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CM 594

Lab 3: Unit Testing

1. The source code is found in the 'Expedia' Project and the test code is in the 'ExpediaTest' Project.
2. There are several classes in each project.
   Expedia: AssemblyInfo, Booking, Car, Flight, Hotel, User
   ExpediaTest: BookingTest, CarTest, FlightTest, HotelTest, UserTest
3. The flight class allows the creation of Flights, which are defined by a start date, end date, and distance in miles.
4. There are 5 classes in the Project: BookingTest, CarTest, FlightTest, HotelTest, UserTest
5. There are several Test classes in the UserTest Class: TestThatUserInitializes(), `TestThatUserHasZeroFrequentFlierMilesOnInit(),TestThatUserCanBookEverything(),TestThatUserHasFrequentFlierMilesAfterBooking(),TestThatUserCanBookAFlight(),TestThatUserCanBookAHotelAndACar(), and TestThatUserHasCorrectNumberOfFrequentFlyerMilesAfterOneFlight()`
6. Assert supports methods to test whether things are equal (.AreEqual, .AreNotEqual), whether they are the same object (.AreSame, .AreNotSame) and if an expression is false (.False).
7. .AreEqual asserts that two arguments are equal or both null, .AreNotEqual asserts that 2 arguments are not equal, .AreSame asserts that 2 arguments refer to the same object, AreNotSame asserts that the 2 arguments are not the same object, and .False asserts that an argument is false.
8. .AreEqual tests to see whether 2 arguments are either both null or equal in value by .equal, while .AreSame checks to see whether the 2 arguments refer to the same object.
9. This method is testing the constructor of Hotel.
10. The base price is calculated by multiplying the NumberOfNightsToRent by 45.
11. The tests verify the base prices for 1, 2, and 10 night stays.
12. We have already tested that the constructor for Hotel creates a non-null object.
13. If the argument to the constructor of Hotel is less than 1, then it throws an ArgumentOutOfRangeException.
14. [Test()]
    [ExpectedException(typeof(OutOfMemoryException))]