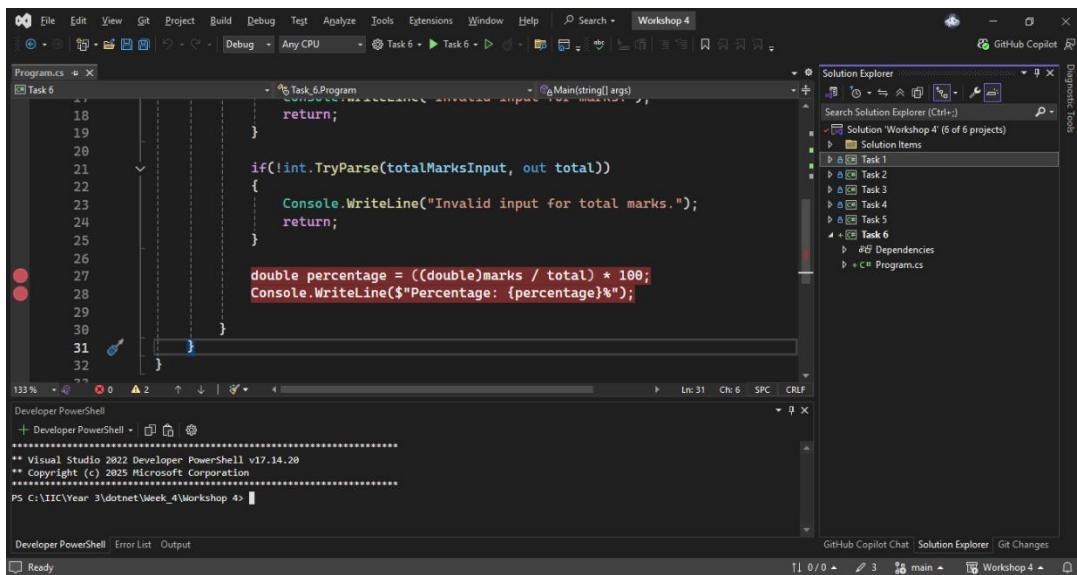
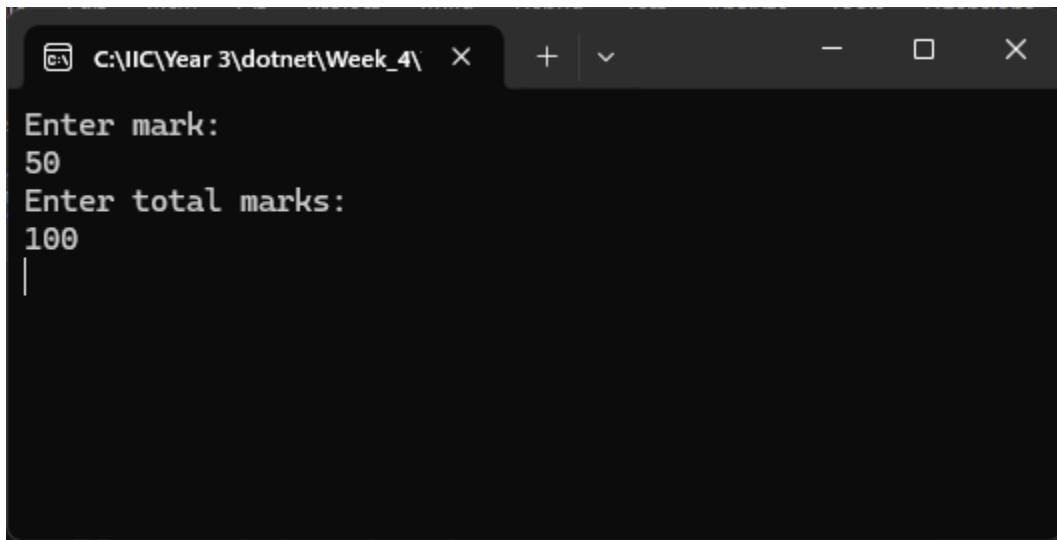


Task 6:

Setting up two breakpoints and clicking f5 to start debugging.



Entering values



The screenshot shows a Visual Studio interface with the following details:

- Code Editor:** Displays the `Program.cs` file with the following code:

```
18
19
20
21     return;
22
23     if(!int.TryParse(totalMarksInput, out total))
24     {
25         Console.WriteLine("Invalid input for total marks.");
26         return;
27
28     double percentage = ((double)marks / total) * 100;
29     Console.WriteLine($"Percentage: {percentage}%");
30
31
32 }
33
```
- Diagnostic Tools:** Shows a summary of a 7-second session with a Process Memory (MB) graph.
- Watch Windows:** The **Autos** window displays variable values:

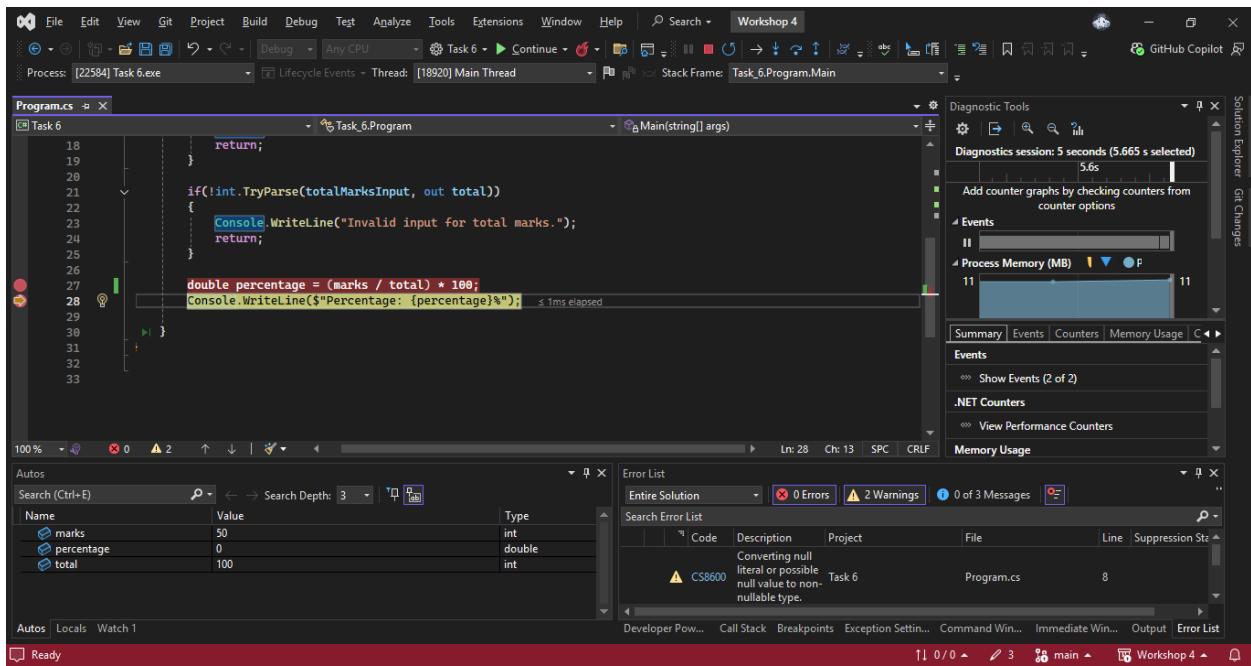
| Name | Type | Value |
|-----------------|--------|-------|
| (double)marks | double | 50 |
| marks | int | 50 |
| percentage | double | 0 |
| total | int | 100 |
| totalMarksInput | string | "100" |
- Error List:** Shows 2 warnings, including CS8600: Converting null literal or possible null value to non-nullable type.

Observing the value:

The screenshot shows the **Autos** watch window with the following data:

| Name | Type | Value |
|-----------------|--------|-------|
| (double)marks | double | 50 |
| marks | int | 50 |
| percentage | double | 0 |
| total | int | 100 |
| totalMarksInput | string | "100" |

After that, I clicked on F10 to execute next line.



After executing all lines, I checked the output values but the output was 0% which is wrong.

A screenshot of a terminal window titled "C:\IIC\Year 3\dotnet\Week_4\". The window displays the following text:

```
Enter mark:  
50  
Enter total marks:  
100  
Percentage: 0%
```

The terminal window has a dark background and white text.

1. Why is the output incorrect?

- It was wrong because both inputs were on integer. So the calculation was done in integer too. C# performs calculation of integer division as it is which will remove any decimal values. So we got 0 as output.

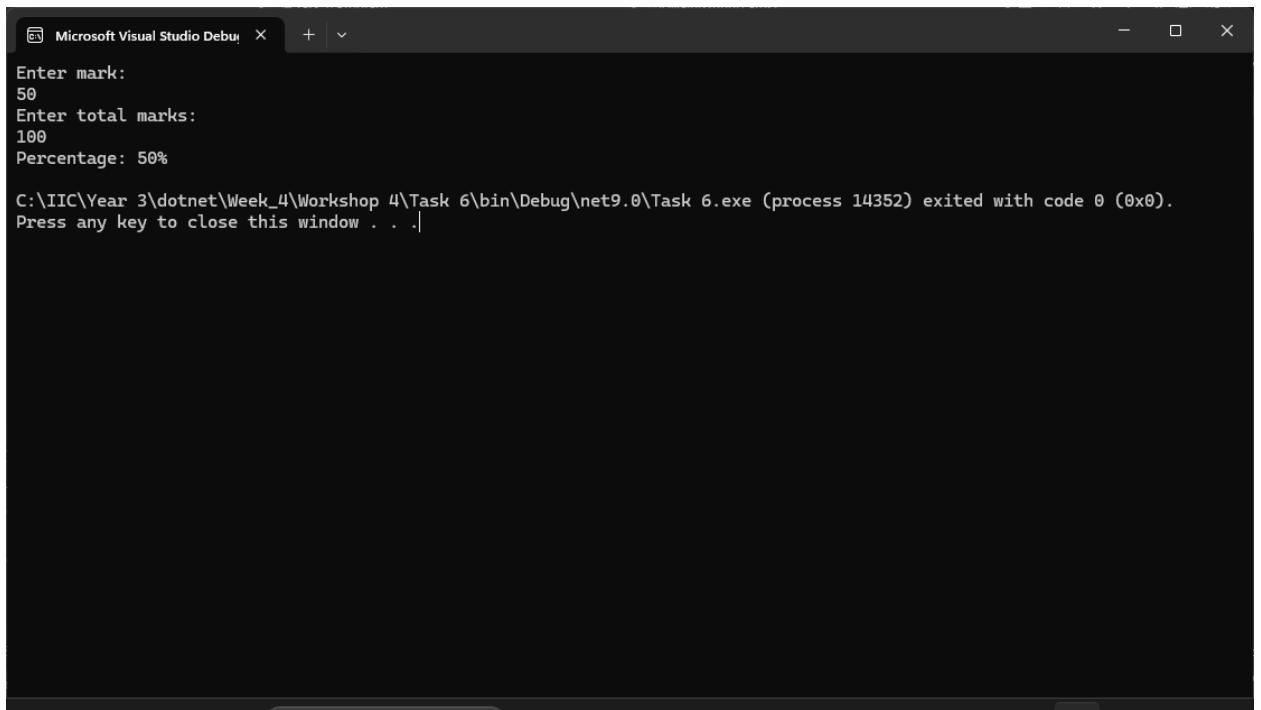
2. How can we correct the program?

- We can correct the program by doing decimal calculations instead of just integer division.

The screenshot shows the Microsoft Visual Studio IDE interface. The main window displays the code for `Program.cs` in a file named `Task 6`. The code checks if the input for total marks is a valid integer. If it is, it calculates the percentage as a decimal and prints it. The Solution Explorer on the right shows a solution named 'Workshop 4' containing six projects: Task 1, Task 2, Task 3, Task 4, Task 5, and Task 6. The Output window at the bottom shows the build log:

```
Build started at 10:38 AM...
1>----- Build started: Project: Task 6, Configuration: Debug Any CPU -----
1> Skipping analyzers to speed up the build. You can execute 'Build' or 'Rebuild' command to run analyzers.
1>Task 6 -> C:\ICYear 3\dotnet\Week_4\Workshop 4\Task 6\bin\Debug\net9.0\Task 6.dll
===== Build: 1 succeeded, 0 failed, 0 up-to-date, 0 skipped ======
===== Build completed at 10:38 AM and took 07.650 seconds ======
```

Correct answer:



The screenshot shows a Microsoft Visual Studio Debug terminal window. The title bar reads "Microsoft Visual Studio Debug". The window contains the following text:

```
Enter mark:  
50  
Enter total marks:  
100  
Percentage: 50%  
  
C:\IIC\Year 3\dotnet\Week_4\Workshop 4\Task 6\bin\Debug\net9.0\Task 6.exe (process 14352) exited with code 0 (0x0).  
Press any key to close this window . . .|
```

