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| .NET Craft  Assignment 2 |  |

The objective of this assignment is to reinforce your understanding of unit testing principles and techniques in C# development, specifically focusing on testing the data access layer. By completing this assignment, you will demonstrate your ability to write unit tests that ensure the stability and reliability of the data access layer, enabling efficient detection of any changes in the database.

namespace UWorx.HR.Data

{

public class UserInfo

{

public string FirstName { get; set; }

public string MiddleName { get; set; }

public string LastName { get; set; }

}

public interface IUsersGateway

{

UserInfo GetUserInformation(string email);

bool UpdatePassword(string email, string password);

bool UpdateName(string email, string firstName, string middleName = null, string lastName = null);

}

}

* You need to implement the data access layer contract on the previous page; you can use Entity Framework, Stored Procedure based ADO.NET based data access layer or any other ORM/Data Access Library of your choice. You are required to then write unit tests for your data access layer using NUnit or MSTest frameworks.
* Your unit tests should cover various scenarios to ensure the robustness of the data access layer, some including but not limited to:
  + Testing data insertion, update, and deletion operations.
  + Validating data retrieval operations.
  + Handling edge cases such as null inputs, invalid data, and database constraints.
  + Verifying error handling and exception scenarios.

Litmus Test of your Data Access Layer and its Tests is; if we change database structure directly or corrupt the data; the data access layer and the tests should capture this and gracefully report failures. Imagine your tests running with Github Actions (CI/CD Pipeline scenario)

# Submission

* The submission deadline is June 3rd 12 noon.
* Create a Github repository and have your code there and share its URL in direct message. You can keep your repo private and make it public at/after deadline.
* Bonus points for having good test coverage.

# Incentive / Reward

If you perform well in this and upcoming assignments; you will be given a reward 😊