Community Board

Testing

Team 4:
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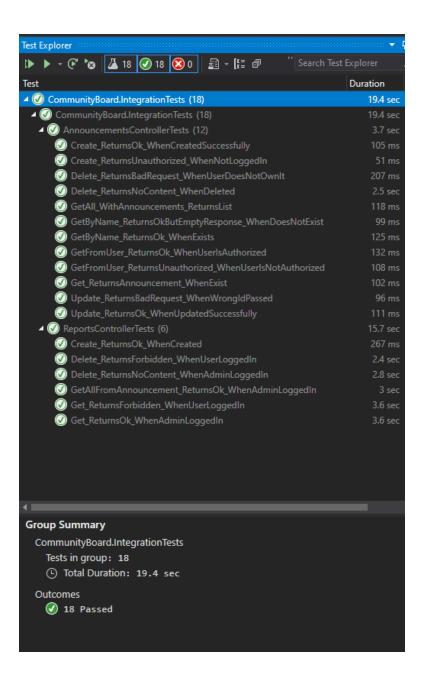George
Edgar

Testing Types

White Box Testing

Instead of unit testing, we used white box testing. After a component or class method was completed, it was tested and we made sure it worked. If it didn't, depending on the error, debugging was taken place in order to find the error and fix it at the moment.

Integration Testing

Individual modules of the REST API were combined and tested as a group. This mostly consisted of testing the two main Controllers (which handle HTTP requests/responses) and made sure we had a test for each possible output (such as Not Found, Unauthorized, OK, and BadRequest responses). When writing out the tests, xUnit, Fluent Assertions, and HttpClient C# libraries were used, which made it a lot easier to test. Also, we used the AAA (Arrange-Act-Assert) pattern when writing tests.
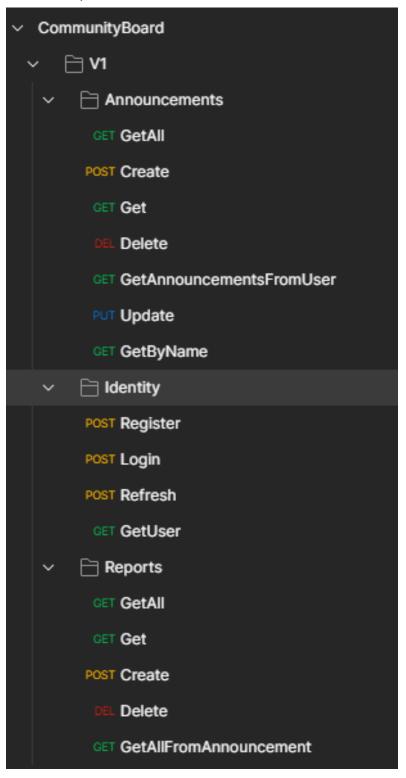
See test results in picture next page.

API Testing with Postman

When testing the API, we used Postman to perform all http requests such as GET, POST, PUT, DELETE. We made sure data was in JSON format and that data was being stored and retrieved from the database accordingly. We also tested and made sure user roles were giving correct http responses (i.e. users should get Forbidden or Unauthorized http status code when trying to view reports, only admins are allowed to do so).

API Endpoints:

- CommunityBoard
  - V1
    - Announcements
      - GET GetAll
      - POST Create
      - GET Get
      - DEL Delete
      - GET GetAnnouncementsFromUser
      - PUT Update
      - GET GetByName
    - Identity
      - POST Register
      - POST Login
      - POST Refresh
      - GET GetUser
    - Reports
      - GET GetAll
      - GET Get
      - POST Create
      - DEL Delete
      - GET GetAllFromAnnouncement

Sample API Valid Response:


```json
[
    {
        "id": 2026,
        "name": "Test Email Here Too",
        "type": 0,
        "description": "Can Test the email here as well!",
        "image": null,
        "createdAt": "2021-04-12T20:07:00.8161503",
        "userId": 1,
        "user": null
    },
    {
        "id": 2025,
        "name": "Test Email Here",
        "type": 1,
        "description": "For Email Testing",
        "image": null,
        "createdAt": "2021-04-12T20:06:36.1940169",
        "userId": 2,
        "user": null
    },
    {
        "id": 2024,
        "name": "Test Masonry",
        "type": 4,
        "description": "Some description Some description Some description Some description Some description Some description Some descriptionSome descriptionSome description",
        "image": null,
        "createdAt": "2021-04-05T22:02:31.9930606",
        "userId": 1,
        "user": null
```

Sample API Invalid Response (Unauthorized):

User/UI Testing

When testing the UI, we made sure all buttons, inputs, and elements worked and performed the expected result. Each one of us tested the website, and in Edgar's case, he asked out some friends and family members to test the website as well. The following chart was used for test cases.

Testing Chart

Test Case #	Description	Input	Expected Output	Actual Output	Pass/ Fail
1	Login using valid user name	User name	Redirect to Homepage	Same as Expected	Pass
2	Register with first name/last name	Main characters no special characters or numbers	Redirect to Login	Same	Pass
3	Register with first name/last name	With special characters and numbers	Redirect to Login	Same	Pass
4	Register with first name/last name	Leave blank	Show "required" message	Same	Pass
5	Register with email	Email includes @website.com	Redirect to Login	Same	Pass
6	Register with email	Does not include @	Show invalid email error	Same	Pass
7	Register with email	Does not include .com .net .edu	Show invalid email error	Redirect to Login	Fail
8	Register with email	With special characters	Show error	Same	Pass
9	Register with email	Leave blank	Show "required" message	Same	Pass

10	Terms and Conditions Checkbox	Check terms and condition box	Redirect to Login	Same	Pass
11	Terms and Conditions Checkbox	Leave uncheck	Show "required" message	Same	Pass
12	Created password with less than 8 characters	Less than 8	Show error	Same	Pass
13	Created password with more than 20 characters	More than 20	Valid Password	Same	Pass
14	Created password with between 8 and 20 characters	Password between 8-20 characters	Valid Password	Same	Pass
15	Contact page Subject field	Subject under 100 characters	Valid Subject	Same	Pass
16	Contact page Subject field	Subject over 100 characters	User input blocked	Same	Pass
17	Contact page Subject field	No characters in subject line	Required Message	Same	Pass
18	Contact page email body field	Type more than 500 characters	User input blocked	Same	Pass
19	Contact page email body field	Type less than 500 characters	Valid email body	Same	Pass
20	Contact page email body field	Leave blank	Required Message	Same	Pass
21	Report announcement page Report Reason field	Under 100 characters	Valid Report	Same	Pass
22	Report announcement page Report Reason field	Over 100 characters	User input blocked	Same	Pass

23	Report announcement page Report Reason field	No characters in subject line	Required Message	Same	Pass
24	Report announcement page Report Body field	Type more than 300 characters	User input blocked	Same	Pass
25	Report announcement page Report Body field	Type less than 300 characters	Valid Report Body	Same	Pass
26	Report announcement page Report Body field	Leave blank	Required Message	Same	Pass
27	Create & Update announcement page Name field	Under 80 characters	Valid Name	Same	Pass
28	Create & Update announcement page Name field	Over 80 characters	User input blocked	Same	Pass
29	Create & Update announcement page Name field	No characters in subject line	Required Message	Same	Pass
30	Create & Update announcement - Announcement type field	Non selected field	Required Message	Same	Pass
31	Create & Update announcement - Announcement type filed	Selected field	Valid Type	Same	Pass
32	Create & Update announcement - Picture field	No picture	Valid Announcement	Same	Pass
33	Create & Update announcement - Picture field	With picture	Valid Announcement	Same	Pass
34	Create & Update announcement - Announcement	Description of announcement less than 300 characters	Valid Announcement	Same	Pass

	description field				
35	Create & Update announcement - Announcement description field	Description of announcement more than 300 characters	User input blocked	Same	Pass
36	Create & Update announcement - Announcement description field	Leave blank	Required Message	Same	Pass
37	Create & Update announcement - Maximum 1080 x 1080 pixels on picture	Upload a picture with more than 1080 x 1080 pixel	Adjust picture to size	Same	Pass
38	Create & Update announcement - Minimum size 600 x 600 pixels	Upload a picture with less than 600 x 600 pixels	Adjust picture to size	Same	Pass
39	Create & Update announcement - upload multiple pictures at once	Upload multiple pictures at once	System won't let multiple	Same	Pass
40	Create & Update announcement - upload single pictures	Upload single picture	Valid picture	Same	Pass
41	Manage Page - Edit option button	Click	Redirects to Update Page	Same	Pass
42	Manage Page - Delete option button	Click	Deletes Announcement	Same	Pass
43	Upload Image Type	Non-image file	Invalid Image Error	Same	Pass
44	Upload Image Type	Image type (JPEG, PNG)	Valid Image	Same	Pass

45	Sending email - receiver should be announcement author	Test email	Should receive email	Same	Pass
46	Sending email - sender should be logged in user	Test email	Should send email	Incorrect email	Fail