

Lab 4 – Advanced Unit Testing

1. In order to test the `getRoomOccupant` function, a mock was created based on the interface that a real database will follow. From there, values were set and expectations were established. The test then calls the `getRoomOccupant` function on the mock database and, assuming everything works as planned, the mock returns the values that were previously set.
2. `LastCall` can throw an exception using the `Throw` method. As an example, `LastCall.Throw(new Exception(myException))` would throw `myException` when it is called.
3. If the mock object does not return a value there is no need to use a stub. A `DynamicMock` would suffice in this situation.
4. In order to test the `AvailableRooms` function, a mock database is established by creating a stub based on the interface a real database would follow. A list of rooms was then created and the `Rooms` value for the stub was set to always be equal to this list. From there a new `Hotel` was created and linked to the database stub. It was then asserted that number of rooms returned by `AvailableRooms` was equal to the number of rooms in our created list.
5. When a `User` creates a `Booking`, there is a check to see if it is a `Car`. If this check returns true, the `User` class tells the current instance of the `ServiceLocator` to remove the `Car`.