Dhirubhai Ambani Institute of Information and Communication Technology

DA-IICT

IT314

Software Engineering

Group 18

Prof. Saurabh Tiwari

Unit Testing

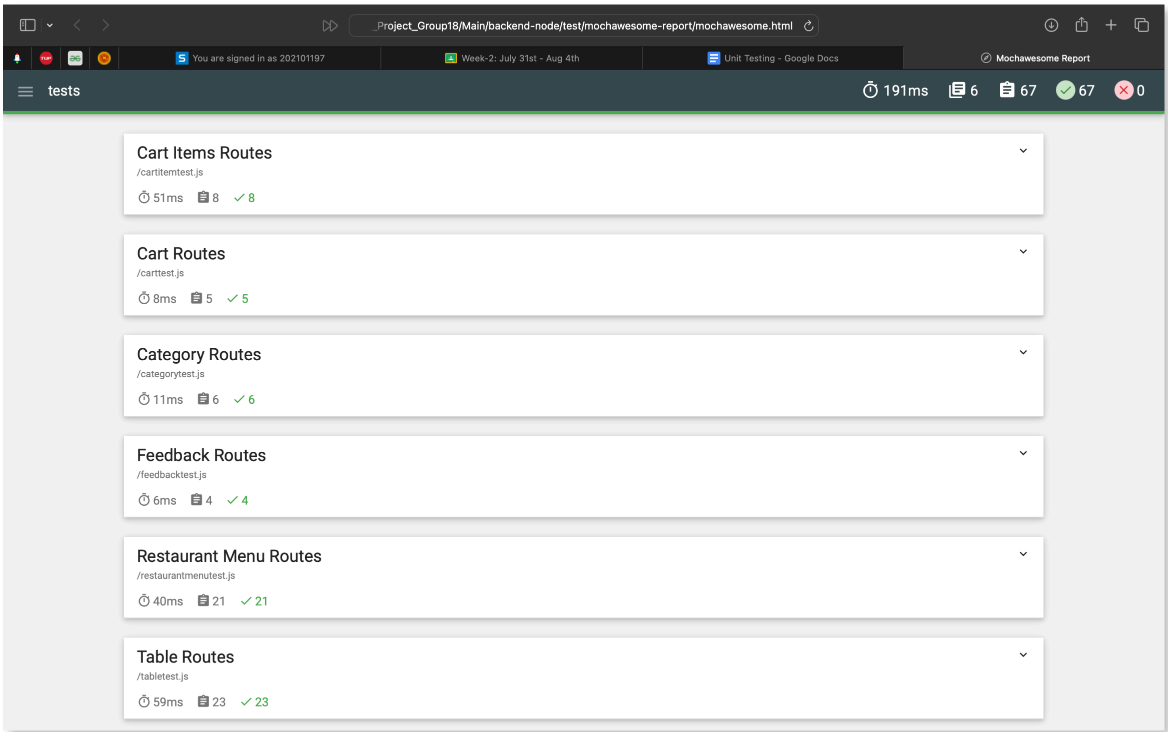
3 December 2023

Unit Testing Using Mocha and chai :

- When developing JavaScript, Mocha and Chai are frequently combined for unit testing. Mocha is a flexible testing framework that includes hooks for setup and teardown, asynchronous support, and an organized test structure. Mocha is enhanced by the assertion library Chai, which offers expressive assertion styles for more readable test code. Mocha is versatile and works well in both browser and Node.js environments, which is why the Mocha-Chai combination is well-liked in the JavaScript community for producing well-structured and dependable unit tests.

- Here, we generated different test cases based on backend code and functionality. Screenshots of the generated report's output for different route modules are attached below. All test cases are self-explanatory as per their name.

- Generated report looks like this. There are a total 6 modules for which we have unit tested.



_Project_Group18/Main/backend-node/test/mochawesome-report/mochawesome.html

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Week-2: July 31st - Aug 4th

Unit Testing - Google Docs

Mochawesome Report

tests ⏱ 191ms 6 67 ✓ 67 ✕ 0

Cart Items Routes
/cartitemtest.js
⏱ 51ms 8 ✓ 8

Cart Routes
/carttest.js
⏱ 8ms 5 ✓ 5

Category Routes
/categorytest.js
⏱ 11ms 6 ✓ 6

Feedback Routes
/feedbacktest.js
⏱ 6ms 4 ✓ 4

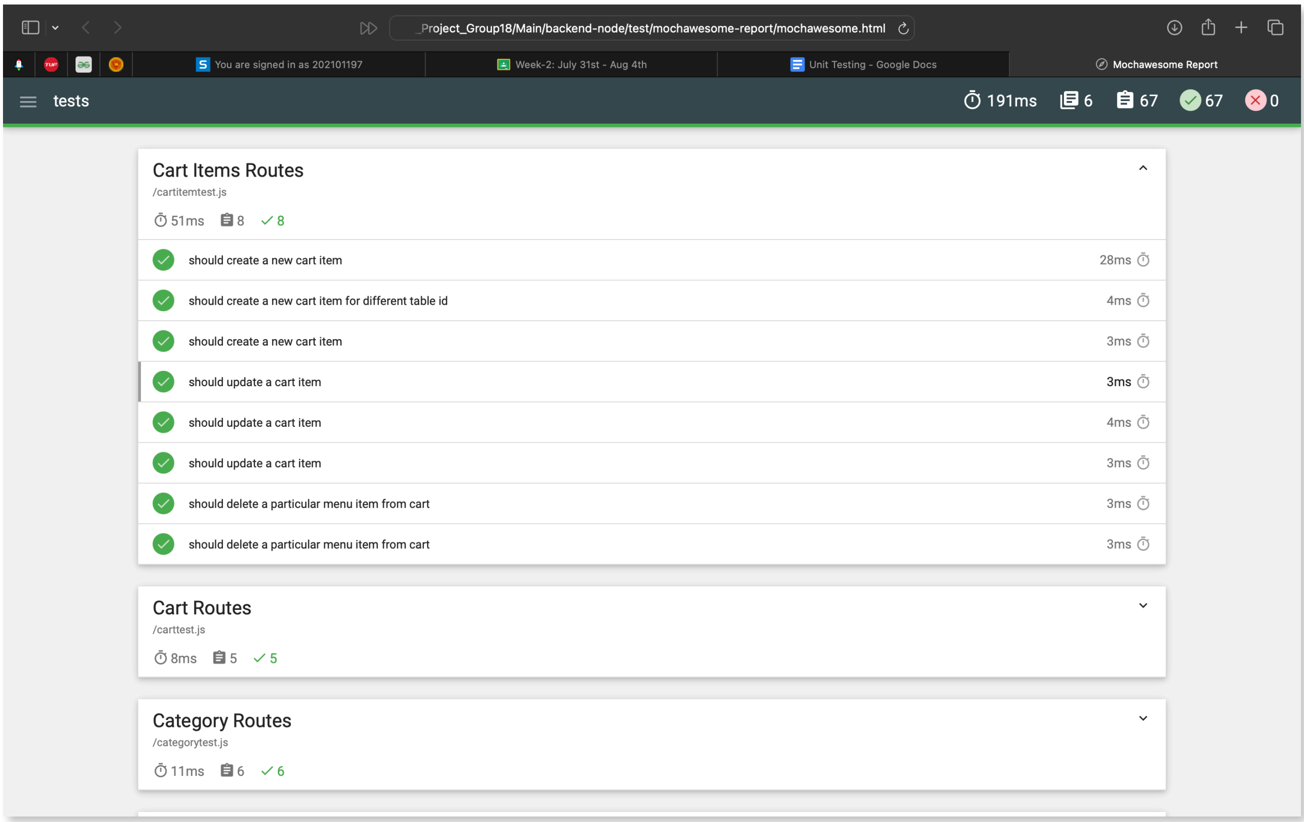
Restaurant Menu Routes
/restaurantmenutest.js
⏱ 40ms 21 ✓ 21

Table Routes
/tabletest.js
⏱ 59ms 23 ✓ 23

1. Cart item Route module(Total 8 test case) :

Test Cases Description:

Test case 1 : Cart item created for any dummy table when any menu item is added.
Test case 2 : Cart items should be created for different tables.
Test case 3 : Cart items should be created for the same table when a new menu item is added.
Test case 4,5,6 : Cart item should be updated on increasing and decreasing the quantity of any menu items.
Test case 7,8 : Particular menu item will be deleted from the cart when we press the cross button beside the menu item.



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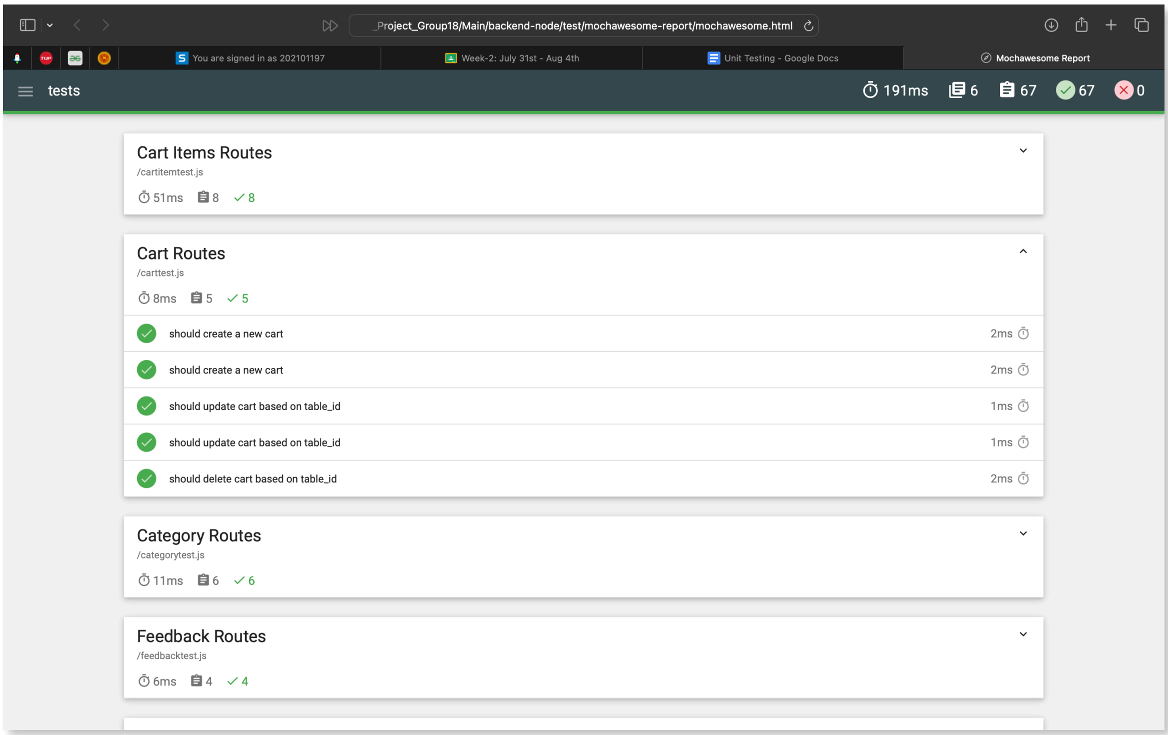
Unit Testing - Google Docs
Mochawesome Report
tests
191ms
6
67
67
0

```
Cart Items Routes
/cartitemtest.js
51ms  8  ✓ 8
✓ should create a new cart item                                28ms
✓ should create a new cart item for different table id          4ms
✓ should create a new cart item                                 3ms
✓ should update a cart item                                     3ms
✓ should update a cart item                                     4ms
✓ should update a cart item                                     3ms
✓ should delete a particular menu item from cart                3ms
✓ should delete a particular menu item from cart                3ms

Cart Routes
/carttest.js
8ms  5  ✓ 5

Category Routes
/categorytest.js
11ms  6  ✓ 6
```

2. Cart routes module (Total 5 test cases) :

Test Cases Description:

Test case 1 : Cart created for any dummy table when any menu item is added.
Test case 2 : Cart should be created for different tables.
Test case 3 : Cart should be created for the same table when a new menu item is added.
Test case 4,5 : Cart should be updated using table id and should be deleted using table id.


_Project_Group18/Main/backend-node/test/mochawesome-report/mochawesome.html
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Unit Testing - Google Docs
Mochawesome Report

tests ⏱ 191ms 6 67 ✓ 67 ✕ 0

Cart Items Routes
/cartitemtest.js
⏱ 51ms 8 ✓ 8

Cart Routes
/carttest.js
⏱ 8ms 5 ✓ 5

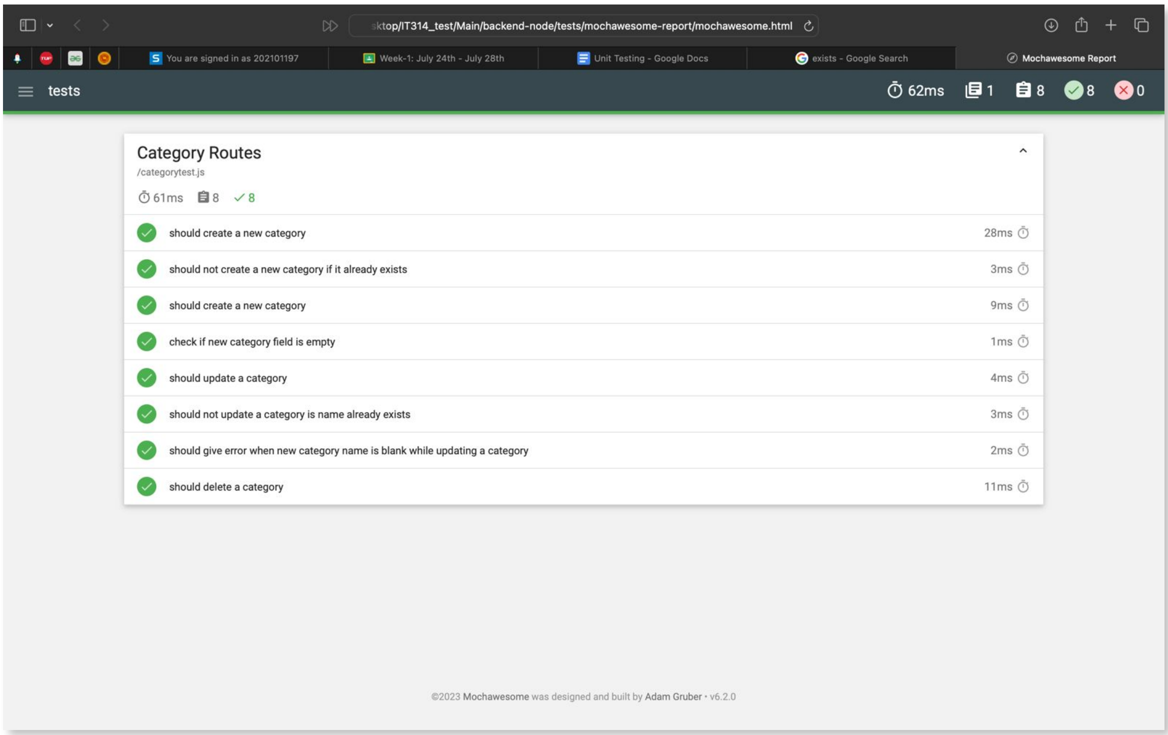
✓	should create a new cart	2ms ⏱
✓	should create a new cart	2ms ⏱
✓	should update cart based on table_id	1ms ⏱
✓	should update cart based on table_id	1ms ⏱
✓	should delete cart based on table_id	2ms ⏱

Category Routes
/categorytest.js
⏱ 11ms 6 ✓ 6

Feedback Routes
/feedbacktest.js
⏱ 6ms 4 ✓ 4

3. Category route module (Total 8 test cases) :

Test Cases Description:
Test case 1,3 : New category should be created if that particular category name is unique (if it doesn't pre-exist) and not null.
Test case 2 : New Category should not be created if that particular category name is not unique.
Test case 4 : New category should not be created if its category name is null.
Test case 5 : Category name should be updated if that particular category name is unique (if it doesn't pre-exist) and not null.
Test case 6 : Category name should not be updated if that particular category name is not unique.
Test case 7 : New category should not be updated if its category name is set null.
Test case 8 : Category should be deleted when we click on the delete button beside that particular category name.


sktop/IT314_test/Main/backend-node/tests/mochawesome-report/mochawesome.html
You are signed in as 202101197
Week-1: July 24th - July 28th
Unit Testing - Google Docs
exists - Google Search
Mochawesome Report
tests
62ms
1
8
8
0

Category Routes
/categorytest.js
⏱ 61ms 8 ✓ 8

✓ should create a new category	28ms
✓ should not create a new category if it already exists	3ms
✓ should create a new category	9ms
✓ check if new category field is empty	1ms
✓ should update a category	4ms
✓ should not update a category is name already exists	3ms
✓ should give error when new category name is blank while updating a category	2ms
✓ should delete a category	11ms

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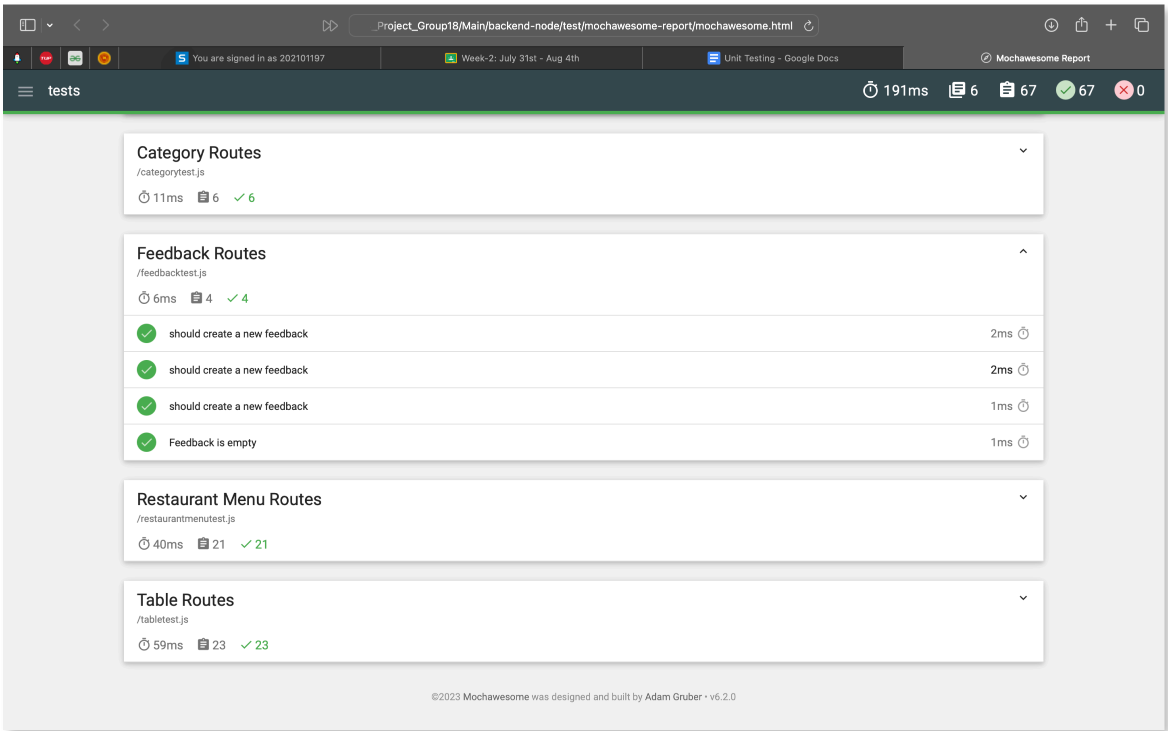
4. Feedback route module (Total 4 test cases) :

Test Cases Description:

Test case 1,2,3 : New feedback should be created on any particular date and time with foods and service ratings posted by customers.
Test case 4 : New feedback should be created on any particular date and time even with no foods and service ratings posted by customers.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Week-2: July 31st - Aug 4th
Unit Testing - Google Docs
Mochawesome Report

tests ⏱ 191ms 6 67 ✓ 67 ✕ 0

Category Routes
/categorytest.js
⏱ 11ms 6 ✓ 6

Feedback Routes
/feedbacktest.js
⏱ 6ms 4 ✓ 4

✓ should create a new feedback 2ms ⏱
✓ should create a new feedback 2ms ⏱
✓ should create a new feedback 1ms ⏱
✓ Feedback is empty 1ms ⏱

Restaurant Menu Routes
/restaurantmenutest.js
⏱ 40ms 21 ✓ 21

Table Routes
/tabletest.js
⏱ 59ms 23 ✓ 23

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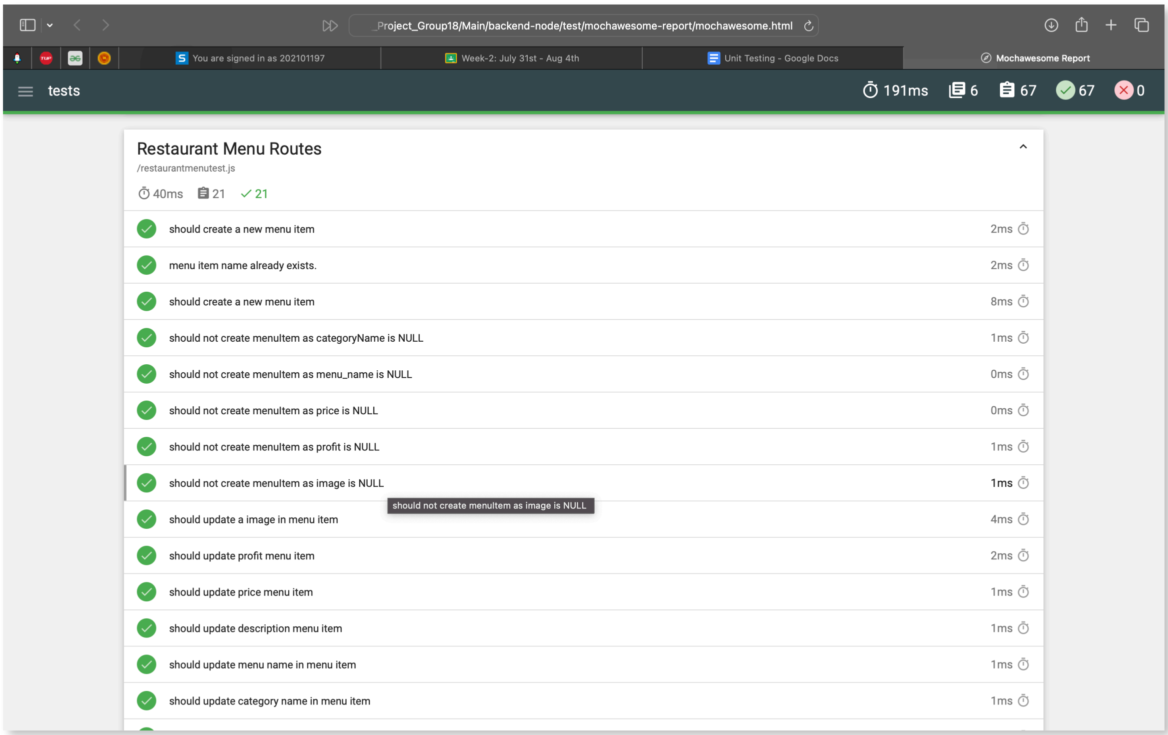
5. Restaurant Menu route module(Total 20 test cases) :

Test Cases Description:
Test case 1,3 : New menu item should be created if that particular menu name is unique (if it doesn't pre-exist) and not null.
Test case 2 : New menu item should not be created if that particular menu name is not unique.
Test case 4,5,6,7,8 : New menu item should not be created if any of the fields namely category name, menu name, price, profit and image is null.
Test case 9,10,11,12,13 : Menu name, category name, description, price, profit and image should be updated if that particular menu name is unique (if it doesn't pre-exist) and not null.
Test case 14 : Menu name should not be updated if that particular menu name is not unique.
Test case 15,16,17,18,19 : Menu name should not be updated if any of the fields namely category name, menu name, price, profit and image is set to null.
Test case 20 : Menu name should be deleted when we click on the delete button beside that particular menu name.



_Project_Group18/Main/backend-node/test/mochawesome-report/mochawesome.html
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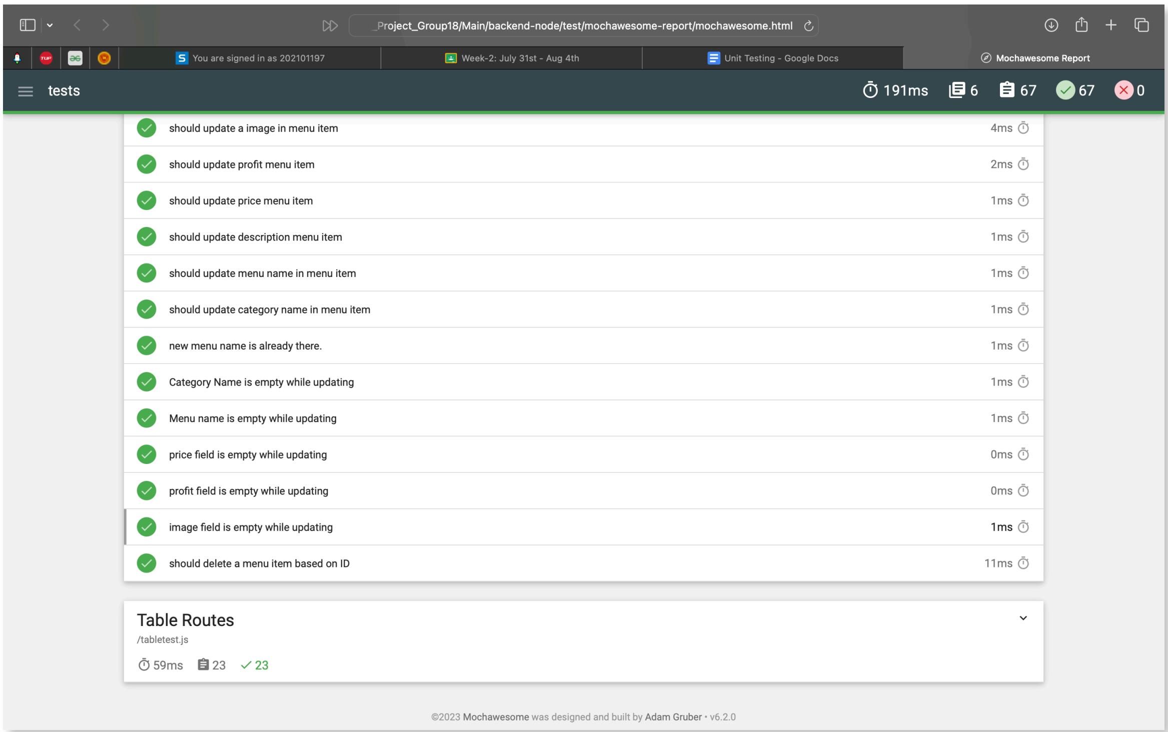
Unit Testing - Google Docs
Mochawesome Report
tests
191ms
6
67
67
0

```
Restaurant Menu Routes
/restaurantmenutest.js
40ms   21   ✓ 21

✓ should create a new menu item                          2ms
✓ menu item name already exists.                         2ms
✓ should create a new menu item                          8ms
✓ should not create menuItem as categoryName is NULL     1ms
✓ should not create menuItem as menu_name is NULL        0ms
✓ should not create menuItem as price is NULL            0ms
✓ should not create menuItem as profit is NULL           1ms
✓ should not create menuItem as image is NULL            1ms
                       should not create menuItem as image is NULL
✓ should update a image in menu item                     4ms
✓ should update profit menu item                         2ms
✓ should update price menu item                          1ms
✓ should update description menu item                    1ms
✓ should update menu name in menu item                   1ms
✓ should update category name in menu item              1ms
```



_Project_Group18/Main/backend-node/test/mochawesome-report/mochawesome.html
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Mochawesome Report

```
tests                                        ⏱ 191ms  6  67  ✓ 67  ✗ 0

✓ should update a image in menu item                 4ms
✓ should update profit menu item                     2ms
✓ should update price menu item                      1ms
✓ should update description menu item                1ms
✓ should update menu name in menu item               1ms
✓ should update category name in menu item           1ms
✓ new menu name is already there.                    1ms
✓ Category Name is empty while updating              1ms
✓ Menu name is empty while updating                  1ms
✓ price field is empty while updating                0ms
✓ profit field is empty while updating               0ms
✓ image field is empty while updating                1ms
✓ should delete a menu item based on ID             11ms

Table Routes
/tabletest.js
⏱ 59ms  23  ✓ 23

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```
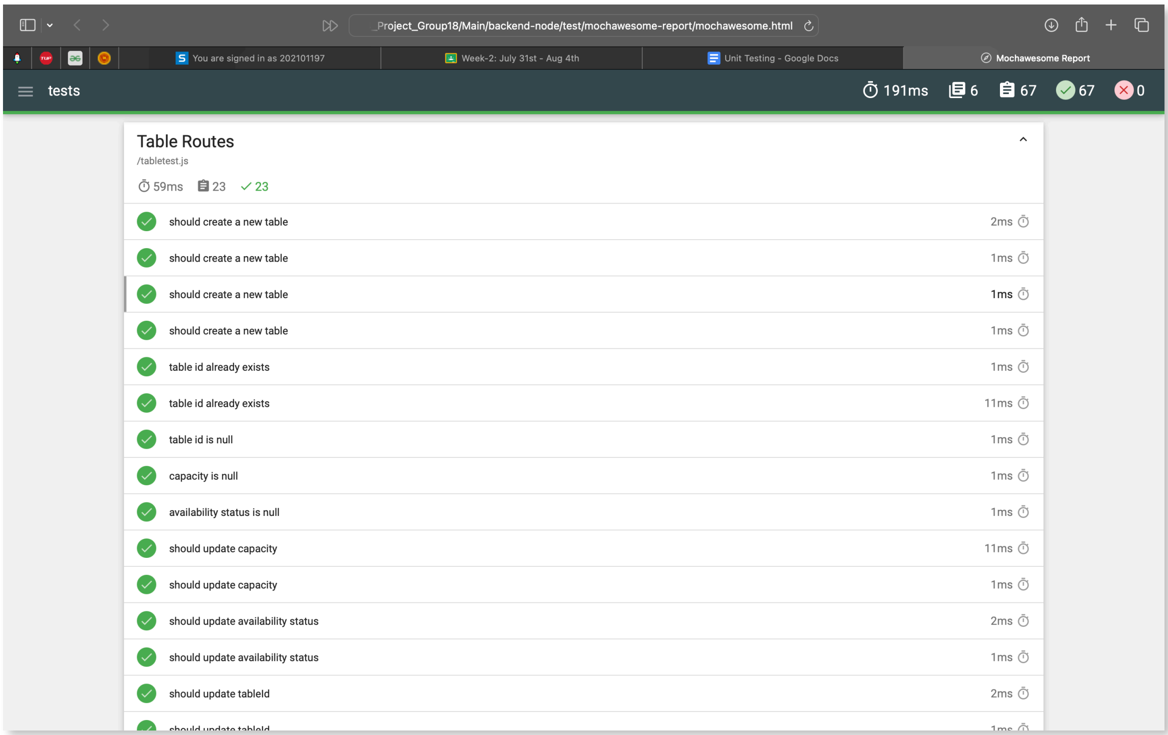

6. Table route module (Total 23 test cases) :

Test Cases Description:
Test case 1,2,3,4 : New table should be created if that particular table number is unique (if it doesn't pre-exist) and not null.
Test case 5,6 : New table should not be created if that particular table number is not unique.
Test case 7,8,9 : New table should not be created if any of the fields namely table number, capacity and availability status is null.
Test case 10,11,12,13,14,15 : Table number, capacity and availability status should be updated if that particular table number is unique (if it doesn't pre-exist) and not null.
Test case 16 : Table number should not be updated if that particular table number is not unique.
Test case 17 : Table number should not be updated if that particular table number is set to null.
Test case 18,19 : Table number should not be updated if that particular table's capacity or availability status is set to null.


_Project_Group18/Main/backend-node/test/mochawesome-report/mochawesome.html
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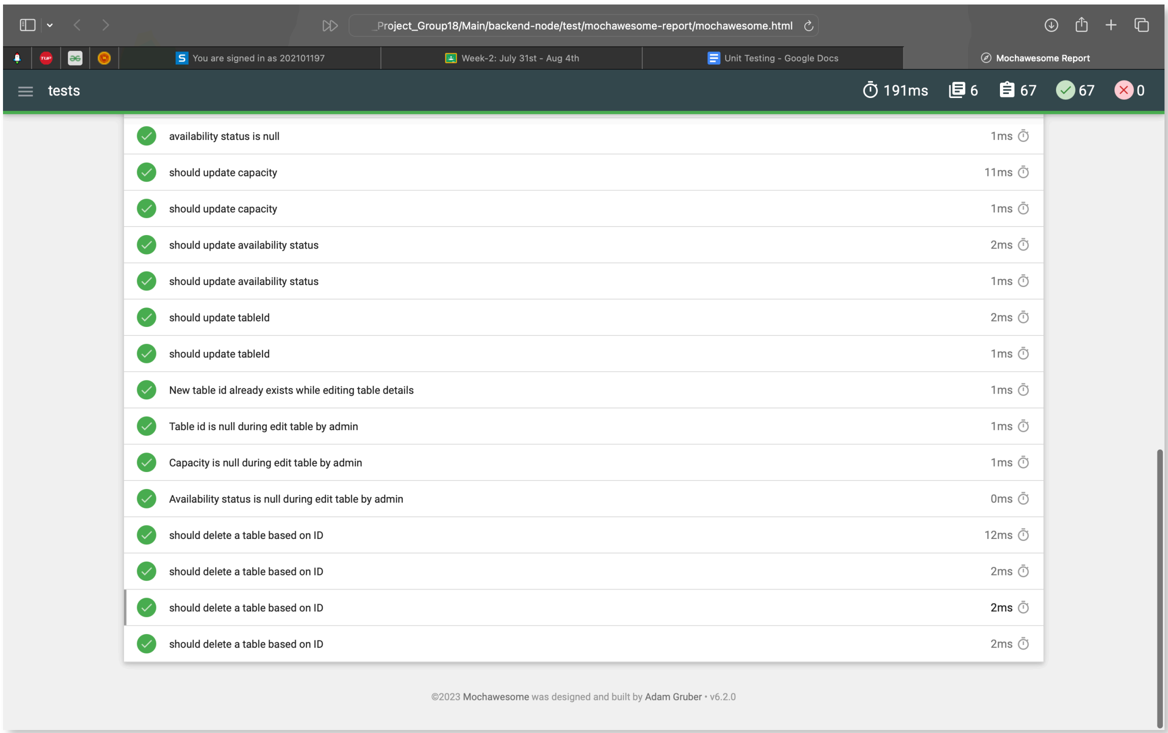
Week-2: July 31st - Aug 4th
Unit Testing - Google Docs
Mochawesome Report

```
tests                                        191ms  6  67  ✓ 67  ✕ 0

Table Routes
/tabletest.js
59ms  23  ✓ 23

✓ should create a new table                              2ms
✓ should create a new table                              1ms
✓ should create a new table                              1ms
✓ should create a new table                              1ms
✓ table id already exists                                1ms
✓ table id already exists                               11ms
✓ table id is null                                       1ms
✓ capacity is null                                       1ms
✓ availability status is null                            1ms
✓ should update capacity                                11ms
✓ should update capacity                                 1ms
✓ should update availability status                      2ms
✓ should update availability status                      1ms
✓ should update tableId                                  2ms
✓ should update tableId                                  1ms
```

Test case 20,21,22,23 : Table should be deleted when clicked on the delete button beside that particular table number.


_Project_Group18/Main/backend-node/test/mochawesome-report/mochawesome.html
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Unit Testing - Google Docs
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```
tests                                        191ms  6  67  ✓ 67  ✕ 0

✓ availability status is null                                       1ms
✓ should update capacity                                           11ms
✓ should update capacity                                            1ms
✓ should update availability status                                 2ms
✓ should update availability status                                 1ms
✓ should update tableId                                             2ms
✓ should update tableId                                             1ms
✓ New table id already exists while editing table details           1ms
✓ Table id is null during edit table by admin                       1ms
✓ Capacity is null during edit table by admin                       1ms
✓ Availability status is null during edit table by admin            0ms
✓ should delete a table based on ID                                12ms
✓ should delete a table based on ID                                 2ms
✓ should delete a table based on ID                                 2ms
✓ should delete a table based on ID                                 2ms

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```