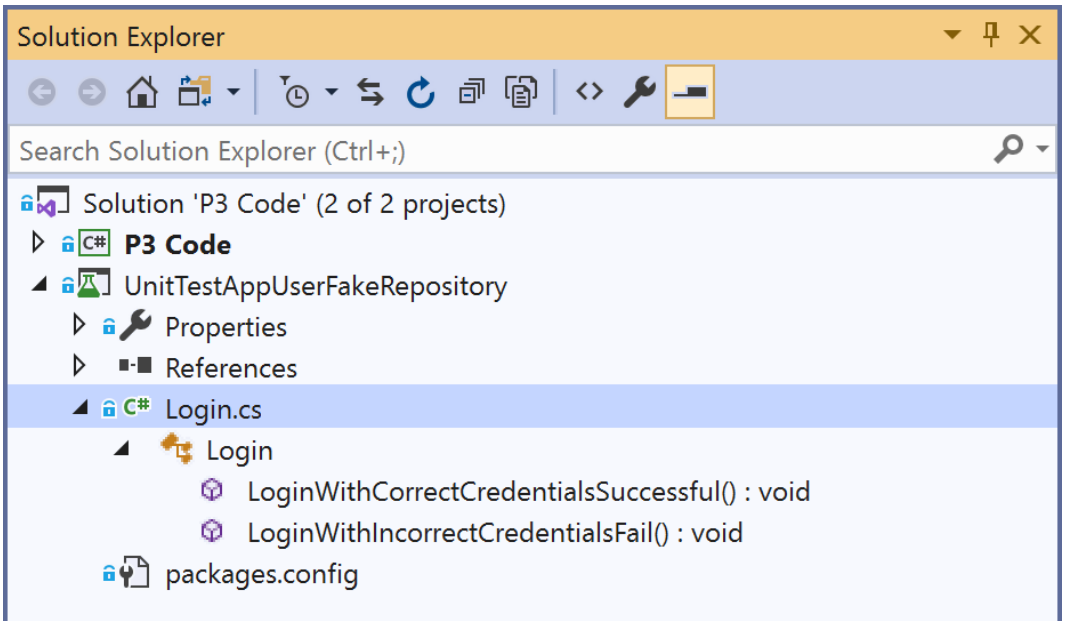
The goal of this assignment is to familiarize you with some techniques to simulate storage without having to connect to a database. We will use this technique for future project work. There are at least three parts to this approach: a class, an interface and an implementation of the interface as a fake data repository. You will use this code for future assignments as well. It also is an opportunity to experience creating and executing unit tests.

Create a new GitHub repository for this assignment, I suggest CSC470-P3. Make sure you, your team and me (davebish), the professor, all have access to that repository. Create a new Visual Studio 2019 solution.

The general idea for the assignment …

1. Create a class called AppUser with string attributes (UserName, Password, FirstName, LastName, EmailAddress) and bool attribute of IsAuthenticated
2. Create an Interface called IAppUserRepository. The interface shall have four methods:
   Login(string UserName, string Password) : bool
   GetAll() : List<AppUser>
   SetAuthentication(string UserName, bool IsAuthenticated) : void
   GetByUserName(string UserName) : AppUser
3. Create a class FakeAppUserRepository that implements the interface
4. Initialize the repository with a complete user for future use
5. Create two unit tests for the Login method (see example Solution Explorer view below). One test verifies a successful login and the other verifies a failed login attempt.



Each team member must have meaningful code commits to the repository.

Grading

- Correctly setup and organized GitHub repository that the professor can access effectively
- Repository commits evenly distributed between the team members
- Correct implementation of the classes and interfaces per the diagram below
- Correctly implemented (semantics and syntax) and passing tests named LoginWithCorrectCredentialsSuccessful() and LoginWithIncorrectCredentialsFail()
- Two separate projects within the single C# solution. One for the application code and one for the unit test project (see above Solution Explorer picture).