# Assignment #1 – code explanation

1. What is the output of the code below

static async Task Main(string[] args)

{

Console.WriteLine("Async action program");

await Task.Run(() =>

{

Task.Delay(1000);

Console.Out.WriteLine("delayed message part 1");

});

Task.Run(async () =>

{

await Task.Delay(1000);

Console.Out.WriteLine("delayed message part 2");

});

Console.WriteLine("Post task message");

await Task.Run(() => { Console.Out.WriteLine("async action completed"); });

}

1. Explain what’s wrong with the code above
2. Fix the code above (if needed in order to log all sysout)

Please explain all changes in the code

**Answers:**

1. The output of the code will be:

Async action program

delayed message part 1

Post task message

async action completed

* 1. In the first Task.Run, Task.Delay(1000); is called without await,

not awaiting it means the delay won't be applied.

* 1. The second Task.Run is not awaited or stored in a variable.

In the event of exceptions , they will not be handled,

It is more correct to await tasks to check that they are finished and the exceptions are handled.

static async Task Main(string[] args)

{

Console.WriteLine("Async action program");

await Task.Run(async () =>

**// Changed to async lambda to await Task.Delay**

{

await Task.Delay(1000);

Console.Out.WriteLine("delayed message part 1");

});

await Task.Run(async () =>

**// Added await to ensure this task is completed before the program exits**

{

await Task.Delay(1000);

Console.Out.WriteLine("delayed message part 2");

});

Console.WriteLine("Post task message");

await Task.Run(() => { Console.Out.WriteLine("async action completed"); });

}

# Assignment #2 - User’s management API

Write an WEBAPI Controller with the following Methods

1. Create user
2. Delete user by UserId
3. Validate User by user and password

Guidance:

* Use DB Repository pattern
* Use Dependency injection pattern
* May Use in memory database / file / any other database
* User schema fields:

1. UserId
2. UserName
3. UserPassword

Please upload the source code to any Source control such as (github ,gitlab ,bitbucket etc)