

Universidad Rafael Landívar.

Facultad de Ingeniería.

Ingeniería en Informática y Sistemas.

Pensamiento Computacional, sección: 08 Ing. Luis Aguilar

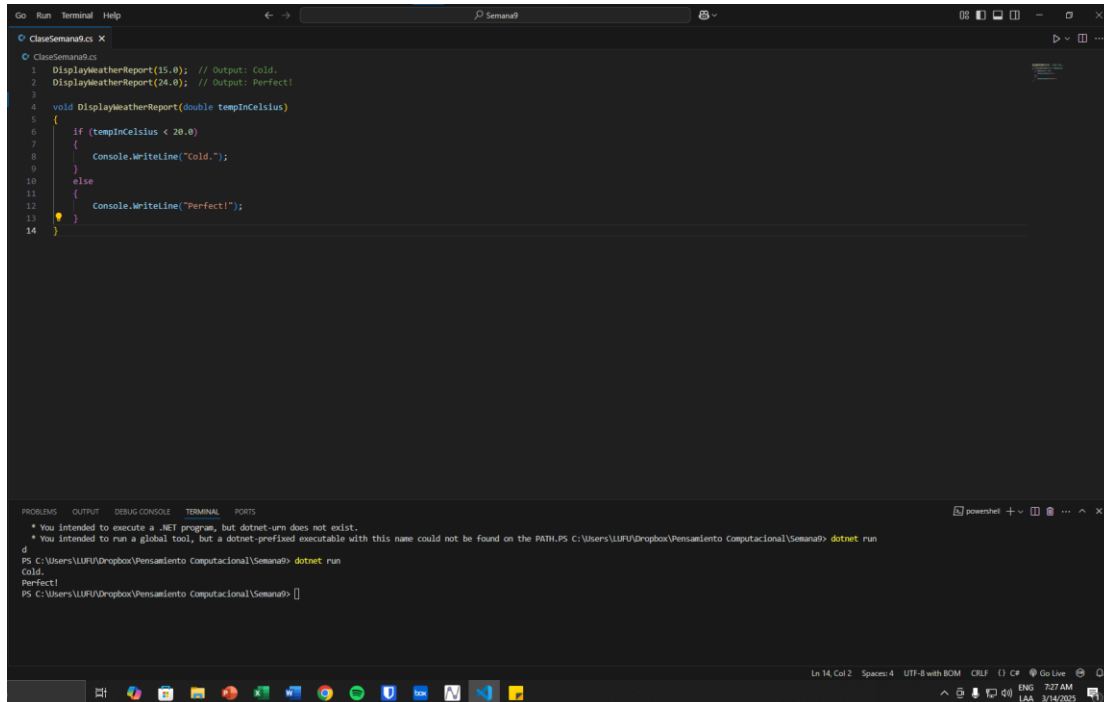
Pantallazos Semana 9

Estudiante: García Elías, Luis David - 1296925

Guatemala, 13 de marzo de 2025

Semana 9

1) Instrucción selección if



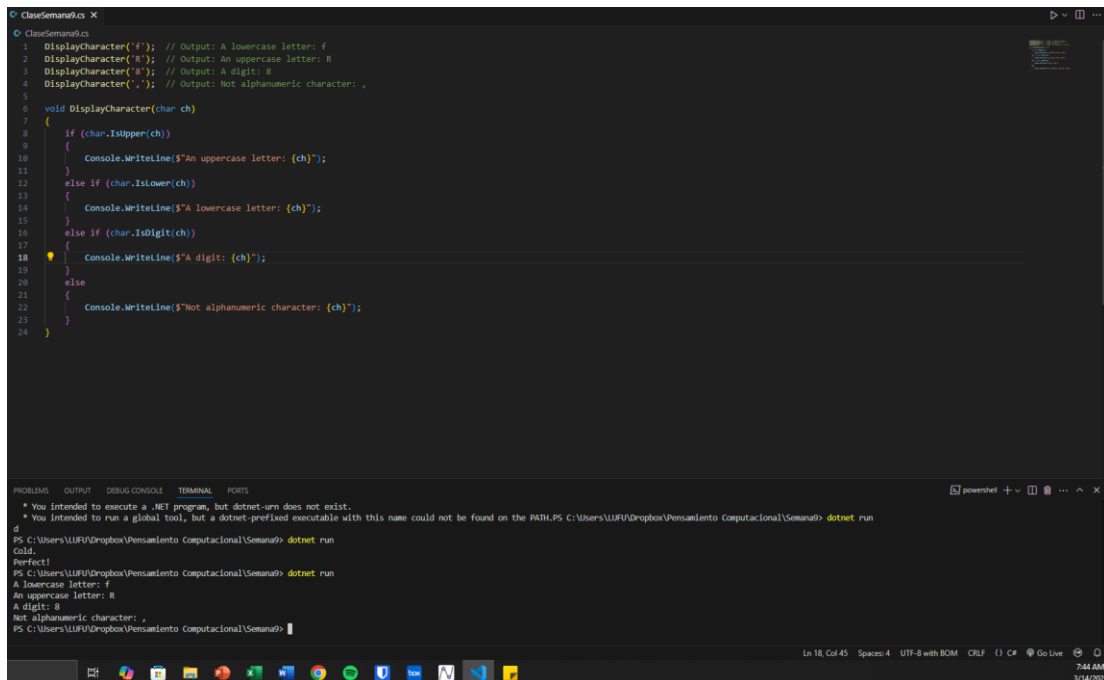
The screenshot shows a Visual Studio Code editor with a C# file named `ClaseSemana9.cs`. The code defines a method `DisplayWeatherReport` that takes a temperature in Celsius and prints "Cold" or "Perfect!". The temperature values 15.0 and 24.0 are passed to the method in the main program. The terminal output shows the results of the program execution.

```
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:

```
d
PS C:\Users\LUFU\Dropbox\Pensamiento Computacional\Semana9> dotnet run
Cold.
Perfect!
PS C:\Users\LUFU\Dropbox\Pensamiento Computacional\Semana9> 
```

2) Else if



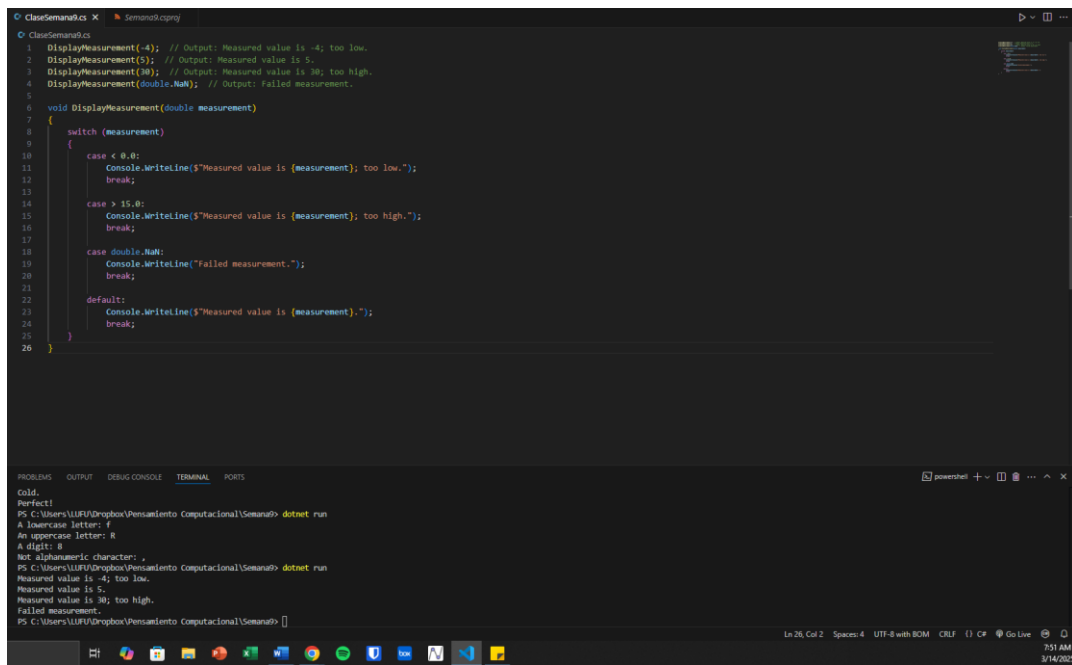
The screenshot shows a Visual Studio Code editor with a C# file named `ClaseSemana9.cs`. The code defines a method `DisplayCharacter` that takes a character and prints its classification based on whether it is an uppercase letter, lowercase letter, digit, or not alphanumeric. The main program calls the method with the characters 'f', 'R', '8', and '.'. The terminal output shows the results of the program execution.

```
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:

```
d
PS C:\Users\LUFU\Dropbox\Pensamiento Computacional\Semana9> dotnet run
Cold.
Perfect!
PS C:\Users\LUFU\Dropbox\Pensamiento Computacional\Semana9> dotnet run
A lowercase letter: f
An uppercase letter: R
A digit: 8
Not alphanumeric character: .
PS C:\Users\LUFU\Dropbox\Pensamiento Computacional\Semana9> 
```

3) Switch



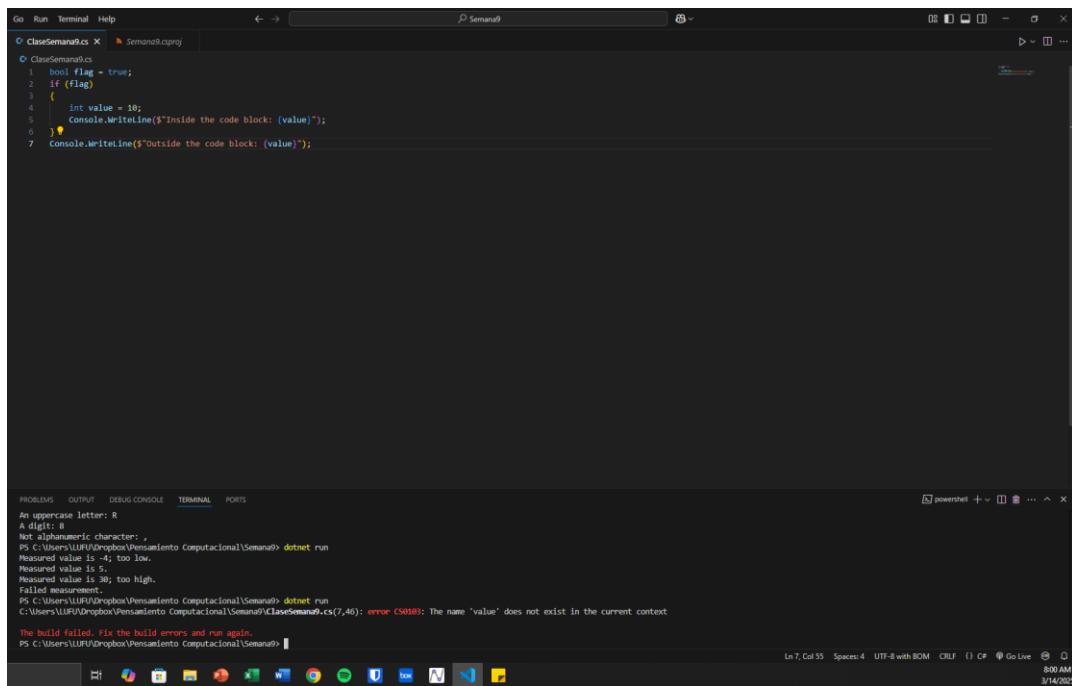
```
1 DisplayMeasurement(-4); // Output: Measured value is -4; too low.
2 DisplayMeasurement(5); // Output: Measured value is 5.
3 DisplayMeasurement(30); // Output: Measured value is 30; too high.
4 DisplayMeasurement(double.NaN); // Output: Failed measurement.
5
6
7 void DisplayMeasurement(double measurement)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

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Go Live

Ln 26, Col 2 Spaces: 4 UTF-8 with BOM CRLF (1) CP Go Live 7:51 AM 3/14/2025

4) Variable Scope



```
1 bool flag = true;
2 if (flag)
3 {
4     int value = 10;
5     Console.WriteLine($"Inside the code block: {value}");
6 }
7 Console.WriteLine($"Outside the code block: {value}");
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

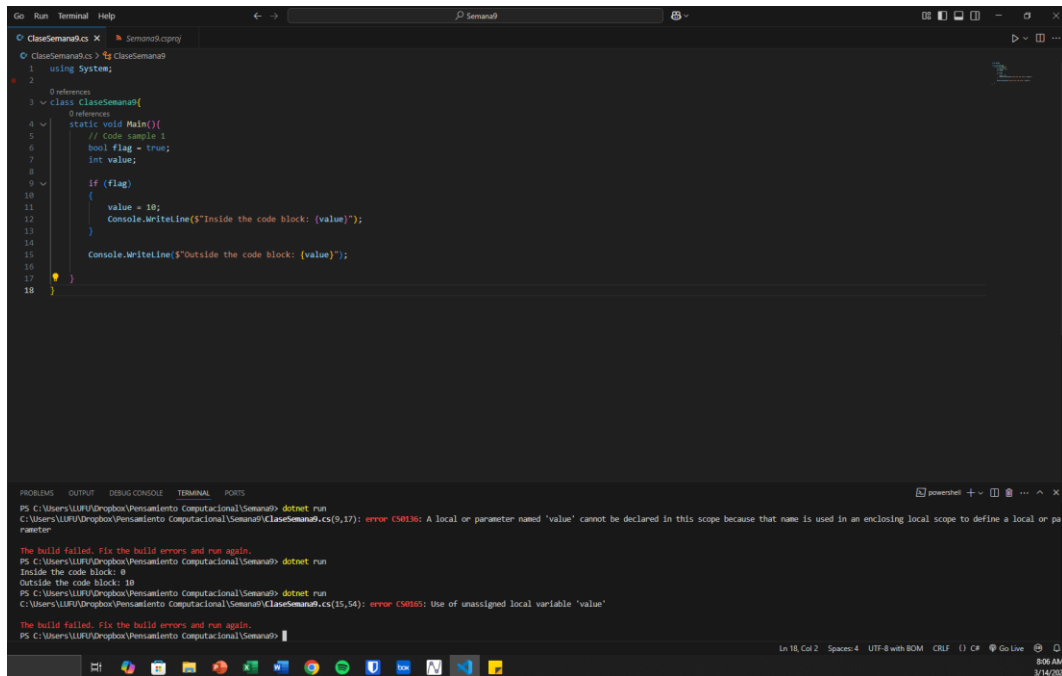
Go Live

Ln 7, Col 53 Spaces: 4 UTF-8 with BOM CRLF (1) CP Go Live 8:00 AM 3/14/2025

The build failed. Fix the build errors and run again.

C:\Users\LUFI\Dropbox\Pensamiento Computacional\Semana9\ClaseSemana9.cs(7,46): error CS0019: The name 'value' does not exist in the current context

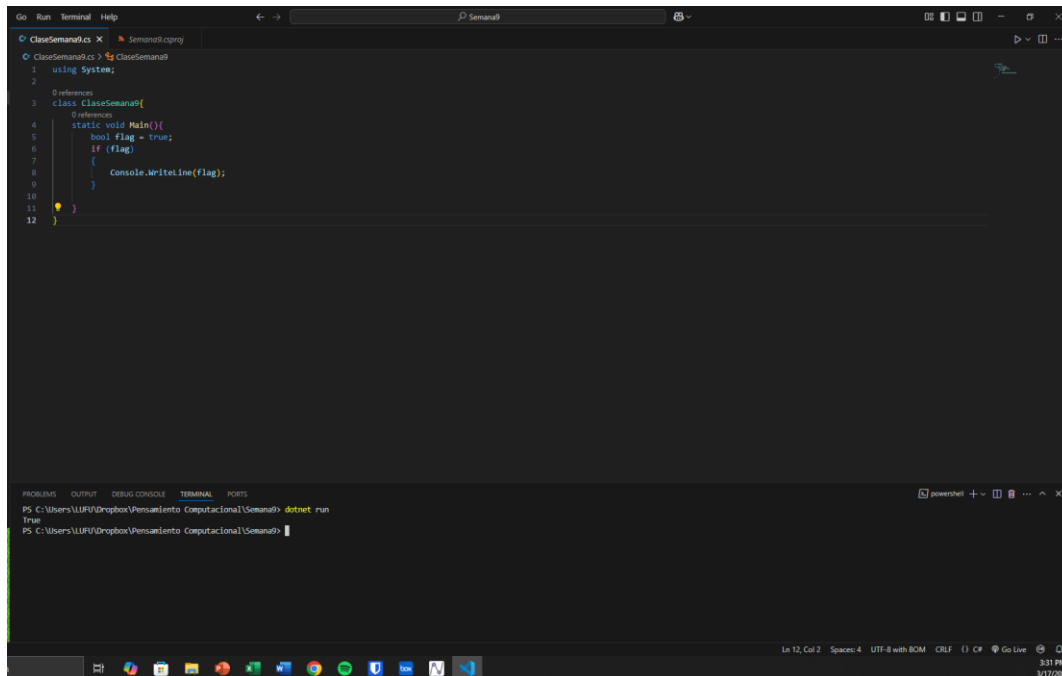
6) Variable Scope no reconoce



```
Go Run Terminal Help
ClassSemanas9.cs X Seman9.coprg
ClassSemanas9.cs > ClassSemanas9
1 using System;
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
}

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\WUPU\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
C:\Users\WUPU\Dropbox\Pensamiento Computacional\Semanas9\ClassSemanas9.cs(9,17): error CS0136: A local or parameter named 'value' cannot be declared in this scope because that name is used in an enclosing local scope to define a local or parameter
The build failed. Fix the build errors and run again.
PS C:\Users\WUPU\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
Inside the code block: 0
Outside the code block: 10
PS C:\Users\WUPU\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
C:\Users\WUPU\Dropbox\Pensamiento Computacional\Semanas9\ClassSemanas9.cs(15,54): error CS0016: Use of unassigned local variable 'value'
The build failed. Fix the build errors and run again.
PS C:\Users\WUPU\Dropbox\Pensamiento Computacional\Semanas9>
Ln 18, Col 2 Spaces: 4 UTF-8 with BOM CRLF C# Go Live 8:06 AM 3/14/2025
```

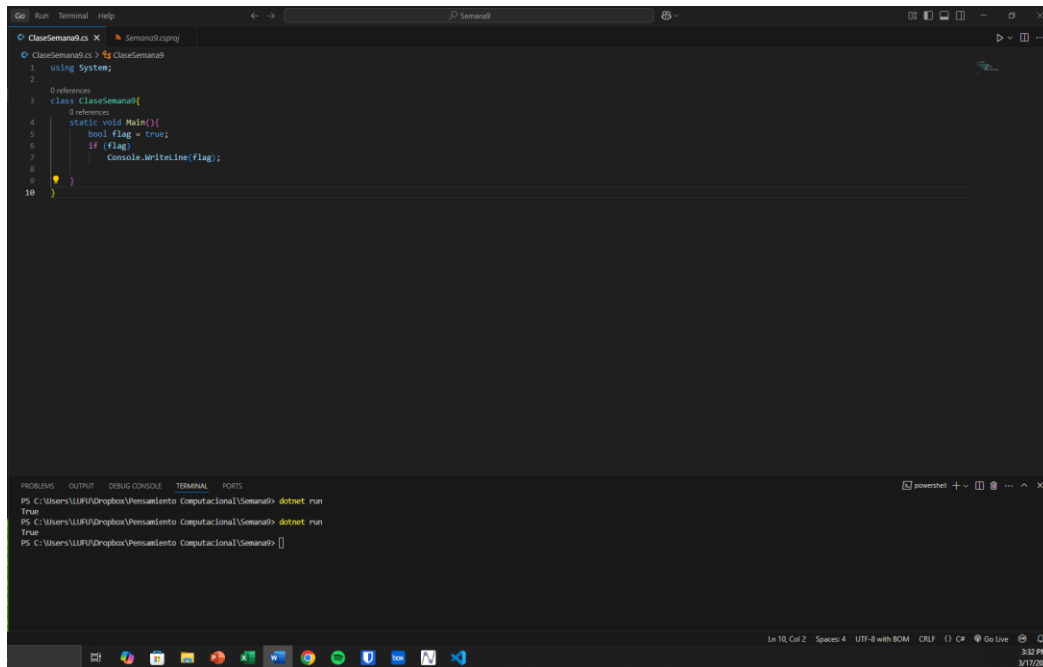
7) Declaración if que utiliza un bloque de código



```
Go Run Terminal Help
ClassSemanas9.cs X Seman9.coprg
ClassSemanas9.cs > ClassSemanas9
1 using System;
2
3
4
5
6
7
8
9
10
11
12
}

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\WUPU\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
True
PS C:\Users\WUPU\Dropbox\Pensamiento Computacional\Semanas9>
Ln 12, Col 2 Spaces: 4 UTF-8 with BOM CRLF C# Go Live 3:31 PM 3/17/2025
```

8) Este bloque de código contiene una sola línea, puede eliminar las llaves.

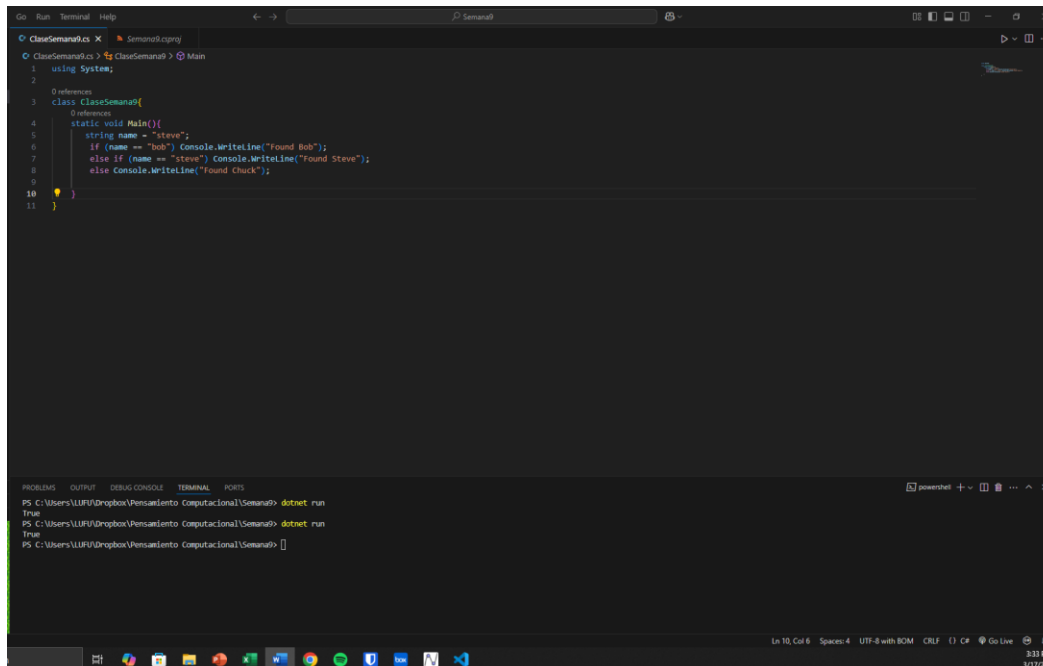


```
1 using System;
2
3 class ClassSemanas9{
4     static void Main(){
5         bool flag = true;
6         if (flag)
7             Console.WriteLine(flag);
8     }
9 }
10
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\ULFV\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
True
PS C:\Users\ULFV\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
True
PS C:\Users\ULFV\Dropbox\Pensamiento Computacional\Semanas9> 
```

9) Construcciones if-elseif-else más grandes



```
1 using System;
2
3 class ClassSemanas9{
4     static void Main(){
5         string name = "steve";
6         if (name == "bob") Console.WriteLine("Found Bob");
7         else if (name == "steve") Console.WriteLine("Found Steve");
8         else Console.WriteLine("Found Chuck");
9     }
10 }
11
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\ULFV\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
True
PS C:\Users\ULFV\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
True
PS C:\Users\ULFV\Dropbox\Pensamiento Computacional\Semanas9> 
```

10) Código con error en bloques de código y variables

```
1 using System;
2
3 class ClassSemanas9{
4     static void Main(){
5         int[] numbers = { 4, 8, 15, 16, 23, 42 };
6
7         foreach (int number in numbers)
8         {
9             int total;
10
11             total += number;
12
13             if (number == 42)
14             {
15                 bool found = true;
16             }
17
18         }
19
20         if (found)
21         {
22             Console.WriteLine("Set contains 42");
23         }
24
25         Console.WriteLine($"Total: {total}");
26     }
27 }
28
29 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
True
PS C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
True
PS C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9\ClassSemanas9.cs(21,13): error CS0103: The name 'found' does not exist in the current context
C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9\ClassSemanas9.cs(27,37): error CS0103: The name 'total' does not exist in the current context
C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9\ClassSemanas9.cs(11,13): error CS0165: Use of unassigned local variable 'total'
C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9\ClassSemanas9.cs(15,15): warning CS0219: The variable 'found' is assigned but its value is never used
The build failed. Fix the build errors and run again.
PS C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9>

11) Código arreglado

```
1 using System;
2
3 class ClassSemanas9{
4     static void Main(){
5         int[] numbers = { 4, 8, 15, 16, 23, 42 };
6         int total = 0;
7         bool found = false;
8
9         foreach (int number in numbers)
10        {
11            total += number;
12            if (number == 42)
13            {
14                found = true;
15            }
16
17        }
18
19        if (found)
20        {
21            Console.WriteLine("Set contains 42");
22        }
23
24        Console.WriteLine($"Total: {total}");
25    }
26 }
27
28 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
True
PS C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9\ClassSemanas9.cs(21,13): error CS0103: The name 'found' does not exist in the current context
C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9\ClassSemanas9.cs(27,37): error CS0103: The name 'total' does not exist in the current context
C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9\ClassSemanas9.cs(11,13): error CS0165: Use of unassigned local variable 'total'
C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9\ClassSemanas9.cs(15,15): warning CS0219: The variable 'found' is assigned but its value is never used
The build failed. Fix the build errors and run again.
PS C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9> dotnet run
Set contains 42
Total: 108
PS C:\Users\WUFI\Dropbox\Pensamiento Computacional\Semanas9>