

Taazaa Training

Assignment-2(Day-1-Revision)

(Library creation and its reference)

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(Steps you need to follow to create a console application and pass references of libraries)

- 1) Open the command prompt by "Cmd" command.
- 2) Create a new directory where you want to create your console application, let say(assignmet2) with **"dotnet new console --name app2"**.

```
Microsoft Windows [Version 10.0.19042.1165]
(c) Microsoft Corporation. All rights reserved.

C:\Users\hp>cd/

C:\>
C:\>cd Users

C:\Users>cd hp

C:\Users\hp>cd Desktop

C:\Users\hp\Desktop>md assignment2

C:\Users\hp\Desktop>dotnet new console --name app2
The template "Console Application" was created successfully.

Processing post-creation actions...
Running 'dotnet restore' on app2\app2.csproj...
  Determining projects to restore...
  Restored C:\Users\hp\Desktop\app2\app2.csproj (in 302 ms).
Restore succeeded.

C:\Users\hp\Desktop>cd assignment2

C:\Users\hp\Desktop\assignment2>vscode .
'vscode' is not recognized as an internal or external command,
operable program or batch file.

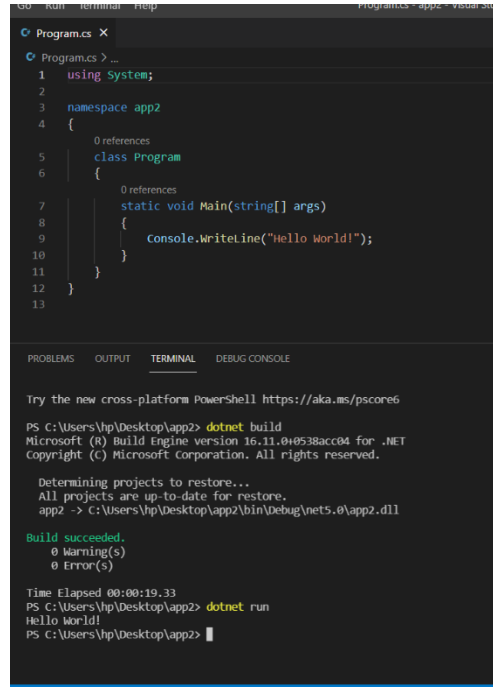
C:\Users\hp\Desktop\assignment2>. vscode
'.' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\hp\Desktop\assignment2>code .

C:\Users\hp\Desktop\assignment2>
```

3)Open visual studio by **“code .”** command.

4)Compile and run the application by **“dotnet build and dotnet run”**.



The screenshot shows the Visual Studio IDE with a C# file named Program.cs. The code defines a namespace 'app2' containing a class 'Program' with a 'Main' method that prints 'Hello World!'. The bottom pane shows the 'TERMINAL' tab with the following output:

```
Try the new cross-platform PowerShell https://aka.ms/powershell

PS C:\Users\hp\Desktop\app2> dotnet build
Microsoft (R) Build Engine version 16.11.0+0538acc04 for .NET
Copyright (C) Microsoft Corporation. All rights reserved.

Determining projects to restore...
All projects are up-to-date for restore.
app2 -> C:\Users\hp\Desktop\app2\bin\Debug\net5.0\app2.dll

Build succeeded.
    0 Warning(s)
    0 Error(s)

Time Elapsed 00:00:19.33
PS C:\Users\hp\Desktop\app2> dotnet run
Hello World!
PS C:\Users\hp\Desktop\app2>
```

Successfully compiled and run

5)Now we need to create libraries **with**

“dotnet new classlib -o <libname>”



The screenshot shows a terminal window with the following commands and output:

```
C:\Users\hp\Desktop>md app2
C:\Users\hp\Desktop>cd app2
C:\Users\hp\Desktop\app2>dotnet new console -o app
The template "Console Application" was created successfully.

Processing post-creation actions...
Running 'dotnet restore' on app\app.csproj...
  Determining projects to restore...
  Restored C:\Users\hp\Desktop\app2\app\app.csproj (in 80 ms).
Restore succeeded.

C:\Users\hp\Desktop\app2>dotnet new classlib -o mlab
The template "Class library" was created successfully.

Processing post-creation actions...
Running 'dotnet restore' on mlab\mlab.csproj...
  Determining projects to restore...
  Restored C:\Users\hp\Desktop\app2\mlab\mlab.csproj (in 94 ms).
Restore succeeded.

C:\Users\hp\Desktop\app2>dotnet new classlib -o clab
The template "Class library" was created successfully.

Processing post-creation actions...
Running 'dotnet restore' on clab\clab.csproj...
  Determining projects to restore...
  Restored C:\Users\hp\Desktop\app2\clab\clab.csproj (in 95 ms).
Restore succeeded.
```

Successfully created libraries named as “mlab” and “clab”

6) Now it's time to create Solution File with **“dotnet new sln –name <solution-file-name>”**

```
C:\Users\hp\Desktop\app2>dotnet new sln --name myproject
The template "Solution File" was created successfully.
C:\Users\hp\Desktop\app2>
```

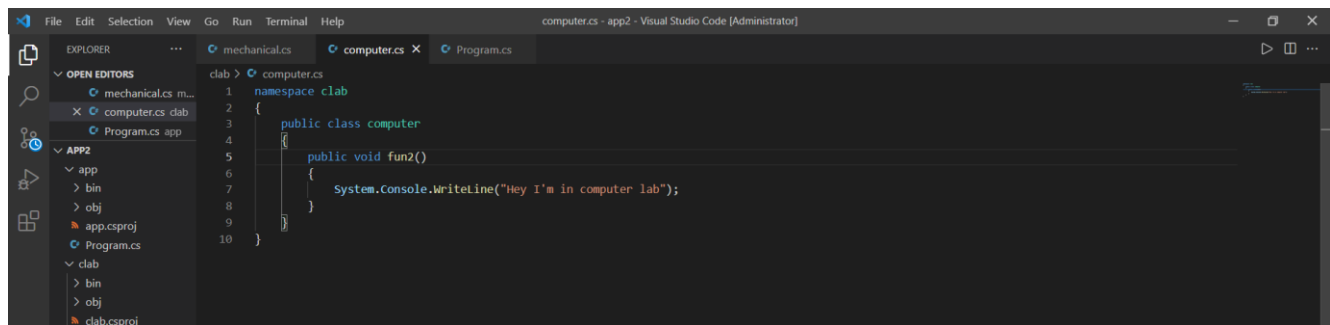
Successfully created solution file “myproject”

7) Now we have to add two libraries that we have created to solution file with **“dotnet sln add ../app2/app2.csproj”**

```
C:\Users\hp\Desktop\app2>cd myproject
C:\Users\hp\Desktop\app2\myproject>dotnet sln add ../app/app.csproj
Project '../app/app.csproj' added to the solution.
C:\Users\hp\Desktop\app2\myproject>dotnet sln add ../clab/clab.csproj
Project '../clab/clab.csproj' added to the solution.
C:\Users\hp\Desktop\app2\myproject>dotnet sln add ../mlab/mlab.csproj
Project '../mlab/mlab.csproj' added to the solution.
C:\Users\hp\Desktop\app2\myproject>cd..
C:\Users\hp\Desktop\app2>dir
Volume in drive C is Windows
Volume Serial Number is 36A3-5FA6
```

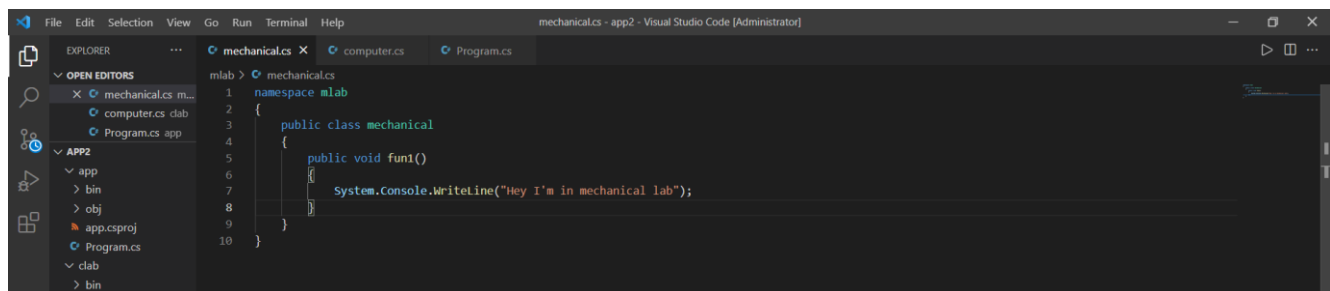
Successfully added app2.csproj, mlab.csproj
and clab.csproj to solution

8) Now for more clarification just create some functions.



The screenshot shows the Visual Studio Code editor with the 'computer.cs' file open. The code defines a namespace 'clab' containing a public class 'computer'. Inside the class, a public void method 'fun2()' is implemented, which calls 'System.Console.WriteLine("Hey I'm in computer lab");'.

```
1 namespace clab
2 {
3     public class computer
4     {
5         public void fun2()
6         {
7             System.Console.WriteLine("Hey I'm in computer lab");
8         }
9     }
10 }
```



The screenshot shows the Visual Studio Code editor with the 'mechanical.cs' file open. The code defines a namespace 'mlab' containing a public class 'mechanical'. Inside the class, a public void method 'fun1()' is implemented, which calls 'System.Console.WriteLine("Hey I'm in mechanical lab");'.

```
1 namespace mlab
2 {
3     public class mechanical
4     {
5         public void fun1()
6         {
7             System.Console.WriteLine("Hey I'm in mechanical lab");
8         }
9     }
10 }
```

Creating of Functions in computerlab and mechanicallab

9) Now we have to take reference from mlab, clab library to app2.csproj

```
Administrator: Command Prompt
Restore succeeded.

C:\Users\hp\Desktop\app2>dotnet new sln -o myproject
The template "Solution File" was created successfully.

C:\Users\hp\Desktop\app2>cd myproject

C:\Users\hp\Desktop\app2\myproject>dotnet sln add ../app/app.csproj
Project '../app/app.csproj' added to the solution.

C:\Users\hp\Desktop\app2\myproject>dotnet sln add ../clab/clab.csproj
Project '../clab/clab.csproj' added to the solution.

C:\Users\hp\Desktop\app2\myproject>dotnet sln add ../mlab/mlab.csproj
Project '../mlab/mlab.csproj' added to the solution.

C:\Users\hp\Desktop\app2\myproject>cd..

C:\Users\hp\Desktop\app2>dir
Volume in drive C is Windows
Volume Serial Number is 36A3-5FA6

Directory of C:\Users\hp\Desktop\app2

14-08-2021 12:19 <DIR> .
14-08-2021 12:19 <DIR> ..
14-08-2021 12:18 <DIR> app
14-08-2021 12:19 <DIR> clab
14-08-2021 12:19 <DIR> mlab
14-08-2021 12:19 <DIR> myproject
                   0 File(s)          0 bytes
                   6 Dir(s)  204,211,019,776 bytes free

C:\Users\hp\Desktop\app2>cd app

C:\Users\hp\Desktop\app2\app>dotnet add app.csproj reference ../mlab
Reference '../mlab/mlab.csproj' added to the project.

C:\Users\hp\Desktop\app2\app>dotnet add app.csproj reference ../clab
Reference '../clab/clab.csproj' added to the project.

C:\Users\hp\Desktop\app2\app>cd..

C:\Users\hp\Desktop\app2>code .

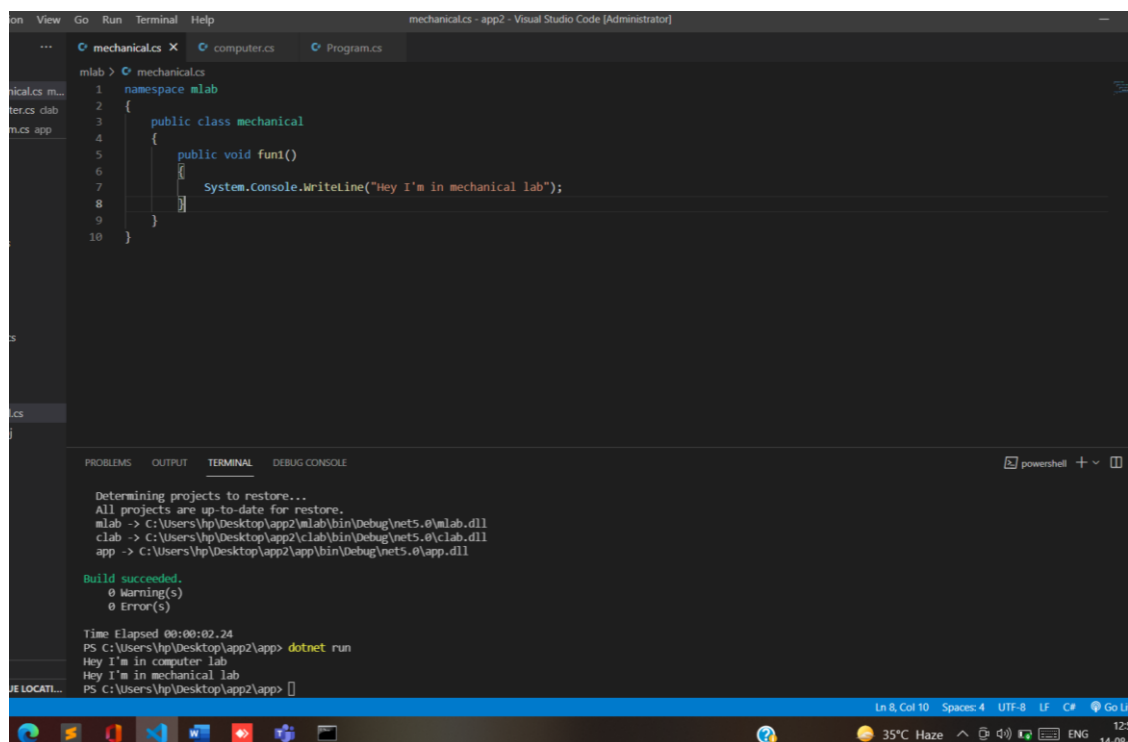
C:\Users\hp\Desktop\app2>code .

C:\Users\hp\Desktop\app2>code .
```

Successfully added references of mlab and clab to our application

“app2”

10) Finally we are calling mlab and clab by our application and successfully run



```
mechanical.cs x computer.cs Program.cs
mlab > mechanical.cs
1 namespace mlab
2 {
3     public class mechanical
4     {
5         public void fun1()
6         {
7             System.Console.WriteLine("Hey I'm in mechanical lab");
8         }
9     }
10 }
```

```
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
Determining projects to restore...
All projects are up-to-date for restore.
mlab -> C:\Users\hp\Desktop\app2\mlab\bin\Debug\net5.0\mlab.dll
clab -> C:\Users\hp\Desktop\app2\clab\bin\Debug\net5.0\clab.dll
app -> C:\Users\hp\Desktop\app2\app\bin\Debug\net5.0\app.dll
Build succeeded.
0 Warning(s)
0 Error(s)
Time Elapsed 00:00:02.24
PS C:\Users\hp\Desktop\app2\app> dotnet run
Hey I'm in computer lab
Hey I'm in mechanical lab
PS C:\Users\hp\Desktop\app2\app> 
```

Successfully compiled and run