Test Case Documentation

By the LCJJ SE:PT Development Team

Test Tracking

Representation of test cases for the Appointment Booking System.

Test Suite/Case	State	Last Ran	Comment	Assert
Integration				
BookingTest	**Pass**	**23:31 07/04/17**		**16**
BusinessOwnerTest	**Pass**	**0:10 08/04/17**		**27**
CustomerTest	**Pass**	**0:20 08/04/17**		**23**
EmployeeTest	**Pass**	**0:23 08/04/17**		**10**
WorkingTimeTest	**Pass**	**0:36 08/04/17**		**18**
AvailabilityTest	**Fail**	**23:31 07/04/17**	**Not Created**	
Suite Summary	**Some Pass**			**94**
Unit				
BookingTest	**Pass**	**23:31 07/04/17**		**2**
Suite Summary	**All Pass**			**2**
Browser				
AddEmployeeTest	**Pass**	**20:59 09/04/17**		**58**
BookingHistoryTest	**Pass**	**21:05 09/04/17**		**25**
BookingsTest	**Pass**	**21:09 09/04/17**		**3**
BusinessOwnerDashbardTest	**Pass**	**21:14 09/04/17**		**8**
BusinessOwnerInformationTest	**Pass**	**21:17 09/04/17**		**8**
BusinessOwnerRegistrationTest	**Pass**	**21:22 09/04/17**		**41**
BusinessOwnerRosterTest	**Pass**	**21:40 09/04/17**		**26**
BusinessOwnerSummaryTest	**Pass**	**21:28 09/04/17**		**39**
CustomerLoginTest	**Pass**	**21:29 09/04/17**		**11**
CustomerRegistrationTest	**Pass**	**21:35 09/04/17**		**49**
Suite Summary	**All Pass**			**268**

Testing Environment

The tests are run on Git Bash program for this document. Operating system used is 64-bit Windows 10 Professional.

Using binary PHPUnit provided by Laravel with Composer (PHP package dependency manager) at `/vendor/bin/phpunit`.

Test Case Screenshots

Unit Tests

Since we're using Laravel (a PHP framework) it is difficult to test foundational features of the framework. Features include Eloquent models where it is meant to hit the database such as Booking::class or Customer::class.

The only time unit tests cases are created is when functions that return a calculated/formatted value such as getting the duration of booking.

Running command `vendor/bin/phpunit` runs tests in the tests/Unit folder.

```
± |dev ✓| → vendor/bin/phpunit
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

E                                                          1 / 1 (100%)

Time: 470 ms, Memory: 10.00MB

There was 1 error:

1) Tests\Unit\BookingsTest::testGetDurationOfBooking
ErrorException: Undefined index: start_time

C:\Users\jjohh\projects\git\SE-PT-Assignment\app\Booking.php:20
C:\Users\jjohh\projects\git\SE-PT-Assignment\tests\Unit\BookingsTest.php:29

ERRORS!
Tests: 1, Assertions: 0, Errors: 1.

 2017-04-07 23:13:31 □   JOHNNY-PC in ~/projects/git/SE-PT-Assignment
± |dev ✓| → |
```

Resolved an error occuring in test case and added another test function.

```
 2017-04-07 23:31:07 □   JOHNNY-PC in ~/projects/git/SE-PT-Assignment
± |dev U:2 x| → vendor/bin/phpunit
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

..                                                        2 / 2 (100%)

Time: 207 ms, Memory: 10.00MB

OK (2 tests, 2 assertions)
```

Running command `vendor/bin/phpunit tests/Unit/{test case}` runs selected tests given by the test case name.

BookingsTest

```
 2017-04-07 23:57:20 □   JOHNNY-PC in ~/projects/git/SE-PT-Assignment
± |dev U:2 x| → vendor/bin/phpunit tests/Unit/BookingsTest
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

..                                                        2 / 2 (100%)

Time: 212 ms, Memory: 10.00MB

OK (2 tests, 2 assertions)
```

Integration Tests

The main features of the Appointment Booking System rely on Eloquent models, which uses Object-Relational Mapping (ORM). Validation rules are tested in this test suite.

Running command `vendor/bin/phpunit tests/Integration` runs tests in the tests/Integration folder.

```
 2017-04-07 23:31:34    JOHNNY-PC in ~/projects/git/SE-PT-Assignment
± |dev U:2 x| → vendor/bin/phpunit tests/Integration
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

...........................................              43 / 43 (100%)

Time: 2.41 seconds, Memory: 24.00MB

OK (43 tests, 94 assertions)
```

BookingTest
Tests the booking Eloquent model.

```
 2017-04-07 23:57:31    JOHNNY-PC in ~/projects/git/SE-PT-Assignment
± |dev U:2 x| → vendor/bin/phpunit tests/Integration/BookingTest
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

............                                            12 / 12 (100%)

Time: 1.49 seconds, Memory: 14.00MB

OK (12 tests, 16 assertions)
```

BusinessOwnerTest
Tests the business owner Eloquent model with form validation through HTTP requests. Requests are sent through JSON and response is asserted.

Tests validation rules for:

- Business name
- First name
- Last name
- Username
- Password
- Phone
- Address

```
 2017-04-08 00:10:52    JOHNNY-PC in ~/projects/git/SE-PT-Assignment
± |dev U:2 x| → vendor/bin/phpunit tests/Integration/BusinessOwnerTest
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

.......                                                 7 / 7 (100%)

Time: 438 ms, Memory: 14.00MB

OK (7 tests, 27 assertions)
```

CustomerTest
Tests the customer Eloquent model with form validation through HTTP requests. Requests are sent through JSON and response is asserted.

Tests validation rules for:

- First name
- Last name
- Username
- Password
- Phone
- Address

EmployeeTest
Tests the employee Eloquent model with form validation through HTTP requests. Requests are sent through JSON and response is asserted.

Tests validation rules for:

- Title (job title)
- First name
- Last name
- Phone

WorkingTimeTest
Tests the working time Eloquent model with form validation through HTTP requests. Requests are sent through JSON and response is asserted.

Tests validation rules for:

- Start time
- End time
- Date

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Browser Tests

The browser tests are the final acceptance tests to make sure the GUI and all its functional elements are working as they should. Browser tests are run using the Laravel Dusk extension rather than PHPUnit which the previous tests have been running on. To run the suite of browser tests simply run the "**php artisan dusk**" cmd from the root directory of the project.

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

.......................................................... 65 / 84 ( 77%)
.................                                          84 / 84 (100%)

Time: 13.76 minutes, Memory: 43.25MB

OK (84 tests, 284 assertions)
```

AddEmployeeTest
Tests the employees page on the Buisness Owner Dashboard.

Tests include:

- Displaying existing employees
- Showing validation errors on blank form fields
- Showing a message when no employees are in the system
- Successfully adding an employee to the system and displaying success
- Validation of employee title
- Validation of employee first name
- Validation of employee last name
- Validation of employee phone number
- Retaining form input on form validation failure

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk ./tests/browser/AddEmployeeTest.php
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

.........                                                 9 / 9 (100%)

Time: 2.61 minutes, Memory: 17.50MB

OK (9 tests, 58 assertions)
```

BookingHistoryTest
Tests the history page on the Buisness Owner Dashboard.

Tests include:

- Existence of the bookings history page
- Showing a message when no past bookings exist
- Display a single past booking
- Displaying multiple past bookings in correct order
- Not displaying future bookings
- Not displaying current day bookings

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk ./tests/browser/BookingHistoryTest.php
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

......                                                    6 / 6 (100%)

Time: 23.4 seconds, Memory: 16.50MB

OK (6 tests, 25 assertions)
```

BookingsTest

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk ./tests/browser/BookingsTest.php
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

...                                                       3 / 3 (100%)

Time: 9.35 seconds, Memory: 15.25MB

OK (3 tests, 3 assertions)
```

BusinessOwnerDashboardTest
Tests the routing on the Business Owner Dashboard

Tests include:

- A logged in business owner can access the Business Owner Information Page
- A logged in business owner can access the Summary of Bookings page
- A logged in business owner can access the Employees page
- A logged in business owner can access the Roster page
- A logged in business owner can access the History of Bookings page
- The above pages contain appropriate headings

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk ./tests/browser/BusinessOwnerDashboardTest.php
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

....                                                      4 / 4 (100%)

Time: 12.47 seconds, Memory: 15.50MB

OK (4 tests, 8 assertions)
```

BusinessOwnerInformationTest
Tests the information page on the Business Owner Dashboard

Tests include:

- Tests the page exists and is at the right path
- A guest cannot access the Business Owner Information page
- A customer cannot access the Business Owner Information Page
- The information of the business owner is displayed correctly on the information page

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk ./tests/browser/BusinessOwnerInformationTest.php
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

....                                                          4 / 4 (100%)

Time: 12.39 seconds, Memory: 15.50MB

OK (4 tests, 8 assertions)
```

BusinessOwnerRegisterTest
Tests the registration form for registering a new business owner (/admin/register)

Tests include:

- Successfully registering a Business Owner with valid information
- The registration page exists and is accessible
- The registration page contains a register button
- The page is accessible only when no Business Owner is registered
- The page cannot be access by a customer
- The form will show validation errors on blank inputs
- Validation of first name input
- Validation of last name input
- Validation of business name input
- Validation of username input (including being unique to customer usernames)
- Validation of password and password confirmation
- Validation of phone input
- Validation of address input

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk ./tests/browser/BusinessOwnerRegisterTest.php
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

............                                                  12 / 12 (100%)

Time: 3.23 minutes, Memory: 18.25MB

OK (12 tests, 41 assertions)
```

BusinessOwnerRosterTest
Tests the roster page on the business owner dashboard

Tests include:

- Verifying the roster page exists and is accessible by an authenticated business owner
- Employees appear correctly in the employee drop down list
- Working times appear with correct times and their corresponding employee
- An employee can only have one working time per day
- An employee can have working times on the same day during different weeks
- Two different employees can have working times on the same day
- A working start time must always be before a working end time
- The working start time cannot equal the working end time

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk ./tests/browser/RosterTest.php
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

........                                              8 / 8 (100%)

Time: 1.62 minutes, Memory: 17.00MB

OK (8 tests, 26 assertions)
```

BusinessOwnerSummaryTest
Tests the summary of bookings page on the business owner dashboard

Tests include:

- Verifying the summary page exists and can be accessed by an authenticated Business Owner
- Verifying the summary page has appropriate headings of Employee Availability and Summary of Bookings
- Displaying a single upcoming booking entry
- Displaying multiple upcoming booking entries
- Displaying current day booking entries
- Not displaying bookings too far in the future (further than 7 days)
- Not displaying past booking entries
- Displaying all employee availabilities
- Displaying when employees aren't available

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk ./tests/browser/BusinessOwnerSummaryTest.php
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

.........                                             9 / 9 (100%)

Time: 33.5 seconds, Memory: 17.50MB

OK (9 tests, 39 assertions)
```

CustomerLoginTest
Tests the login page for the customer

Tests include:

- The login pages exists and is located at the /login directory
- The login page contains a sign in button
- The login page contains a register button
- A valid customer can login using their username and password
- A customer can't login with a bad password (variation of password eg. Case-sensitivity, encrypted password, blank password)
- An authenticated customer can't return to the login screen while still logged in
- An authenticated customer can log out
- The login page displayed validation errors for invalid login credentials

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk ./tests/browser/CustomerLoginTest.php
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

.......                                                  7 / 7 (100%)

Time: 43.16 seconds, Memory: 16.50MB

OK (7 tests, 11 assertions)
```

CustomerRegisterTest
Tests the customer registration page

Tests include:

- The registration page exists and is located at the /register directory
- The registration page has a 'Register' button to complete registration
- An authenticated customer can't visit the customer registration page
- The registration page retains input on a failed validation
- A customer with valid credentials can register an account
- The registration page displays validation errors for blank fields
- Validation of first name input
- Validation of last name input
- Validation of username (including uniqueness from other customers and business owner)
- Validation of password input and password confirmation input
- Validation phone input
- Validation of address input

```
Craig@SUPERCOMPUTER MINGW64 /c/xampp/htdocs/sept
$ php artisan dusk ./tests/browser/CustomerRegisterTest.php
PHPUnit 5.7.17 by Sebastian Bergmann and contributors.

...............                                          15 / 15 (100%)

Time: 3.65 minutes, Memory: 19.50MB

OK (15 tests, 49 assertions)
```