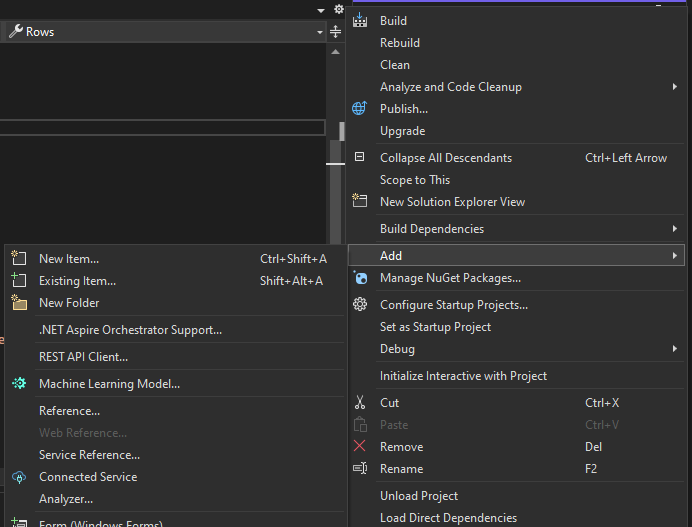
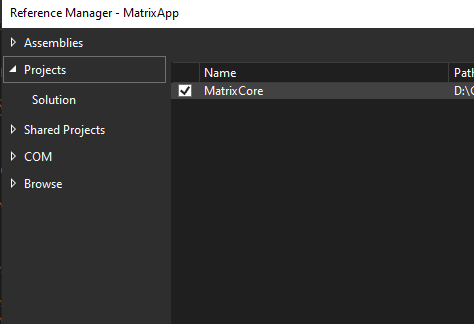
Install Microsoft Visual Studio -> Visual Studio Setup.exe -> It will download installer, then start installing it -> a screen then appears for the things you want to download -> .NET framework for console -> around 7 GB, download then install -> Launch Visual Studio 2022 -> Create new Project -> Choose C# project for console -> Name the project -> Solution space name could be different , it is a container for many different projects that you will build later on -> Chose the directory of your workspace -> Create Project.

You can have two or more different projects within same solution. Within each project your namespaces may be different. A good method is to have one project for defining classes and methods, like a library project( without any Main() method) , while a separate project would be the executable project. The latter would contain the Main() method: entry point of your app. The library project needs to be referenced in the executable project so that we can use its classes and methods. For this write **Using namespaceLibrary**; at top of the executable project. **Also** : *right click the executable project tab in Visual Studio-> Add -> Reference..* In the new window, select the(checkbox) library project from project list.

To measure the execution time of a code block in C#: Use the **Stopwatch** class from the **System.Diagnostics** namespace. Wrap the code you want to measure with Stopwatch.StartNew() and Stopwatch.Stop().  
  
using System;  
using System.Diagnostics;  
  
class Program   
{  
 static void Main(string[] args)  
 {  
 Stopwatch stopwatch = Stopwatch.StartNew(); // Create a new Stopwatch instance  
 PerformTask(); // Code block whose execution time you want to measure  
 stopwatch.Stop(); // Stop the stopwatch  
 TimeSpan ts = stopwatch.Elapsed; // Get the elapsed time as a TimeSpan value  
 Console.WriteLine($"Execution Time: {ts.TotalMilliseconds} ms");// Display the elapsed time  
 }  
}

Literals: fixed values, literally the character that is typed.  
Data types: integer, long, float, double, decimal  
Variable name: may use Camel case; start with alphabet or underscore; container for holding values

Console.WriteLine("Hello World!!"); // Outputs this line on terminal and appends a new line  
Console.ReadKey(); // Obtains the next character or function key pressed by user and displays it onto console. If it is the last statement the window will close following our key press.  
Console.ReadLine();// Reads the next line of characters from the standard input stream and returns this; return type: string  
int marks; // Variable Declaration- int can hold only integers of 32-bit signed integer – default  
marks = 21; // Variable initialization using assignment operator, done from right to left  
int age=33, x, y, salary = 2400000; // Multiple Variable Declaration and initialization.  
// x = 5, y= 6; Cannot assign like this using comma separator  
long ageOfUniverse = 160000000000L; // long integer - 64 bit signed   
double score = 36.4342D; // double precision floating point number – default  
float weight = 65.4f; // single precision floating point number - suffix f or F.  
decimal money = 793.34M; // decimal number

int num = Convert.ToInt32(Console.ReadLine()); // For Type Conversion; here string output is converted to integer