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CM 1711
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CSSE 376
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Lab 4

[Question 1 (4 pts)] Explain, in your own words, the process used to mock the database and test the `getRoomOccupant` function.

The Rhino Mocks creates a mock database that is used by the `TestThatHotelDoesGetRoomOccupantFromTheDatabase` function. It allows the tester to simulate the calls to the database without the need to create a database. It also prevents the tester from having to worry about the test failing due to database connections problems. The `getRoomOccupant` function looks up in the database who in the room. The use of Rhino Mock allows us to create a mock database containing guests “Whale Rider” and “Raptor Wrangler” and run calls to the mock database to retrieve the guest names.

[Question 2 (4 pts)] Specify how you can use the `LastCall` class to throw an exception.

By using the `LastCall` class to throw an exception when the database doesn’t respond, the tester can be notified when the database doesn’t respond in a timely manner. It would look very similar to this:

```
LastCall.Throw(new TimeoutException("Connection to the database failed!."));
```

This is just one type of an exception the `LastCall` class can throw. It can be used to handle errors with mocking during the testing.

[Question 3 (4 pts)] In the above example, we used a “stub” since the mocked object returned a value. Do I need to use a stub if the mocked object did not return a value? Can I replace the stub with a `DynamicMock`?

No, you do not. Yes, if you are not returning a value.

[Question 4 (4 pts)] Explain, in your own words, the process used to mock the database and test the `AvailableRooms` property.

The Rhino Mocks creates a mock database that is used by the `TestThatHotelDoesGetRoomCountFromDatabase` function. It allows the tester to simulate the calls to the database without the need to create a database. It also prevents the tester from having to worry about the test failing due to database connections problems. The testing of the `AvailableRooms` function is tested by populating the mock database with rooms from a for loop. From there, we create a mock hotel in the database and return the available room count from the mock database and compare it to rooms list.

[Question 5 (4 pts)] Explain, in your own words, the process used to ensure that the service locator removes a car from its available cars when a car is booked.

When a car is booked, the service locator removes the car from the pool of available cars. It removes the car from the car list inside the `User` class in the `book` method. It uses `RemoveCar` function inside of the `book` function.