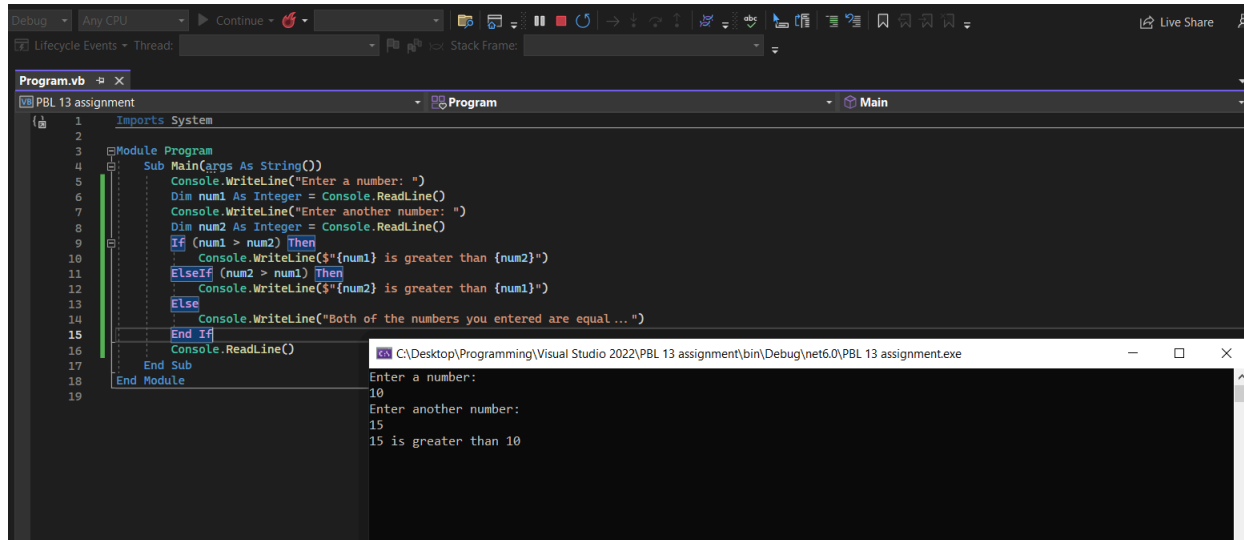


PBL 13 – Functions

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

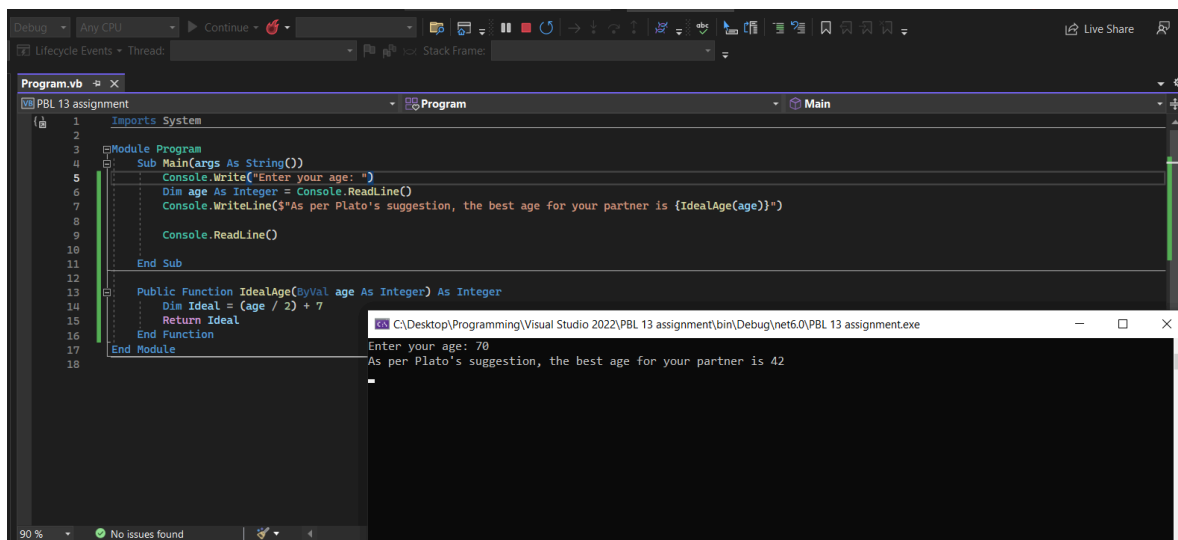


```
1 Imports System
2
3 Module Program
4     Sub Main(args As String())
5         Console.WriteLine("Enter a number: ")
6         Dim num1 As Integer = Console.ReadLine()
7         Console.WriteLine("Enter another number: ")
8         Dim num2 As Integer = Console.ReadLine()
9         If (num1 > num2) Then
10            Console.WriteLine($"{num1} is greater than {num2}")
11        ElseIf (num2 > num1) Then
12            Console.WriteLine($"{num2} is greater than {num1}")
13        Else
14            Console.WriteLine("Both of the numbers you entered are equal...")
15        End If
16        Console.ReadLine()
17    End Sub
18 End Module
```

Output:

```
Enter a number:
10
Enter another number:
15
15 is greater than 10
```

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.



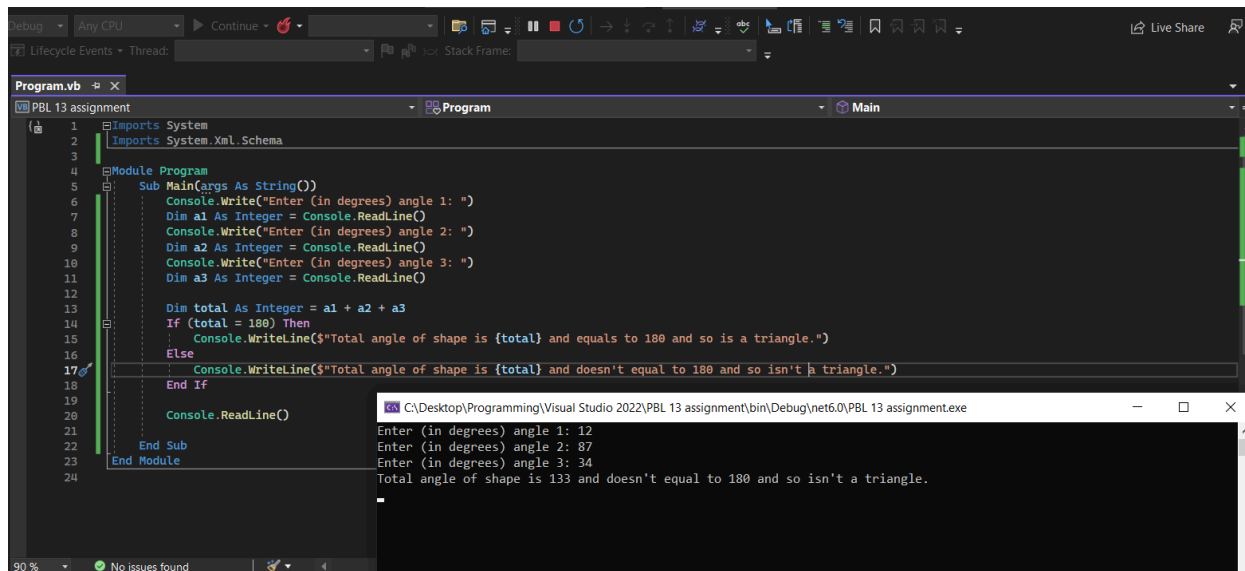
```
1 Imports System
2
3 Module Program
4     Sub Main(args As String())
5         Console.WriteLine("Enter your age: ")
6         Dim age As Integer = Console.ReadLine()
7         Console.WriteLine($"As per Plato's suggestion, the best age for your partner is {IdealAge(age)}")
8         Console.ReadLine()
9     End Sub
10
11 Public Function IdealAge(ByVal age As Integer) As Integer
12     Dim Ideal = (age / 2) + 7
13     Return Ideal
14 End Function
15 End Module
```

Output:

```
Enter your age: 70
As per Plato's suggestion, the best age for your partner is 42
```

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.



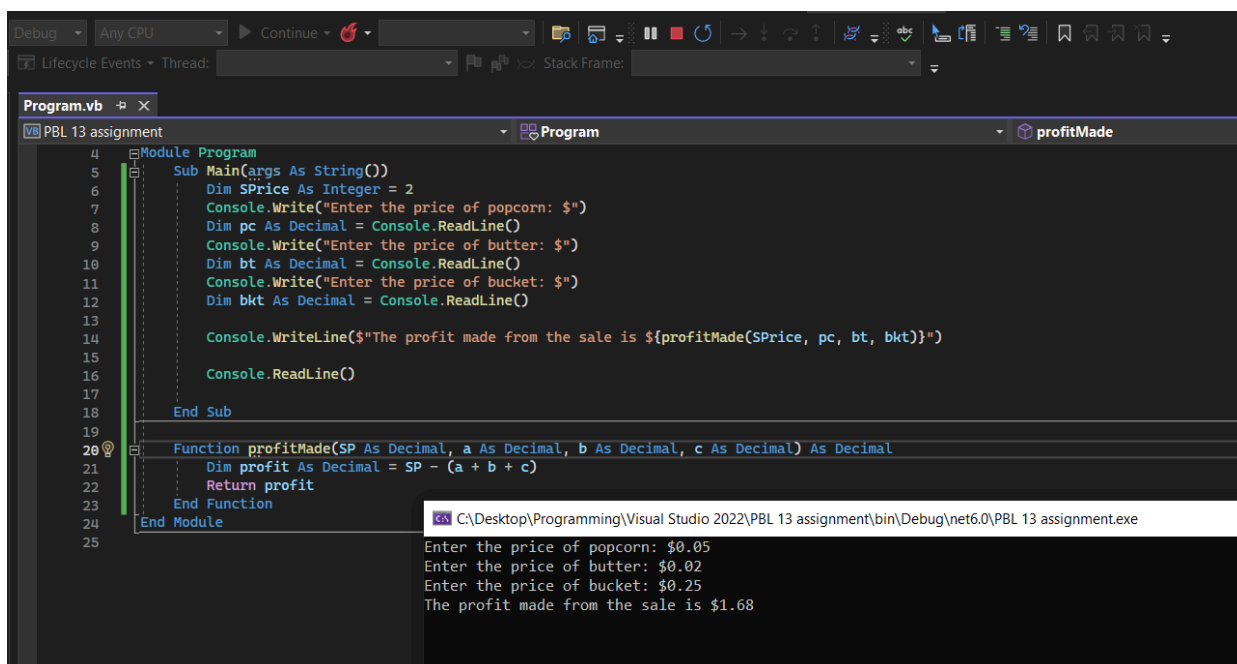
```
1 Imports System
2 Imports System.Xml.Schema
3
4 Module Program
5     Sub Main(args As String())
6         Console.WriteLine("Enter (in degrees) angle 1: ")
7         Dim a1 As Integer = Console.ReadLine()
8         Console.WriteLine("Enter (in degrees) angle 2: ")
9         Dim a2 As Integer = Console.ReadLine()
10        Console.WriteLine("Enter (in degrees) angle 3: ")
11        Dim a3 As Integer = Console.ReadLine()
12
13        Dim total As Integer = a1 + a2 + a3
14        If (total = 180) Then
15            Console.WriteLine($"Total angle of shape is {total} and equals to 180 and so is a triangle.")
16        Else
17            Console.WriteLine($"Total angle of shape is {total} and doesn't equal to 180 and so isn't a triangle.")
18        End If
19
20        Console.ReadLine()
21    End Sub
22 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



```
4 Module Program
5     Sub Main(args As String())
6         Dim SPrice As Integer = 2
7         Console.WriteLine("Enter the price of popcorn: $")
8         Dim pc As Decimal = Console.ReadLine()
9         Console.WriteLine("Enter the price of butter: $")
10        Dim bt As Decimal = Console.ReadLine()
11        Console.WriteLine("Enter the price of bucket: $")
12        Dim bkt As Decimal = Console.ReadLine()
13
14        Console.WriteLine($"The profit made from the sale is ${profitMade(SPrice, pc, bt, bkt)}")
15
16        Console.ReadLine()
17    End Sub
18
19
20 Function profitMade(SP As Decimal, a As Decimal, b As Decimal, c As Decimal) As Decimal
21     Dim profit As Decimal = SP - (a + b + c)
22     Return profit
23 End Function
24 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.