

Lab 3 Questions

Question 1) In what project is the source code found? In what project is the test code found?

The source code is found in the Expedia project. The test code is found in the ExpediaTest project.

Question 2) What classes exist in the project?

AssemblyInfo, Booking, Car, Flight, Hotel, and User

Question 3) Explain, in your own words, the functionality that is supported by the Flight class.

The Flight class manages the dates that the particular flight enters and leaves, along with the base price for the flight.

Question 4) What are the test classes in the project?

BookingTest, CarTest, FlightTest, HotelTest, and UserTest

Question 5) Identify the various test methods in the UserTest class.

[TestFixture()], [SetUp()], [Test()], and [TearDown()]

Question 6) Identify at least three different functions that are supposed by the Assert class.

Assert.Catch, Assert.ByVal, Assert.Contains

Question 7) Please explain the functions that you identified briefly.

Assert.Catch – Verifies that a delegate throws an exception and returns it

Assert.ByVal – Apply a constraint to an actual value

Assert.Contains – Asserts that an object is contained in a list.

Question 8) You may have noticed that there are two methods on the assert class named `AreEqual` and `AreSame`. These methods may seem identical, but there is a critical difference between them. Please explain the difference.

`AreEquals` verifies that two objects are the same, while `AreSame` checks if two objects refer to the same objects.

Question 9) What is the unit test `TestThatHotelInitializes` verifying?

The unit test is verifying that the `NightsToRentHotel` variable is not null.

Question 10) What is the generic algorithm for calculating `getBasePrice`?

```
return 45 * numberOfNightsToRent;
```

Question 11) What cases are tested with these new sets?

The tests are verifying if the integers are being multiplied correctly, with first 1, then 2, and finally 10.

Question 12) What don't we have to include `Assert.IsNotNull(target)` in each of these tests?

The `Hotel.cs` class has a condition if the `nightsToRent <= 0`, then throw a new `ArgumentOutOfRangeException("Nights to rent must be greater than zero!")`.

Question 13) Why does this test expect an exception?

The condition inside the constructor throws an `ArgumentOutOfRangeException` if any integers are less than 0.

Question 14) Please provide the attribute declaration to accompany a test case that expects an `OutOfMemoryException`.

```
[Test()]  
[ExpectedException(typeof(OutOfMemoryException))]  
public void TestThatHotelContainsNoMoreMemory()  
{  
    ....code;  
}
```