Classes

Objectives
- Implement complex programs using Python
- Solve problems using abstract data types
- Implement classes and methods
- Develop unit tests
- Use design patterns

Requirements

Develop an application to manage a list of contacts. Each contact is described by name and phone number and should be implemented as an ADT. The phone number is given as string and should be of length 10.

The application should allow CRUD (Create Read Update Delete) operations on a list of contact saved in the Repository class. The application should have a user interface based on a menu that gives the user different options for the CRUD operations.

Specific requirements:
- Develop a class Contact (domain layer) and a Python unit test for it (using unittest.TestCase)
- Develop a repository class managing a list of Contact objects (ContactRepository, infrastructure layer)
- Develop a controller class (application layer)
- Develop a UI class (UI layer)