

Universidad Rafael Landívar

Facultad de Ingeniería

Ingeniería en Informática y Sistemas

Pensamiento Computacional, Sección 08

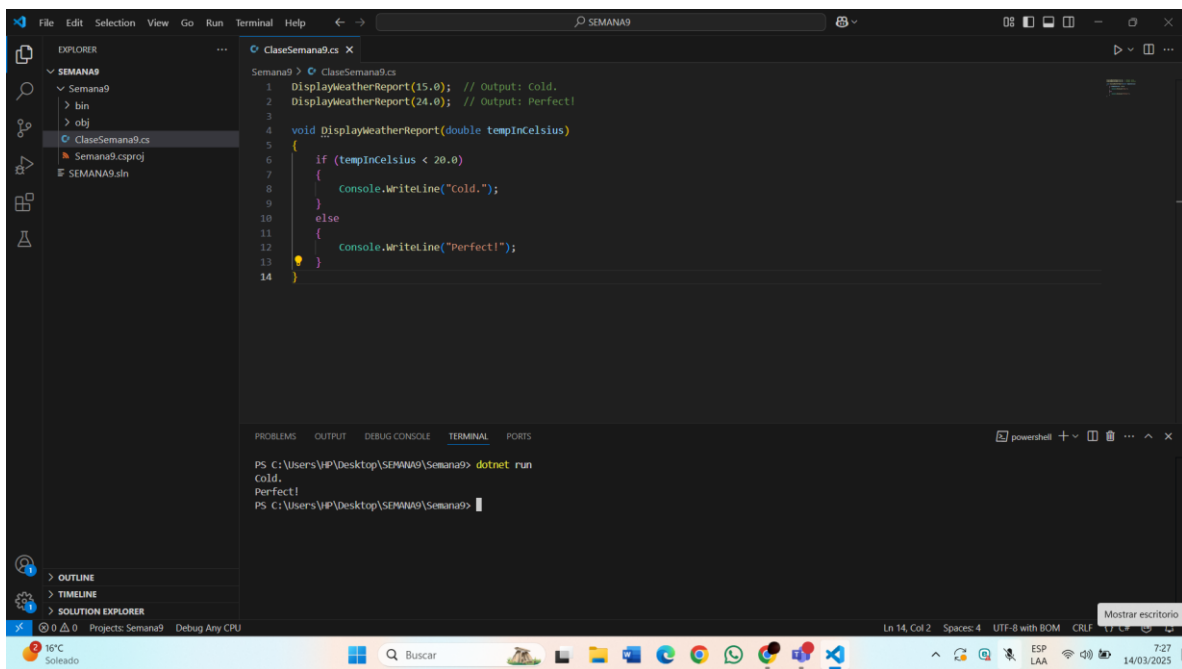
Docente: Ing. Luis Enrique Aguilar Rojas

Actividad 3– Semana 9 – Practica IF

Estudiante: Pérez Gómez, Gerber Mariano- 1165825

Guatemala, 14 de marzo de 2025

Estructura de IF-Else



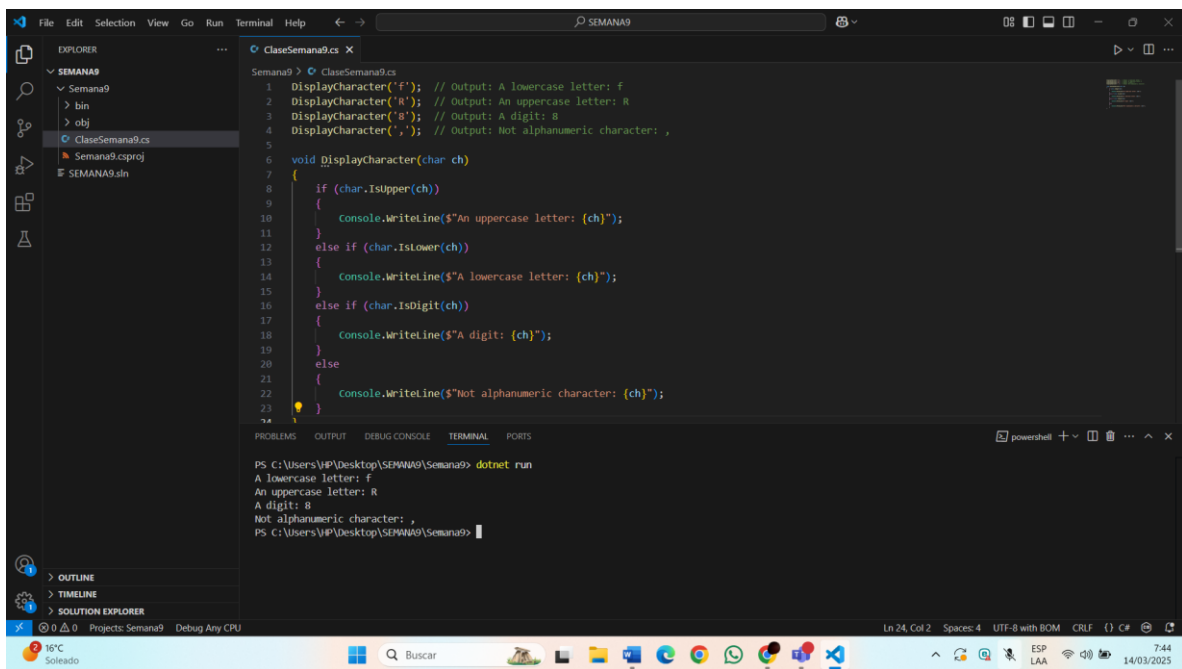
The screenshot shows the Visual Studio IDE with a C# project named 'SEMANA9'. The file explorer on the left shows the project structure, including 'bin', 'obj', 'Semana9.csproj', and 'SEMANA9.sln'. The main editor displays the code for 'ClaseSemana9.cs'. The code defines a method 'DisplayWeatherReport' that takes a 'tempInCelsius' parameter and uses an IF-ELSE structure to output 'Cold.' or 'Perfect!' based on the temperature. The terminal at the bottom shows the output of the program after running 'dotnet run'.

```
1 DisplayWeatherReport(15.0); // Output: Cold.  
2 DisplayWeatherReport(24.0); // Output: Perfect!  
3  
4 void DisplayWeatherReport(double tempInCelsius)  
5 {  
6     if (tempInCelsius < 20.0)  
7     {  
8         Console.WriteLine("Cold.");  
9     }  
10    else  
11    {  
12        Console.WriteLine("Perfect!");  
13    }  
14 }
```

Terminal output:

```
PS C:\Users\VIP\Desktop\SEMANA9\Semana9> dotnet run  
Cold.  
Perfect!  
PS C:\Users\VIP\Desktop\SEMANA9\Semana9>
```

Estructura de Elself



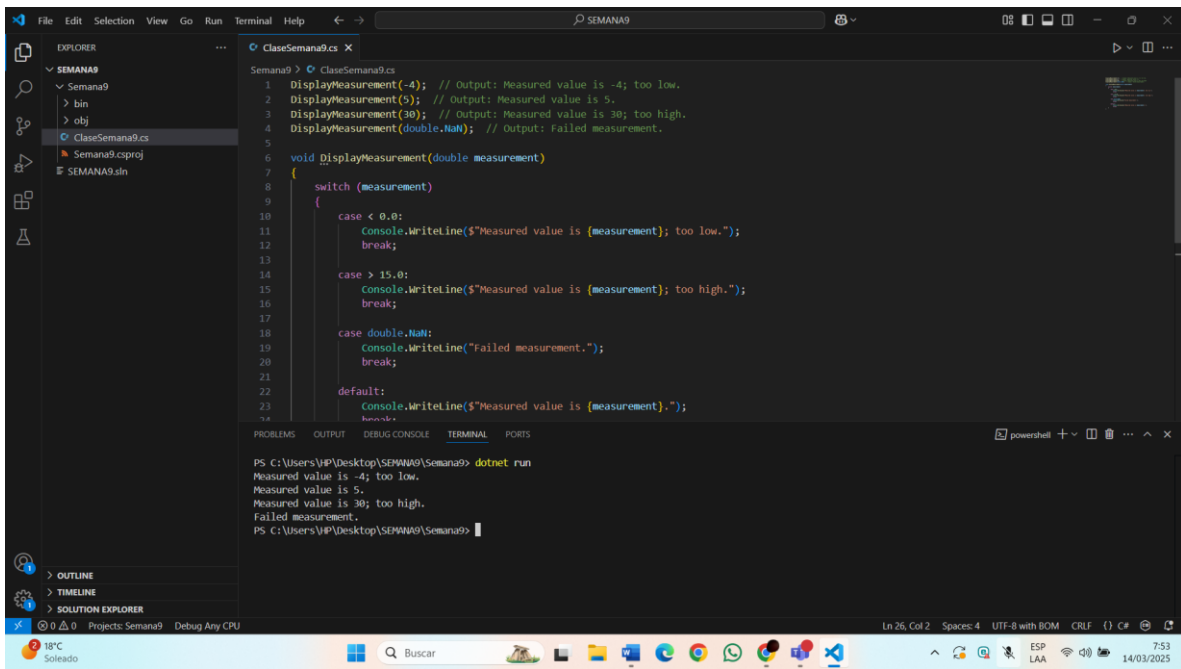
The screenshot shows the Visual Studio IDE with the same C# project 'SEMANA9'. The file explorer on the left shows the project structure. The main editor displays the code for 'ClaseSemana9.cs'. The code defines a method 'DisplayCharacter' that takes a 'ch' parameter and uses an Elself structure (if-else-if-else) to output the character type: 'A lowercase letter: f', 'An uppercase letter: R', 'A digit: 8', or 'Not alphanumeric character: ,'. The terminal at the bottom shows the output of the program after running 'dotnet run'.

```
1 DisplayCharacter('f'); // Output: A lowercase letter: f  
2 DisplayCharacter('R'); // Output: An uppercase letter: R  
3 DisplayCharacter('8'); // Output: A digit: 8  
4 DisplayCharacter(','); // Output: Not alphanumeric character: ,  
5  
6 void DisplayCharacter(char ch)  
7 {  
8     if (char.IsUpper(ch))  
9     {  
10        Console.WriteLine($"An uppercase letter: {ch}");  
11    }  
12    else if (char.IsLower(ch))  
13    {  
14        Console.WriteLine($"A lowercase letter: {ch}");  
15    }  
16    else if (char.IsDigit(ch))  
17    {  
18        Console.WriteLine($"A digit: {ch}");  
19    }  
20    else  
21    {  
22        Console.WriteLine($"Not alphanumeric character: {ch}");  
23    }  
24 }
```

Terminal output:

```
PS C:\Users\VIP\Desktop\SEMANA9\Semana9> dotnet run  
A lowercase letter: f  
An uppercase letter: R  
A digit: 8  
Not alphanumeric character: ,  
PS C:\Users\VIP\Desktop\SEMANA9\Semana9>
```

Estructura de Switch



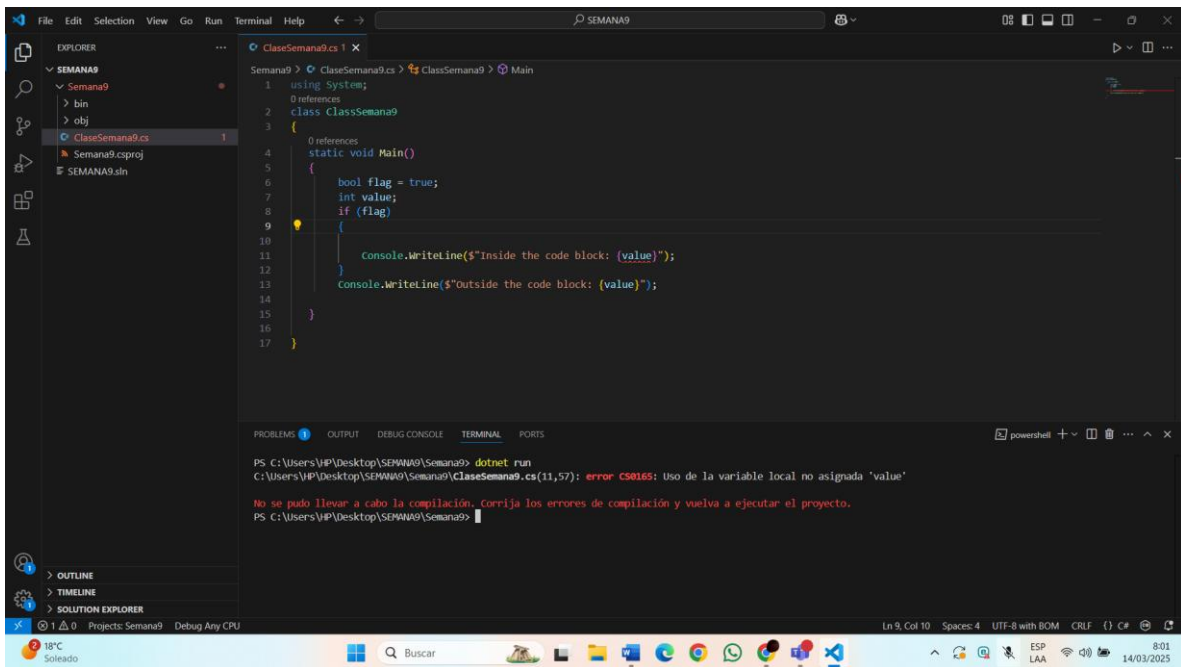
The screenshot shows a Visual Studio IDE with a C# project named 'SEMANA9'. The file explorer on the left shows the project structure: 'SEMANA9' (solution), 'Semana9' (project), 'bin', 'obj', 'ClassSemana9.cs', 'Semana9.csproj', and 'SEMANA9.sln'. The main editor displays 'ClassSemana9.cs' with the following code:

```
1 DisplayMeasurement(-4); // Output: Measured value is -4; too low.
2 DisplayMeasurement(5); // Output: Measured value is 5.
3 DisplayMeasurement(30); // Output: Measured value is 30; too high.
4 DisplayMeasurement(double.NaN); // Output: Failed measurement.
5
6 void DisplayMeasurement(double measurement)
7 {
8     switch (measurement)
9     {
10         case < 0.0:
11             Console.WriteLine($"Measured value is {measurement}; too low.");
12             break;
13
14         case > 15.0:
15             Console.WriteLine($"Measured value is {measurement}; too high.");
16             break;
17
18         case double.NaN:
19             Console.WriteLine("Failed measurement.");
20             break;
21
22         default:
23             Console.WriteLine($"Measured value is {measurement}.");
24             break;
25     }
26 }
```

The bottom pane shows the 'TERMINAL' output, which matches the comments in the code:

```
PS C:\Users\VIP\Desktop\SEMANA9\Semana9> dotnet run
Measured value is -4; too low.
Measured value is 5.
Measured value is 30; too high.
Failed measurement.
PS C:\Users\VIP\Desktop\SEMANA9\Semana9>
```

Captura 4



The screenshot shows the same Visual Studio IDE with the 'SEMANA9' project. The file explorer is the same. The main editor displays 'ClassSemana9.cs' with the following code:

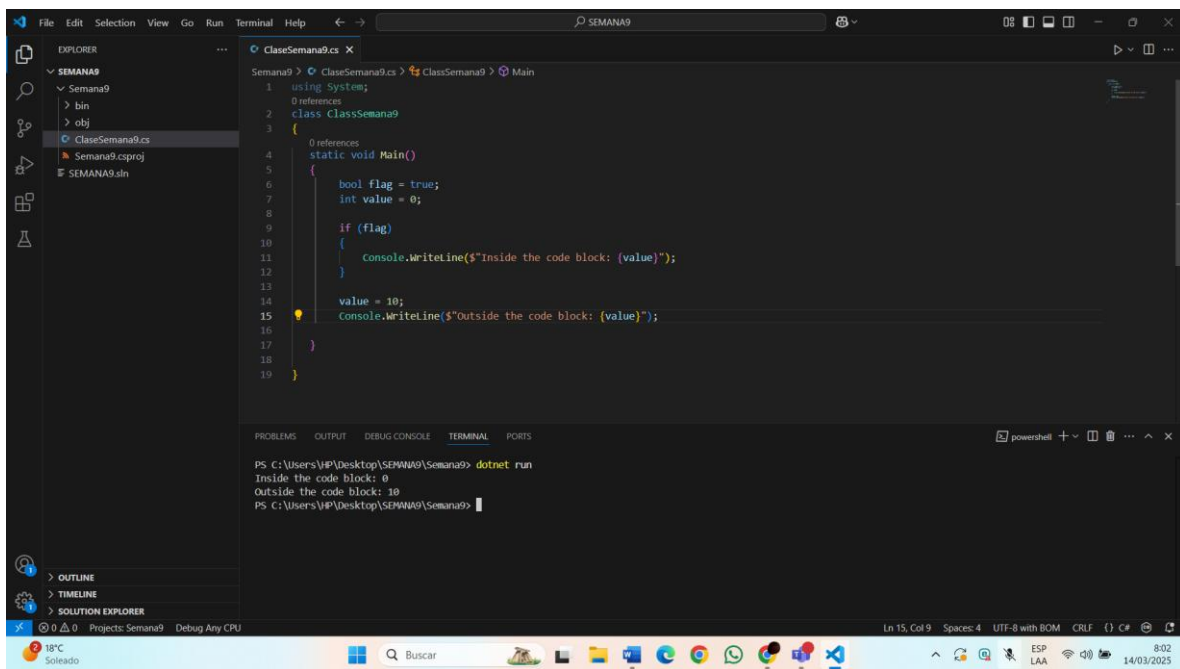
```
1 using System;
2 class ClassSemana9
3 {
4     0 references
5     static void Main()
6     {
7         bool flag = true;
8         int value;
9         if (flag)
10         {
11             Console.WriteLine($"Inside the code block: {value}");
12         }
13         Console.WriteLine($"Outside the code block: {value}");
14     }
15 }
16
17 }
```

The bottom pane shows the 'TERMINAL' output with a compilation error:

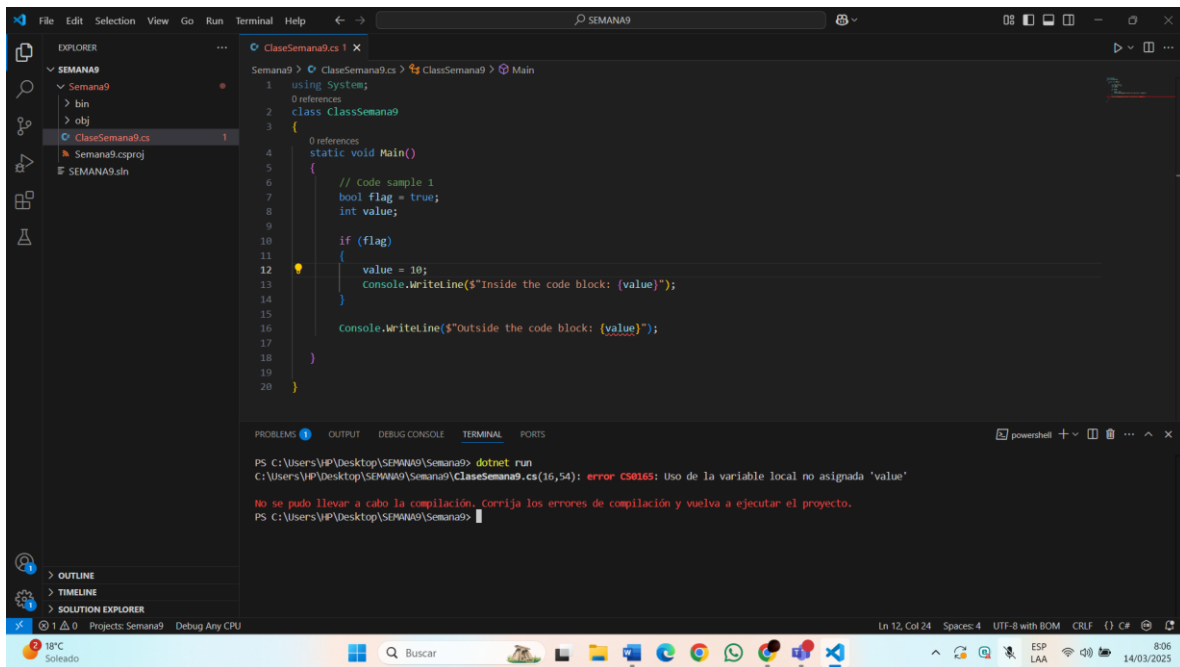
```
PS C:\Users\VIP\Desktop\SEMANA9\Semana9> dotnet run
C:\Users\VIP\Desktop\SEMANA9\Semana9\ClassSemana9.cs(11,57): error CS0165: Uso de la variable local no asignada 'value'

No se pudo llevar a cabo la compilación, corrija los errores de compilación y vuelva a ejecutar el proyecto.
PS C:\Users\VIP\Desktop\SEMANA9\Semana9>
```

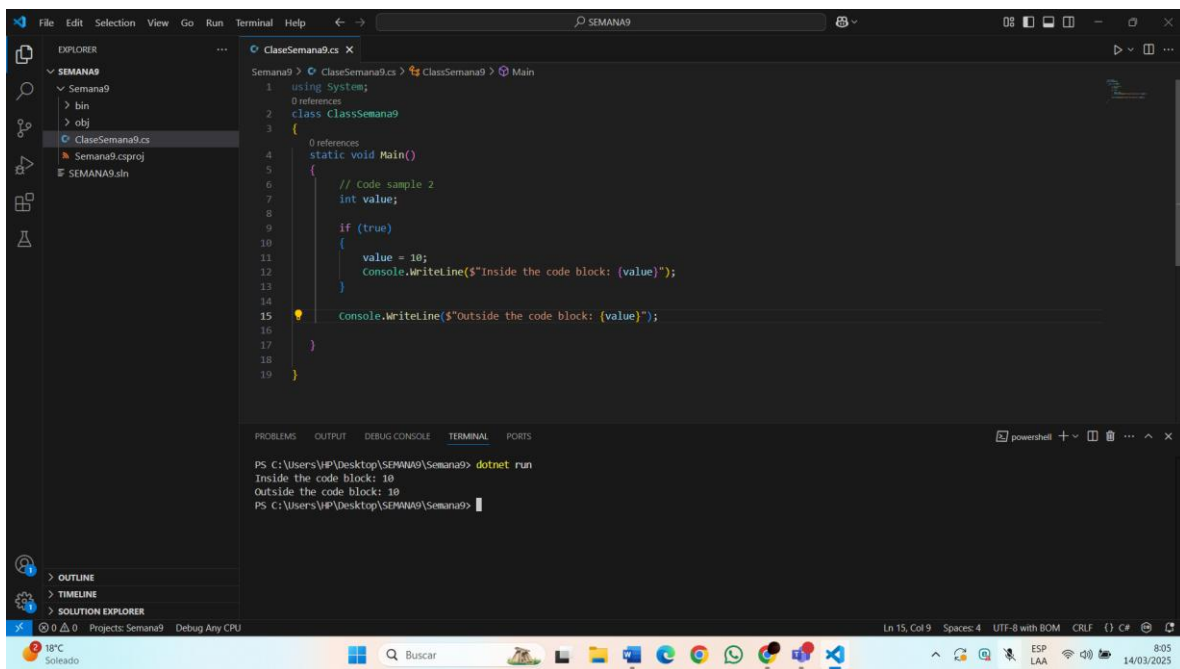
Captura 5



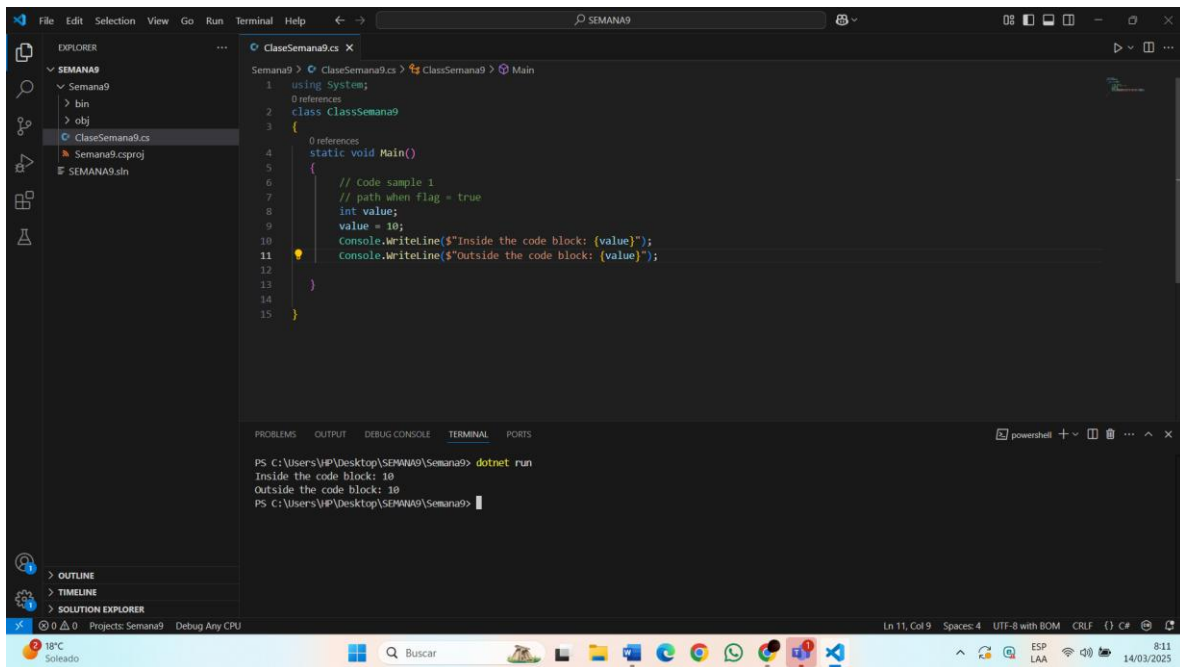
Captura 6



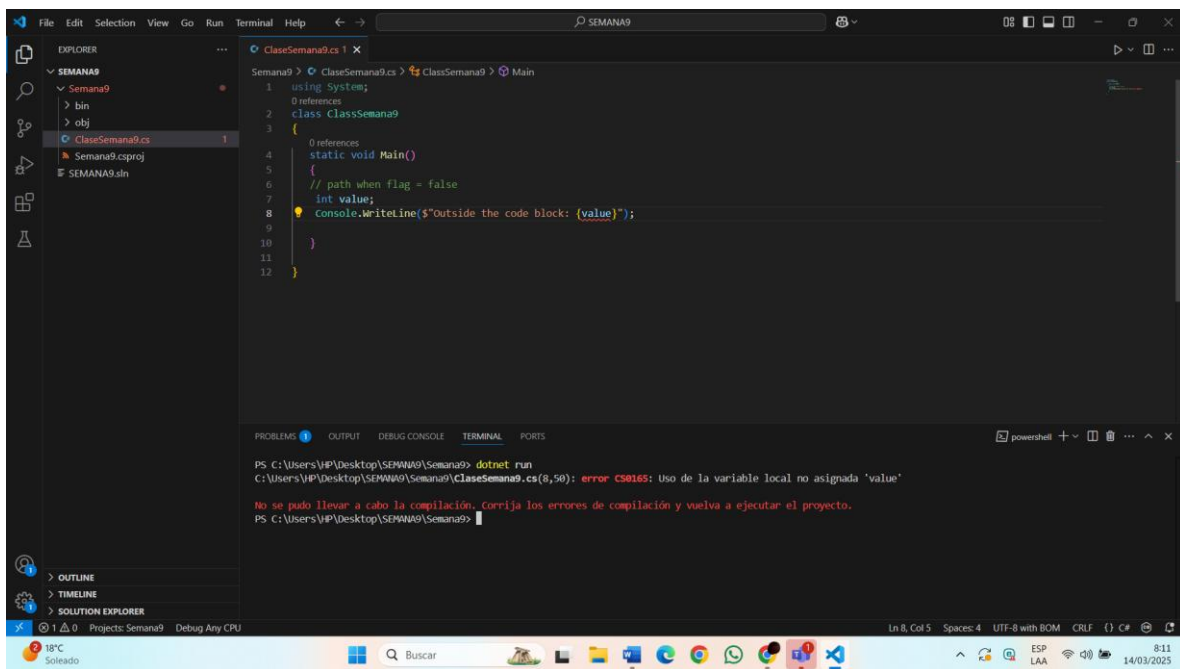
Captura 7



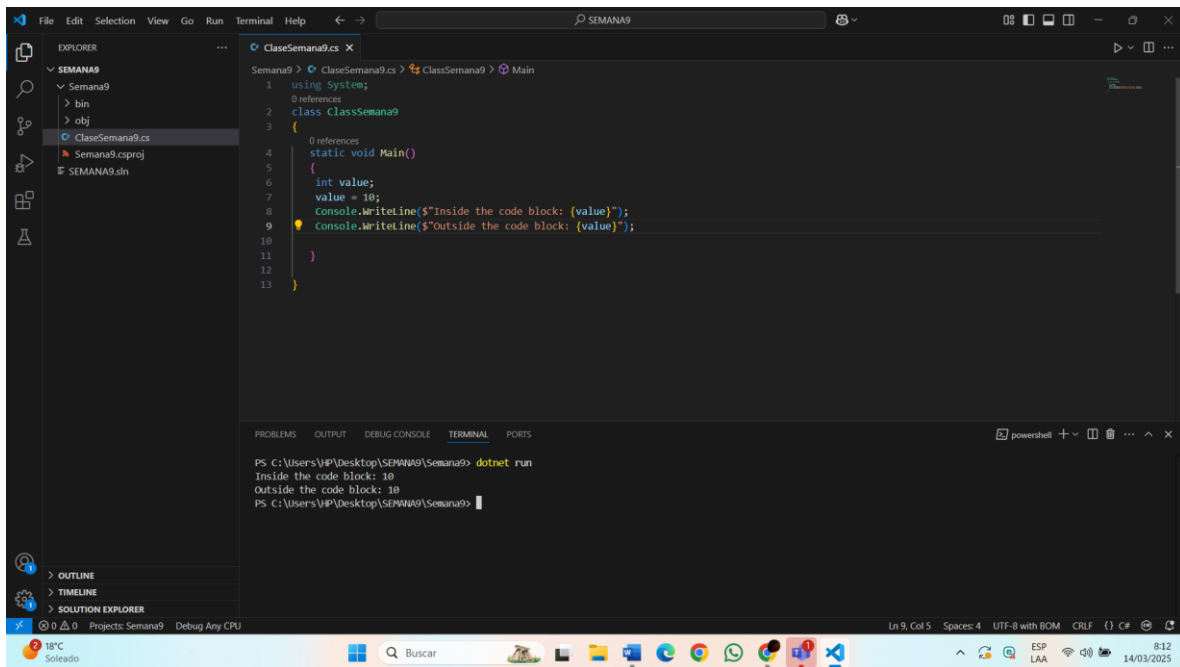
Captura 8



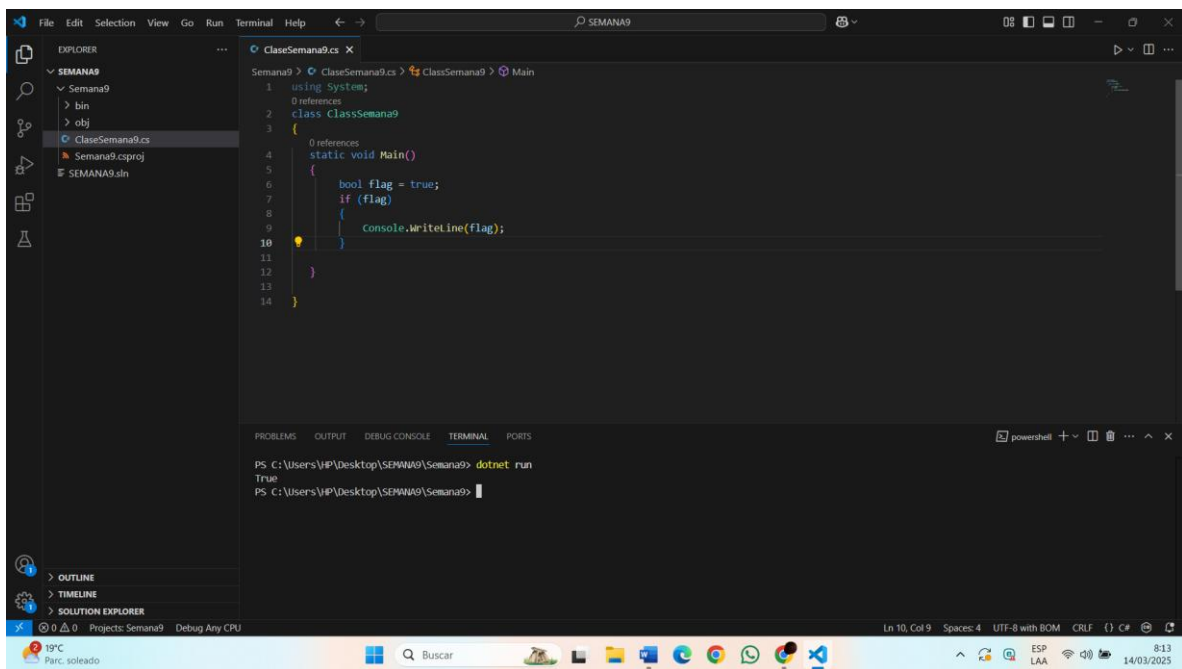
Captura 9



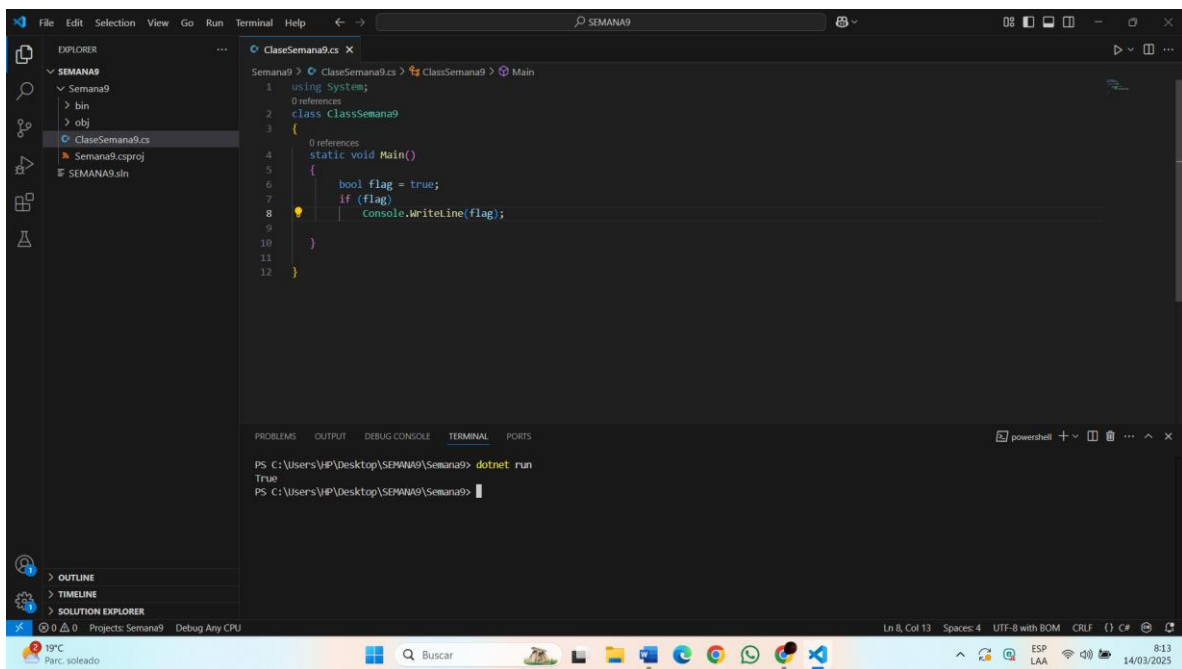
Captura 10



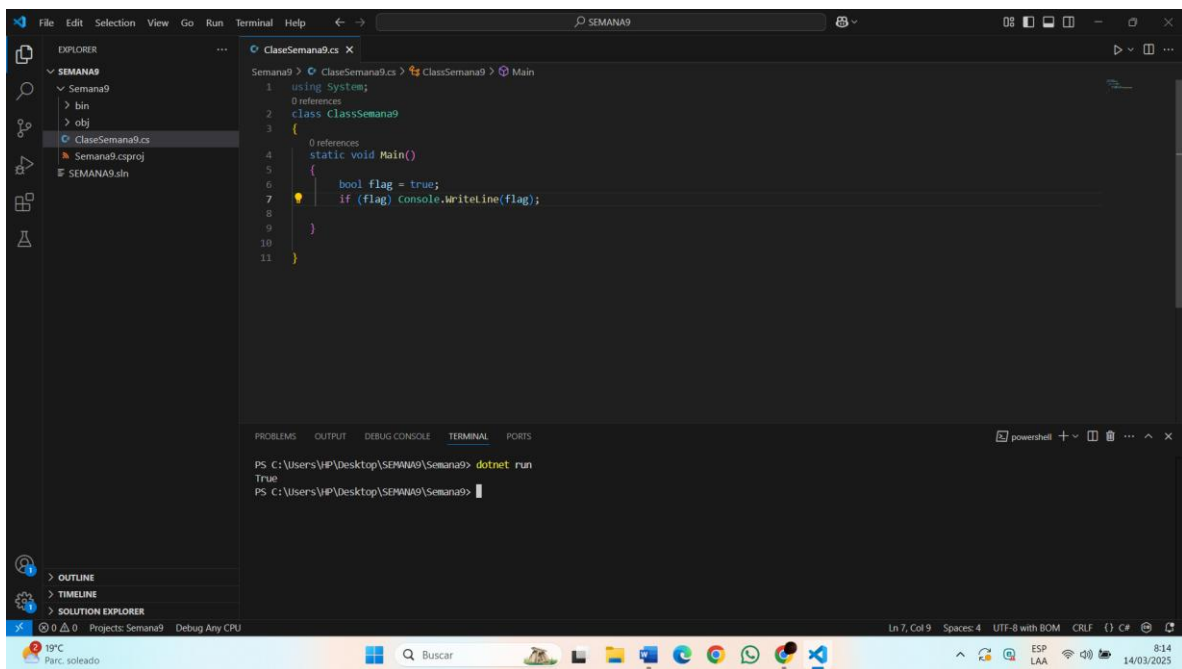
Captura 11



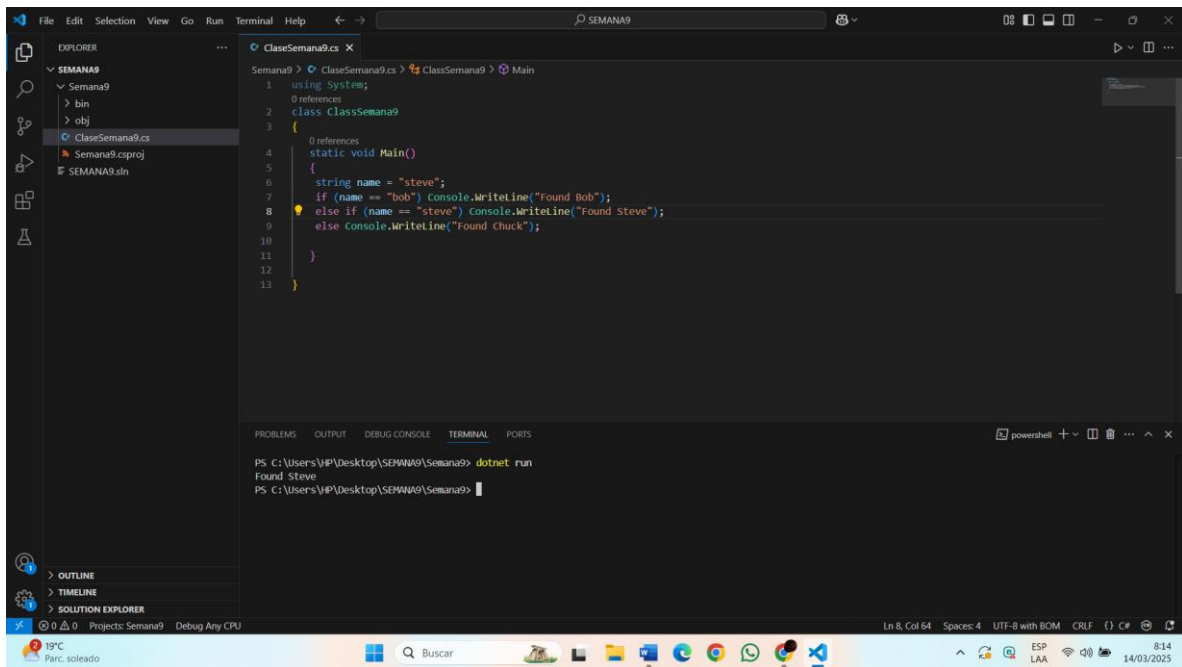
Captura 12



Captura 13



Captura 14



Captura 15

