Visual Programming - 20INMCA306
AND
Visual Programming Lab - 20INMCA334

Topic : Prime Number Checker

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Problem Statement

Create a Visual Basic application that allows users to input a number and determine whether it is a prime number. A prime number is defined as a natural number greater than 1 that has no divisors other than 1 and itself. The application should take user input, perform calculations, and display the result accordingly.

Logic For Prime Number Checker

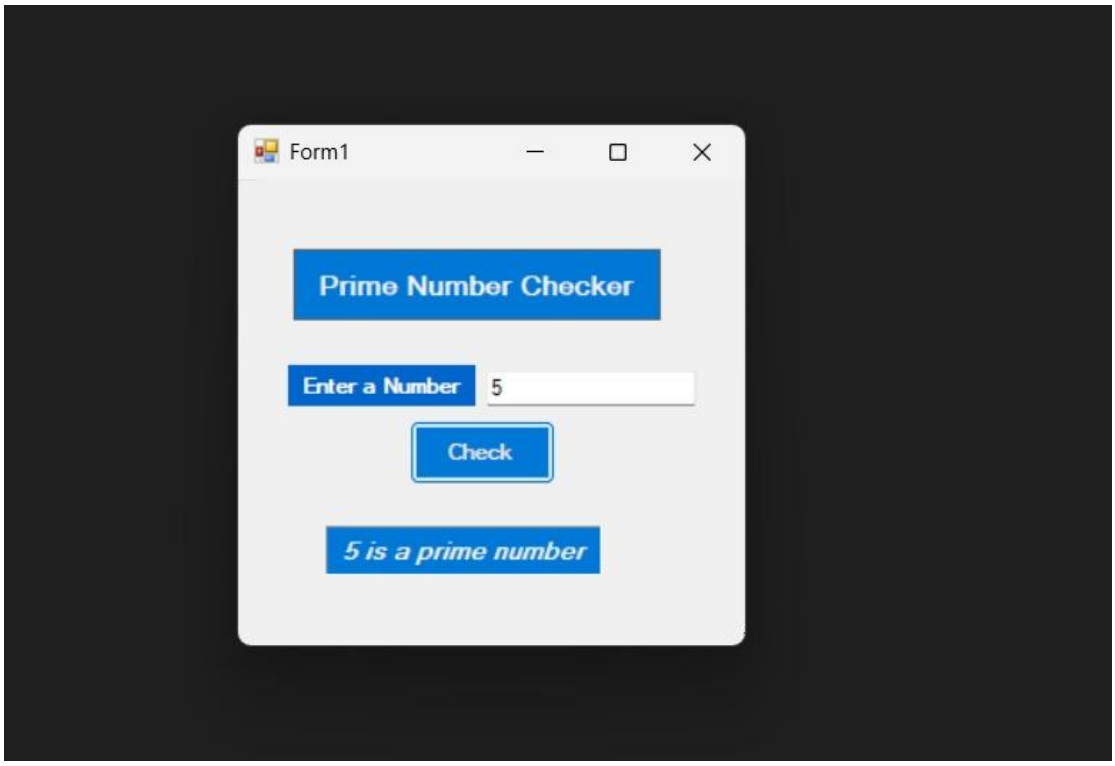
The program takes input from the user through a text box and converts it into a numerical value. It then initializes a counter (s) to keep track of how many numbers divide the input number completely (i.e., without a remainder). A loop runs from 1 to the given number, checking if the number is divisible by i using the modulus (Mod) operator. If the number is divisible, the counter is incremented. After the loop, the program evaluates the counter: if it equals 2 (meaning the number is only divisible by 1 and itself), the number is prime; otherwise, it is not. The result is then displayed on a label.

Code Implementation

```
Public Class Form1
Private Sub Button1_Click(sender As Object, e As EventArgs) Handles Button1.Click
Dim i, s As Integer
Dim num As Decimal
s = 0
num = TextBox1.Text
For i = 1 To num
If num Mod i = 0 Then
s = s + 1
End If
Next
If s = 2 Then
Label2.Text = num & " is a prime number"
Else
Label2.Text = num & " is not a prime number"
End If
End Sub


End Class
```

Output



Result : : The question have been successfully executed and the output is verified