

Testing Document

Revision History

Version	Date	Description	Author
Testing Phase	March 30, 2017	First draft.	Michael Thomas

Functionality Tested

The functionality we chose to test was booking rooms. We decided that it would be the best thing to test since it is the most important part of the application. The software is meant to allow users to book rooms as its primary function, so it would be the essential function to test and get running perfectly.

Partitioning Testing

We chose to restrict the majority of user input throughout our application. The nature of web based programming furthers the need to us to be very cautious with what inputs we allow to be entered into the site. With that said we will provide the following equivalence classes for our partitioning testing. These equivalence classes represent valid and invalid inputs to the variable fields that we provide for the user.

The first step to booking a room is logging in. Our first test case analyzing the login process.

Test Case 1 (LG1)

A valid email and password is required for logging in. Here we will test the functionality of an invalid email. The email used is invalid but the password is valid for jon@test.com.

Email:	Password
jonny@test.com	testHash123

Test Case 2 (LG2)

Here we will test the functionality of an invalid password with a valid email.

Email:	Password
jon@test.com	garbagePassword

Test Case 3 (LG3)

The third login test combines both a valid email and valid login to ensure they work properly together

Email:	Password
jon@test.com	testHash123

The following test cases occur after a successful login. The next step is searching for a room. This can be done by searching based on parameters or by room id.

Test Case 4 (RS1)

Here we test searching for a room via room id. This test case uses an invalid room id.

Room ID
10000

Test Case 5 (RS2)

Again, we test searching for a room via room id. This test case uses an valid room id.

Room ID
201

Test Case 6 (RS3)

Here we test searching for a room via min capacity and room type. It is impossible to choose an invalid room type because we use a dropdown menu with set options all of which are acceptable, likewise you cannot enter an invalid capacity because we have a fixed ranged of inputs set. We will therefore only a search that should and shouldn't result in rooms. Here we test with inputs that should not return a room.

Capacity	Room Type
10	Bio Lab (we have no rooms of this type yet)

Test Case 7 (RS4)

Now we will test with a inputs that should return a room.

Capacity	Room Type
10	Computer Lab

After this step all input options are locked to valid options. It is impossible to perform any actions that are invalid from this point until the room is booked.

Partitioning Testing Results

Test Case	Expected Output	Actual Output
LG1	Login Error	Login Error
LG2	Login Error	Login Error
LG3	Successful Login	Successful Login
RS1	Invalid Room ID Error	Invalid Room ID Error
RS2	Successful search	Successful search
RS3	Unsuccessful search	Unsuccessful search
RS4	Successful search	Successful search

Boundary Value Testing

There are not many places where we allow inputs that can reach edge cases. However, we did come across some areas where testing near the boundaries of valid input was necessary. These include the following:

Test Case 1 (CC)

The calendar can cycle through months and years. The functionality used to implement this reaches a boundary on the first and last month of the year. So we tested changing between years on the calendar (Note this does not require any data input only interaction with UI elements by the user). For example going from December 2017 to January 2018.

Extending rooms was the other area where boundary testing was necessary. There are 2 scenarios where boundaries are reached. When the user tries to extend past 10pm – which we do not allow or when the user tries to extend a booking that has no available space after that booking.

Test Case 2 (ER1)

Here we attempt to extend the booking past 10pm.

Test Case 3 (ER2)

Here we attempt to extend into a space that is already taken.

Boundary Testing Results

Test Case	Expected Output	Actual Output
CC	Calendar month Jan 2018	Calendar month Jan 2018
ER1	Invalid booking time	Invalid booking time
ER2	Booking conflict	Booking conflict