QA Cinema Project

BY SHAMEER DAR, HAARIS MOGHAL, OLIVER DILLON AND ANDREW MCCALL

Introduction

Created a Full stack MERN application, with utilization of supporting tools and methodologies, covered during training.

Create a web application following the Enterprise Architecture Model, using:

- Presentation layer - A front-end written using React
- Business Layer - An expressJS API
- Data Layer – A Mongo database

Project Approach

Project objective:

- To create a functional Full Stack MERN application
- Focused on the MVP (Minimum Viable Product)

Project breakdown:

- Project Management platform – Jira-Kanban Board
- Key deliverables were split into user stories.
- Component Hierarchy and ERD diagrams
- CRUD back-end
- Fully integrated front end
- Testing : JEST, Chai and Mocha
- Styling
- Git management

Team Roles

Scrum Master:

- Oliver Dillon

Product Owner:

- Shameer Dar

Development Team:

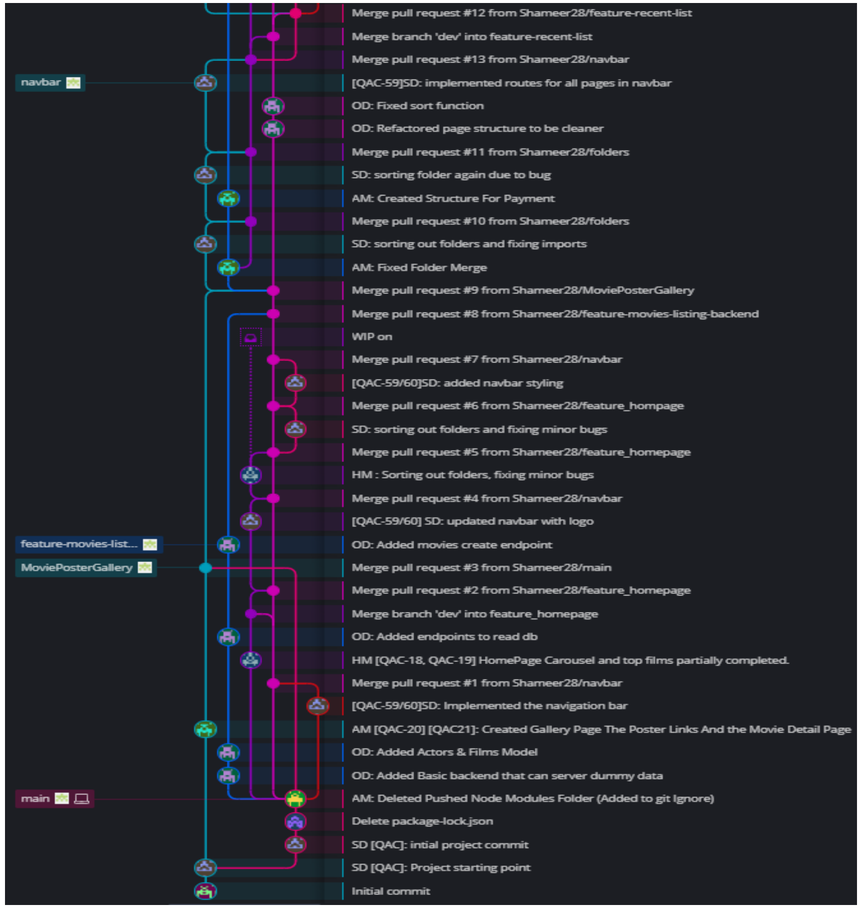
- Frontend Developers – Shameer Dar & Haaris Moghal
- Backend Developers – Oliver Dillon & Andrew McCall

Consultant Journey

- Version Control System:Git, Github.
- MERN Stack
- Testing –Mocha, Chai and JEST
- Project Management platform – Jira/Kanban board
- Postman

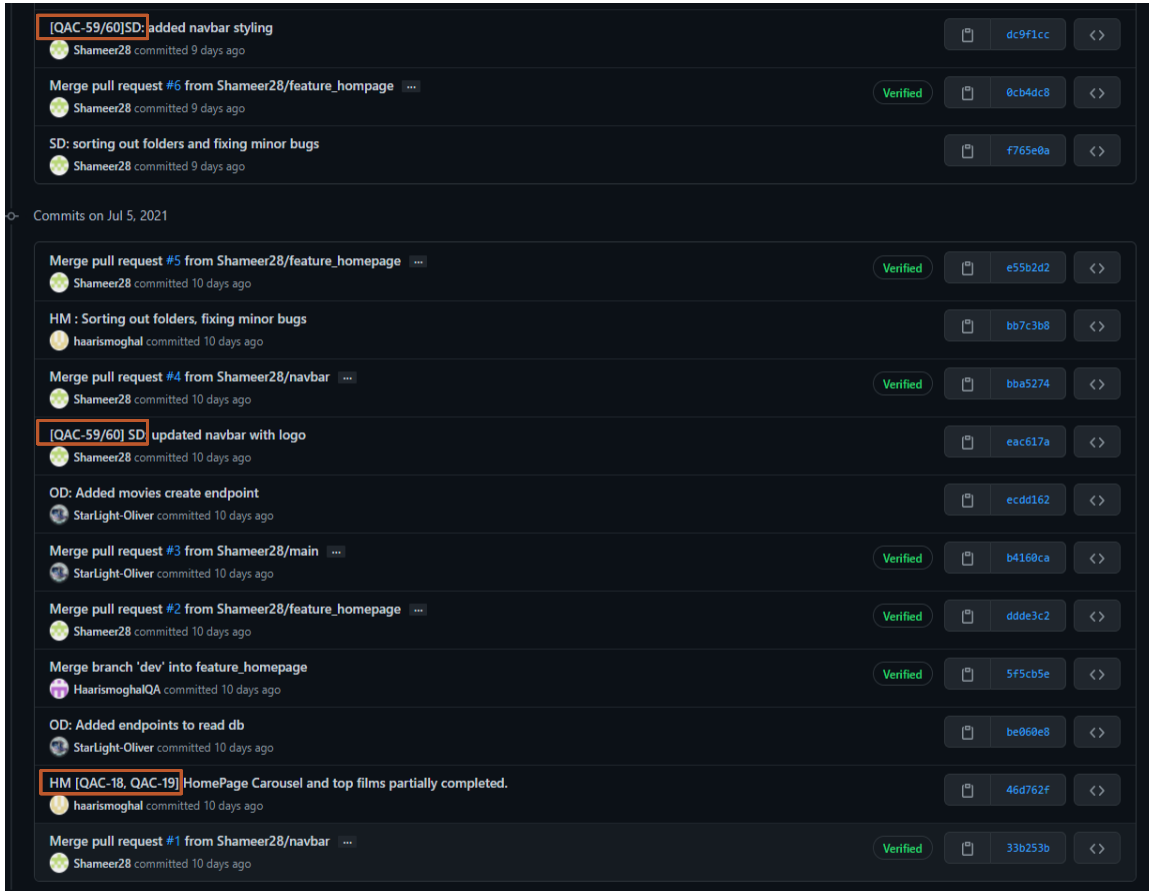
Continuous Integration

- Feature-branch model. (GitKraken)
- Regular commits to ensure project safety.



```
Merge pull request #12 from Shameer28/feature-recent-list
Merge branch 'dev' into feature-recent-list
Merge pull request #13 from Shameer28/navbar
[QAC-59]SD: implemented routes for all pages in navbar
OD: Fixed sort function
OD: Refactored page structure to be cleaner
Merge pull request #11 from Shameer28/folders
SD: sorting folder again due to bug
AM: Created Structure For Payment
Merge pull request #10 from Shameer28/folders
SD: sorting out folders and fixing imports
AM: Fixed Folder Merge
Merge pull request #9 from Shameer28/MoviePosterGallery
Merge pull request #8 from Shameer28/feature-movies-listing-backend
WIP on
Merge pull request #7 from Shameer28/navbar
[QAC-59/60]SD: added navbar styling
Merge pull request #6 from Shameer28/feature_hompage
SD: sorting out folders and fixing minor bugs
Merge pull request #5 from Shameer28/feature_homepage
HM : Sorting out folders, fixing minor bugs
Merge pull request #4 from Shameer28/navbar
[QAC-59/60] SD: updated navbar with logo
OD: Added movies create endpoint
Merge pull request #3 from Shameer28/main
Merge pull request #2 from Shameer28/feature_homepage
Merge branch 'dev' into feature_homepage
OD: Added endpoints to read db
HM [QAC-18, QAC-19] HomePage Carousel and top films partially completed.
Merge pull request #1 from Shameer28/navbar
[QAC-59/60]SD: Implemented the navigation bar
AM [QAC-20] [QAC21]: Created Gallery Page The Poster Links And the Movie Detail Page
OD: Added Actors & Films Model
OD: Added Basic backend that can server dummy data
AM: Deleted Pushed Node Modules Folder (Added to git Ignore)
Delete package-lock.json
SD [QAC]: intial project commit
SD [QAC]: Project starting point
Initial commit
```

Continuous Integration



```
[QAC-59/60]SD: added navbar styling
Shameer28 committed 9 days ago                                          dc9f1cc

Merge pull request #6 from Shameer28/feature_homepage ...
Shameer28 committed 9 days ago                                Verified  0cb4dc8

SD: sorting out folders and fixing minor bugs
Shameer28 committed 9 days ago                                          f765e0a

Commits on Jul 5, 2021

Merge pull request #5 from Shameer28/feature_homepage ...
Shameer28 committed 10 days ago                               Verified  e55b2d2

HM : Sorting out folders, fixing minor bugs
haarismoghal committed 10 days ago                                      bb7c3b8

Merge pull request #4 from Shameer28/navbar ...
Shameer28 committed 10 days ago                               Verified  bba5274

[QAC-59/60] SD: updated navbar with logo
Shameer28 committed 10 days ago                                         eac617a

OD: Added movies create endpoint
StarLight-Oliver committed 10 days ago                                  ecdd162

Merge pull request #3 from Shameer28/main ...
StarLight-Oliver committed 10 days ago                        Verified  b4160ca

Merge pull request #2 from Shameer28/feature_homepage ...
Shameer28 committed 10 days ago                               Verified  ddde3c2

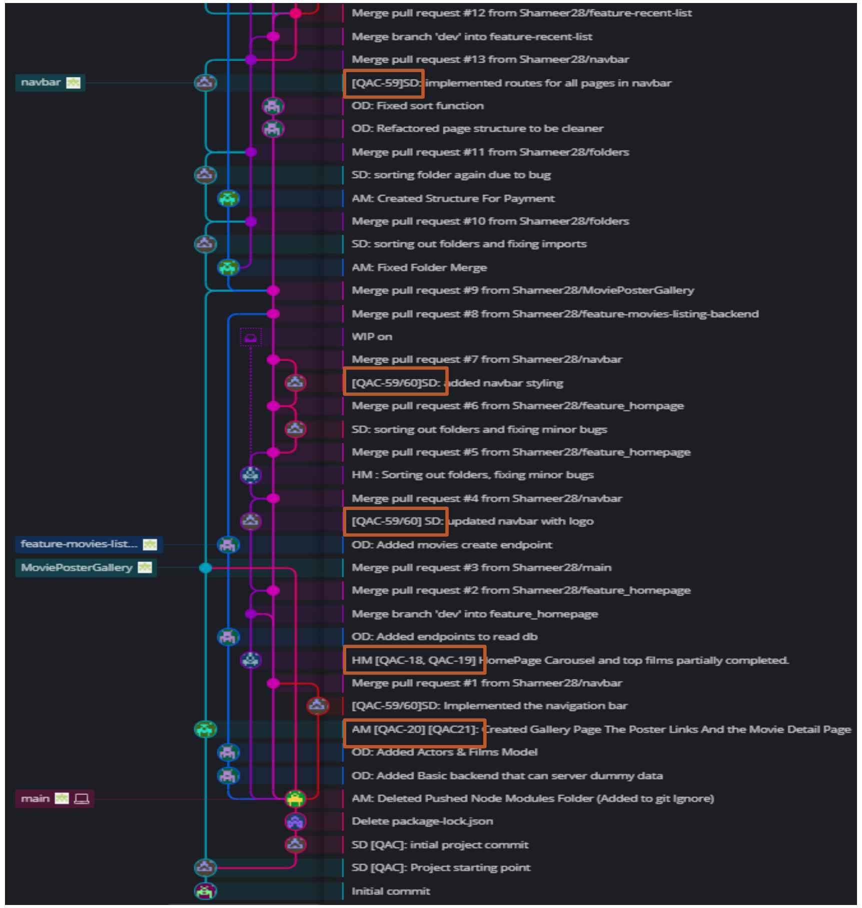
Merge branch 'dev' into feature_homepage
HaarismoghalQA committed 10 days ago                          Verified  5f5cb5e

OD: Added endpoints to read db
StarLight-Oliver committed 10 days ago                                  be060e8

HM [QAC-18, QAC-19] HomePage Carousel and top films partially completed.
haarismoghal committed 10 days ago                                      46d762f

Merge pull request #1 from Shameer28/navbar ...
Shameer28 committed 10 days ago                               Verified  33b253b
```

Added Jira
Tags
On relevant
commits



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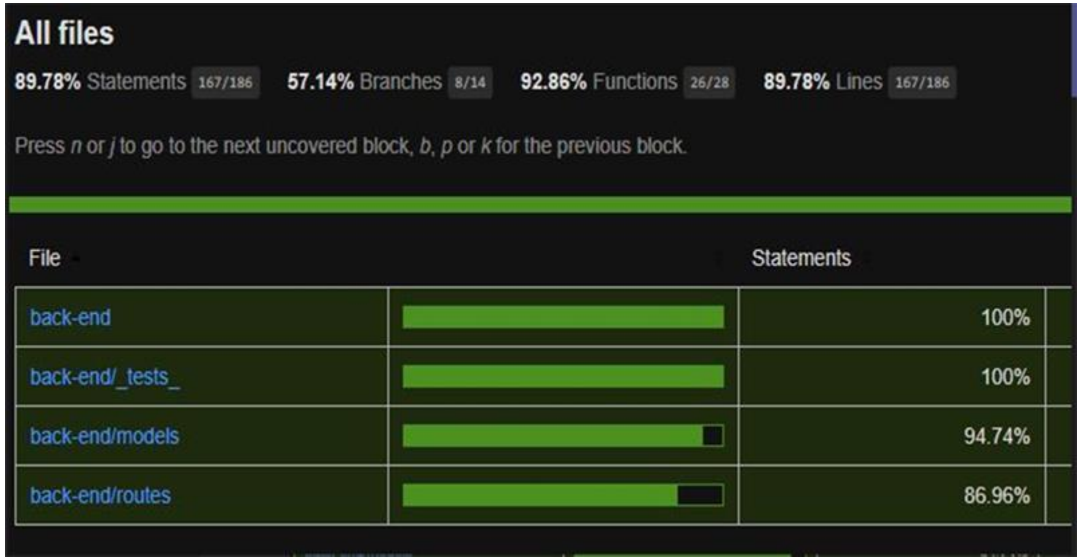
SD [QAC]: Project starting point
Initial commit
```

Backend Testing – Chai & Mocha

- Managed to get 89.78% test coverage on the backend.
- Chai how the test is run and Mocha was the test environment used.

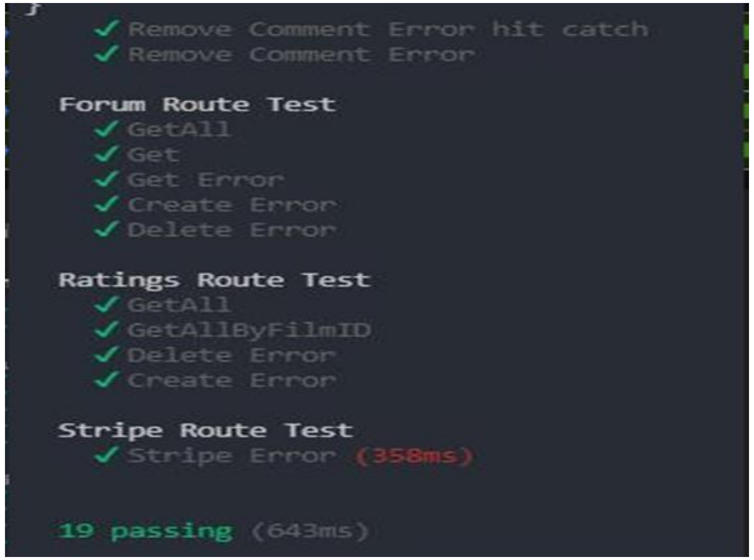


All files

89.78% Statements 167/186 **57.14%** Branches 8/14 **92.86%** Functions 26/28 **89.78%** Lines 167/186

Press *n* or *j* to go to the next uncovered block, *b*, *p* or *k* for the previous block.

File		Statements
back-end	🟩	100%
back-end/_tests_	🟩	100%
back-end/models	🟩	94.74%
back-end/routes	🟩	86.96%



```
    ✓ Remove Comment Error hit catch
    ✓ Remove Comment Error

  Forum Route Test
    ✓ GetAll
    ✓ Get
    ✓ Get Error
    ✓ Create Error
    ✓ Delete Error

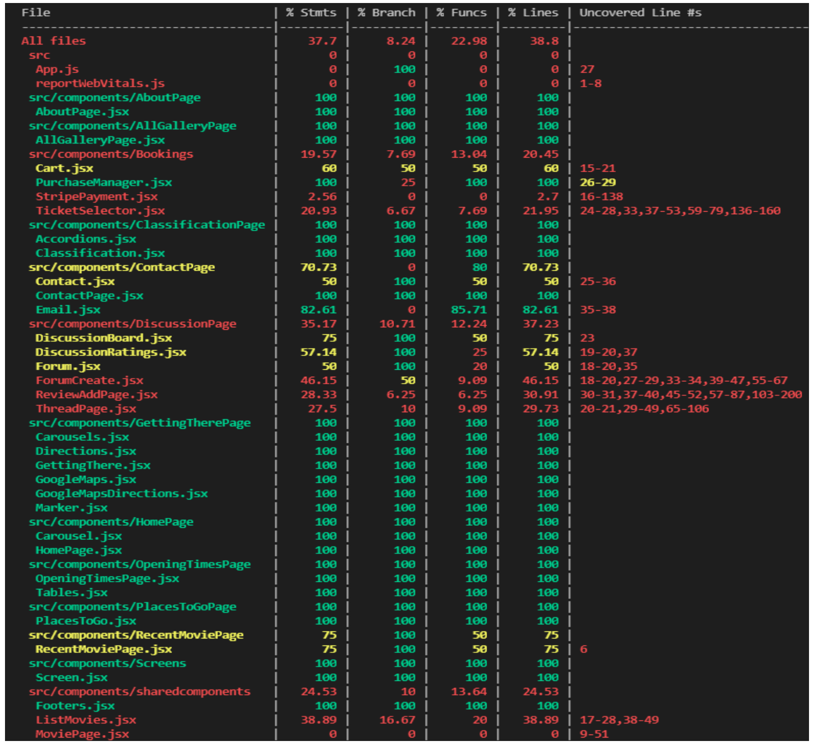
  Ratings Route Test
    ✓ GetAll
    ✓ GetAllByFilmID
    ✓ Delete Error
    ✓ Create Error

  Stripe Route Test
    ✓ Stripe Error (358ms)

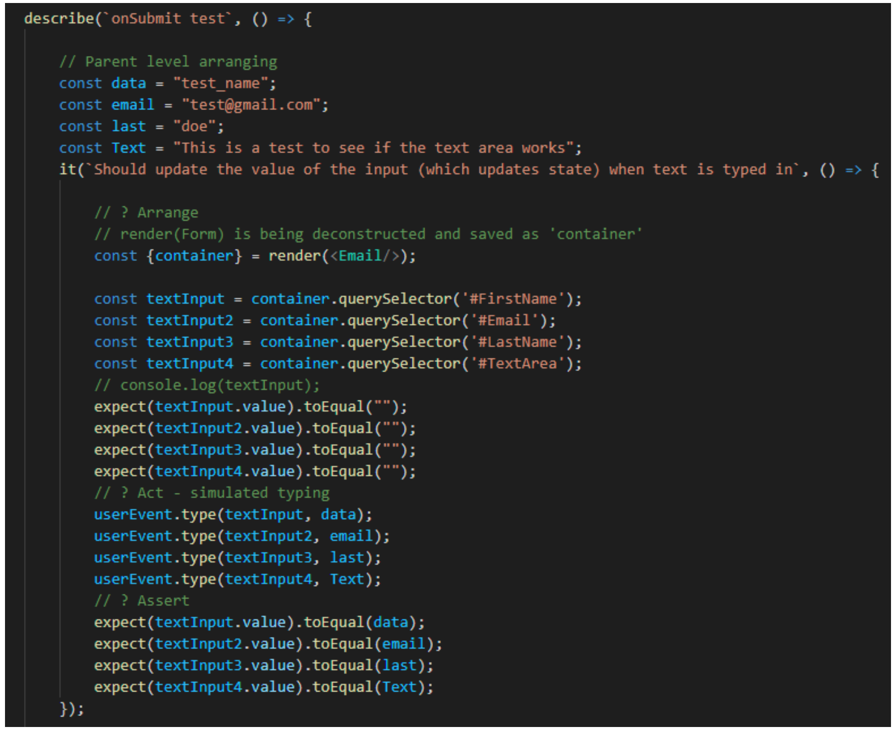

  19 passing (643ms)
```

Frontend Testing - JEST

- Jest is a JavaScript Testing Framework with a focus on simplicity.
- Code Coverage: Generate code coverage



```
File                                 | % Stmts | % Branch | % Funcs | % Lines | Uncovered Line #s
-------------------------------------|---------|----------|---------|---------|-------------------------------------
All files                            |    37.7 |     8.24 |   22.98 |    38.8 |
 src                                 |       0 |        0 |       0 |       0 |
  App.js                             |       0 |      100 |       0 |       0 | 27
  reportWebVitals.js                 |       0 |        0 |       0 |       0 | 1-8
 src/components/AboutPage            |     100 |      100 |     100 |     100 |
  AboutPage.jsx                      |     100 |      100 |     100 |     100 |
 src/components/AllGalleryPage       |     100 |      100 |     100 |     100 |
  AllGalleryPage.jsx                 |     100 |      100 |     100 |     100 |
 src/components/Bookings             |   19.57 |     7.69 |   13.04 |   20.45 |
  Cart.jsx                           |      60 |       50 |      50 |      60 | 15-21
  PurchaseManager.jsx                |     100 |       25 |     100 |     100 | 26-29
  StripePayment.jsx                  |    2.56 |        0 |       0 |     2.7 | 16-138
  TicketSelector.jsx                 |   20.93 |     6.67 |    7.69 |   21.95 | 24-28,33,37-53,59-79,136-160
 src/components/ClassificationPage   |     100 |      100 |     100 |     100 |
  Accordions.jsx                     |     100 |      100 |     100 |     100 |
  Classification.jsx                 |     100 |      100 |     100 |     100 |
 src/components/ContactPage          |   70.73 |        0 |      80 |   70.73 |
  Contact.jsx                        |      50 |      100 |      50 |      50 | 25-36
  ContactPage.jsx                    |     100 |      100 |     100 |     100 |
  Email.jsx                          |   82.61 |        0 |   85.71 |   82.61 | 35-38
 src/components/DiscussionPage       |   35.17 |    10.71 |   12.24 |   37.23 |
  DiscussionBoard.jsx                |      75 |      100 |      50 |      75 | 23
  DiscussionRatings.jsx              |   57.14 |      100 |      25 |   57.14 | 19-20,37
  Forum.jsx                          |      50 |      100 |      20 |      50 | 18-20,35
  ForumCreate.jsx                    |   46.15 |       50 |    9.09 |   46.15 | 18-20,27-29,33-34,39-47,55-67
  ReviewAddPage.jsx                  |   28.33 |     6.25 |    6.25 |   30.91 | 30-31,37-40,45-52,57-87,103-200
  ThreadPage.jsx                     |    27.5 |       10 |    9.09 |   29.73 | 20-21,29-49,65-106
 src/components/GettingTherePage     |     100 |      100 |     100 |     100 |
  Carousels.jsx                      |     100 |      100 |     100 |     100 |
  Directions.jsx                     |     100 |      100 |     100 |     100 |
  GettingThere.jsx                   |     100 |      100 |     100 |     100 |
  GoogleMaps.jsx                     |     100 |      100 |     100 |     100 |
  GoogleMapsDirections.jsx           |     100 |      100 |     100 |     100 |
  Marker.jsx                         |     100 |      100 |     100 |     100 |
 src/components/HomePage             |     100 |      100 |     100 |     100 |
  Carousel.jsx                       |     100 |      100 |     100 |     100 |
  HomePage.jsx                       |     100 |      100 |     100 |     100 |
 src/components/OpeningTimesPage     |     100 |      100 |     100 |     100 |
  OpeningTimesPage.jsx               |     100 |      100 |     100 |     100 |
  Tables.jsx                         |     100 |      100 |     100 |     100 |
 src/components/PlacesToGoPage       |     100 |      100 |     100 |     100 |
  PlacesToGo.jsx                     |     100 |      100 |     100 |     100 |
 src/components/RecentMoviePage      |      75 |      100 |      50 |      75 |
  RecentMoviePage.jsx                |      75 |      100 |      50 |      75 | 6
 src/components/Screens              |     100 |      100 |     100 |     100 |
  Screen.jsx                         |     100 |      100 |     100 |     100 |
 src/components/sharedcomponents     |   24.53 |       10 |   13.64 |   24.53 |
  Footers.jsx                        |     100 |      100 |     100 |     100 |
  ListMovies.jsx                     |   38.89 |    16.67 |      20 |   38.89 | 17-28,38-49
  MoviePage.jsx                      |       0 |        0 |       0 |       0 | 9-51
```



```
describe(`onSubmit test`, () => {

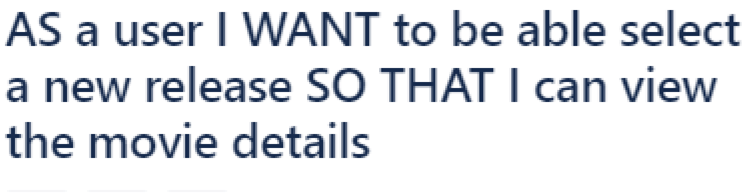
    // Parent level arranging
    const data = "test_name";
    const email = "test@gmail.com";
    const last = "doe";
    const Text = "This is a test to see if the text area works";
    it(`Should update the value of the input (which updates state) when text is typed in`, () => {

        // ? Arrange
        // render(Form) is being deconstructed and saved as 'container'
        const {container} = render(<Email/>);

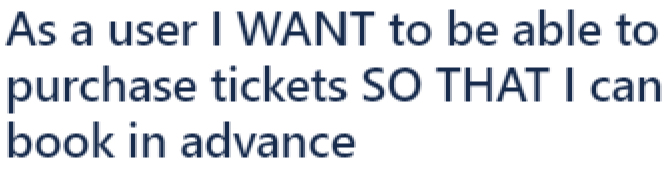
        const textInput = container.querySelector('#FirstName');
        const textInput2 = container.querySelector('#Email');
        const textInput3 = container.querySelector('#LastName');
        const textInput4 = container.querySelector('#TextArea');
        // console.log(textInput);
        expect(textInput.value).toEqual("");
        expect(textInput2.value).toEqual("");
        expect(textInput3.value).toEqual("");
        expect(textInput4.value).toEqual("");
        // ? Act - simulated typing
        userEvent.type(textInput, data);
        userEvent.type(textInput2, email);
        userEvent.type(textInput3, last);
        userEvent.type(textInput4, Text);
        // ? Assert
        expect(textInput.value).toEqual(data);
        expect(textInput2.value).toEqual(email);
        expect(textInput3.value).toEqual(last);
        expect(textInput4.value).toEqual(Text);
    });
```

Demonstration

Demonstration of the project

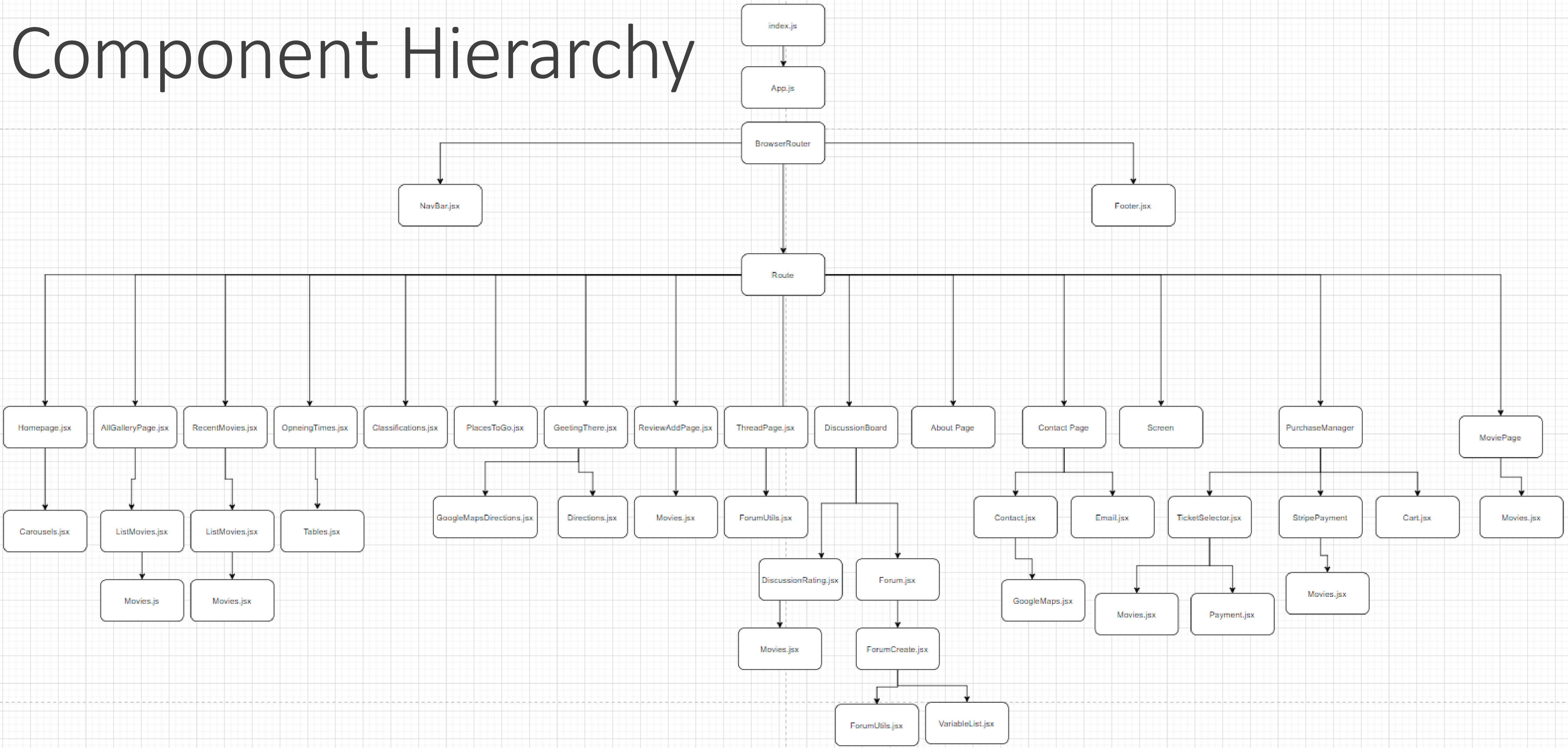


AS a user I WANT to be able select a new release SO THAT I can view the movie details



As a user I WANT to be able to purchase tickets SO THAT I can book in advance

Component Hierarchy



index.js

App.js

BrowserRouter

NavBar.jsx

Footer.jsx

Route

Homepage.jsx

Carousels.jsx

AllGalleryPage.jsx

ListMovies.jsx

Movies.js

RecentMovies.jsx

ListMovies.jsx

Movies.jsx

OpneingTimes.jsx

Tables.jsx

Classifications.jsx

PlacesToGo.jsx

GeetingThere.jsx

GoogleMapsDirections.jsx

Directions.jsx

ReviewAddPage.jsx

Movies.jsx

ThreadPage.jsx

ForumUtils.jsx

DiscussionBoard

DiscussionRating.jsx

Movies.jsx

Forum.jsx

ForumCreate.jsx

ForumUtils.jsx

VariableList.jsx

About Page

Contact Page

Contact.jsx

GoogleMaps.jsx

Email.jsx

Screen

PurchaseManager

TicketSelector.jsx

Movies.jsx

Payment.jsx

StripePayment

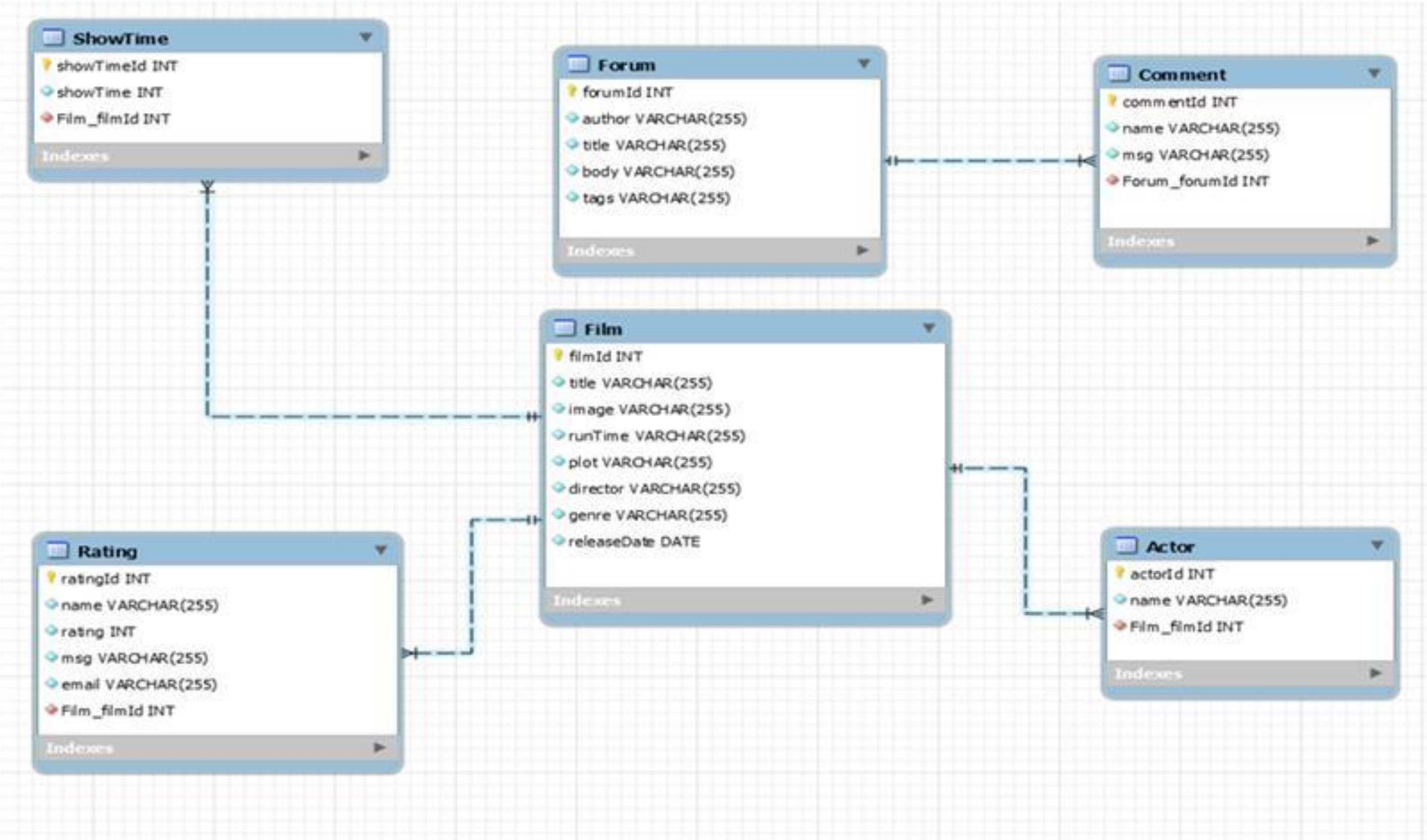
Movies.jsx

Cart.jsx

MoviePage

Movies.jsx

ERD – Entity Relationship Diagram



ShowTime
showTimeId INT
showTime INT
Film_filmId INT
Indexes

Forum
forumId INT
author VARCHAR(255)
title VARCHAR(255)
body VARCHAR(255)
tags VARCHAR(255)
Indexes

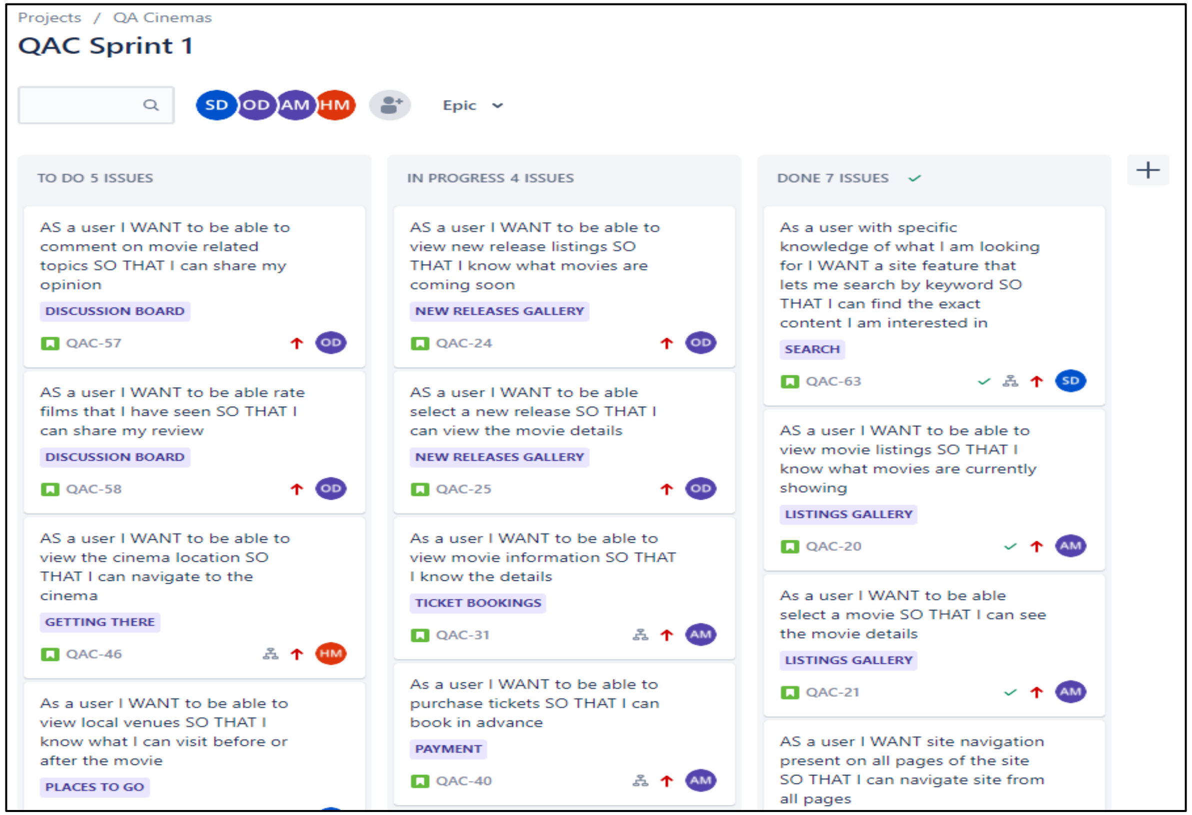
Comment
commentId INT
name VARCHAR(255)
msg VARCHAR(255)
Forum_forumId INT
Indexes

Film
filmId INT
title VARCHAR(255)
image VARCHAR(255)
runTime VARCHAR(255)
plot VARCHAR(255)
director VARCHAR(255)
genre VARCHAR(255)
releaseDate DATE
Indexes

Rating
ratingId INT
name VARCHAR(255)
rating INT
msg VARCHAR(255)
email VARCHAR(255)
Film_filmId INT
Indexes

Actor
actorId INT
name VARCHAR(255)
Film_filmId INT
Indexes

Jira – Kanban Board Week 1



Projects / QA Cinemas

QAC Sprint 1

TO DO 5 ISSUES

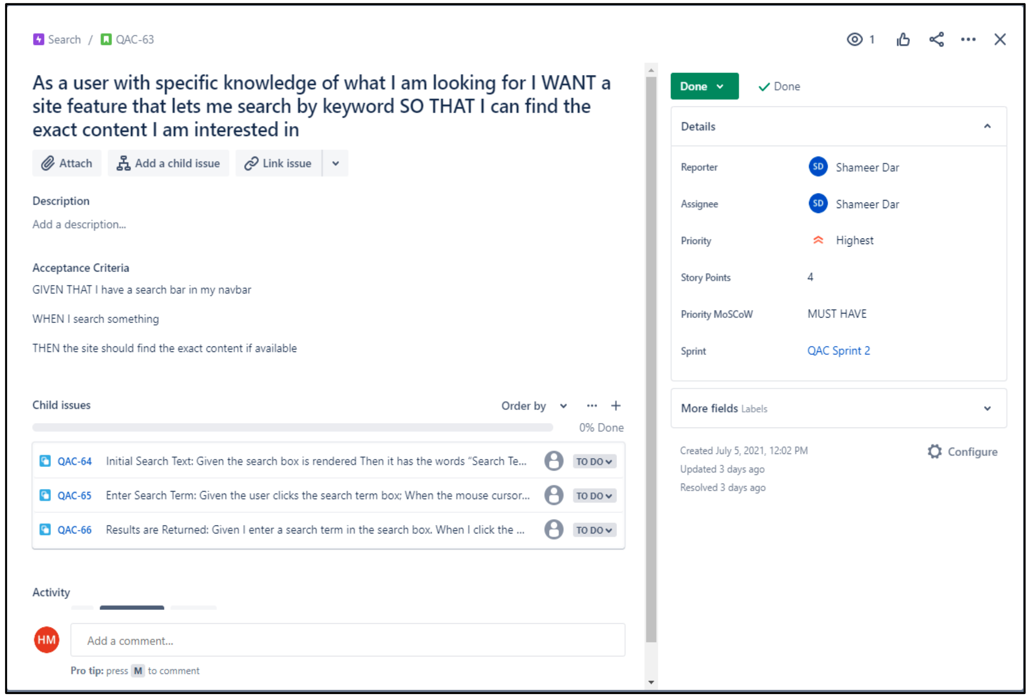
- AS a user I WANT to be able to comment on movie related topics SO THAT I can share my opinion — DISCUSSION BOARD — QAC-57 — OD
- AS a user I WANT to be able rate films that I have seen SO THAT I can share my review — DISCUSSION BOARD — QAC-58 — OD
- AS a user I WANT to be able to view the cinema location SO THAT I can navigate to the cinema — GETTING THERE — QAC-46 — HM
- As a user I WANT to be able to view local venues SO THAT I know what I can visit before or after the movie — PLACES TO GO

IN PROGRESS 4 ISSUES

- AS a user I WANT to be able to view new release listings SO THAT I know what movies are coming soon — NEW RELEASES GALLERY — QAC-24 — OD
- AS a user I WANT to be able select a new release SO THAT I can view the movie details — NEW RELEASES GALLERY — QAC-25 — OD
- As a user I WANT to be able to view movie information SO THAT I know the details — TICKET BOOKINGS — QAC-31 — AM
- As a user I WANT to be able to purchase tickets SO THAT I can book in advance — PAYMENT — QAC-40 — AM

DONE 7 ISSUES ✓

- As a user with specific knowledge of what I am looking for I WANT a site feature that lets me search by keyword SO THAT I can find the exact content I am interested in — SEARCH — QAC-63 — SD
- AS a user I WANT to be able to view movie listings SO THAT I know what movies are currently showing — LISTINGS GALLERY — QAC-20 — AM
- As a user I WANT to be able select a movie SO THAT I can see the movie details — LISTINGS GALLERY — QAC-21 — AM
- AS a user I WANT site navigation present on all pages of the site SO THAT I can navigate site from all pages



Search / QAC-63

As a user with specific knowledge of what I am looking for I WANT a site feature that lets me search by keyword SO THAT I can find the exact content I am interested in

Description

Add a description...

Acceptance Criteria

GIVEN THAT I have a search bar in my navbar

WHEN I search something

THEN the site should find the exact content if available

Child issues — Order by — 0% Done

QAC-64	Initial Search Text: Given the search box is rendered Then it has the words "Search Te...	TO DO
QAC-65	Enter Search Term: Given the user clicks the search term box; When the mouse cursor...	TO DO
QAC-66	Results are Returned: Given I enter a search term in the search box. When I click the ...	TO DO

Activity

HM Add a comment...

Pro tip: press M to comment

Done ✓ Done

Details

Reporter	SD Shameer Dar
Assignee	SD Shameer Dar
Priority	Highest
Story Points	4
Priority MoSCoW	MUST HAVE
Sprint	QAC Sprint 2

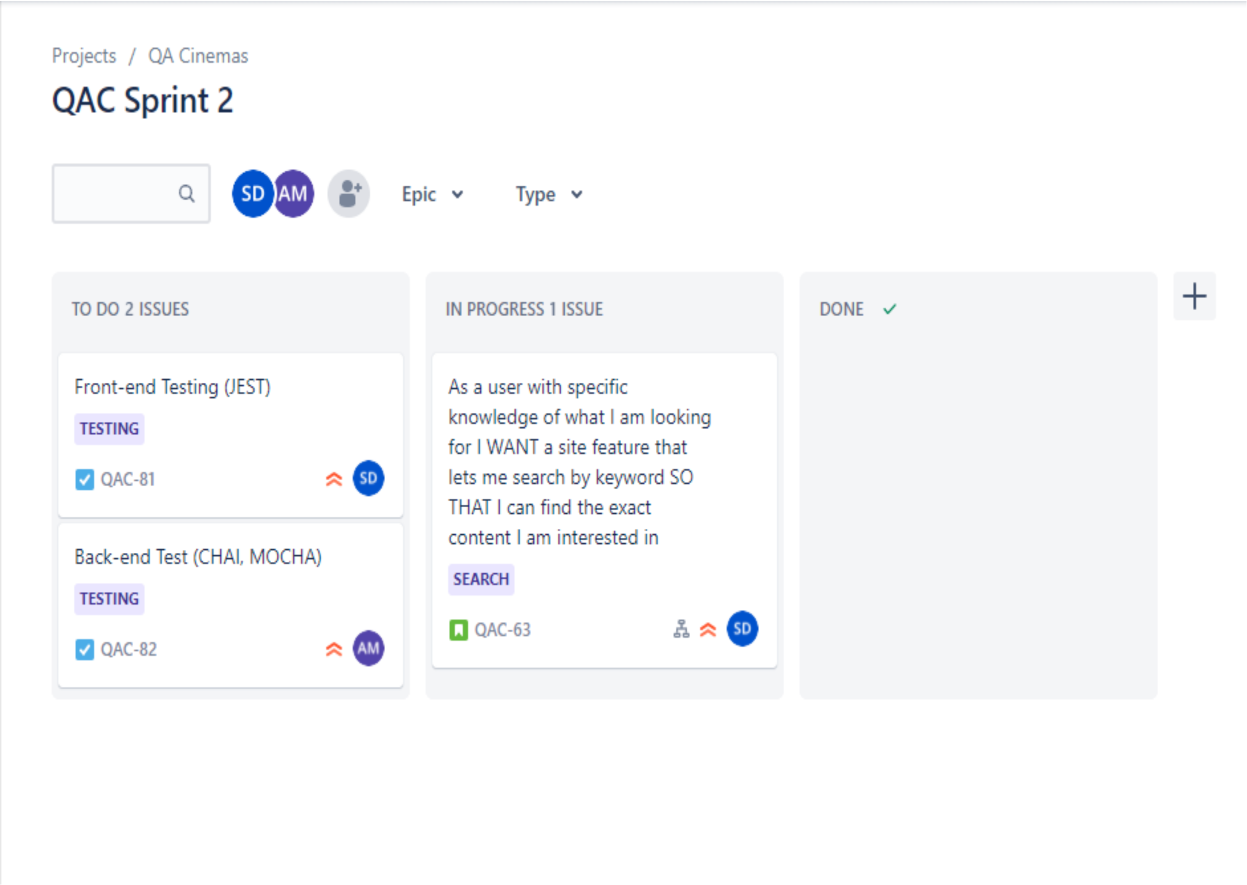
More fields Labels

Created July 5, 2021, 12:02 PM
Updated 3 days ago
Resolved 3 days ago

Configure

Example of one the user stories.

Jira – Kanban Board Week 2



Projects / QA Cinemas

QAC Sprint 2

TO DO 2 ISSUES

Front-end Testing (JEST)

TESTING

☑ QAC-81 SD

Back-end Test (CHAI, MOCHA)

TESTING

☑ QAC-82 AM

IN PROGRESS 1 ISSUE

As a user with specific knowledge of what I am looking for I WANT a site feature that lets me search by keyword SO THAT I can find the exact content I am interested in

SEARCH

QAC-63 SD

DONE ✓

Sprint review

Managed to complete the main functionality required according the deliverables:

- CRUD functionality on the Back-end
- Testing >80%

What got left behind:

- All MVP has been met, nothing was left behind.

Sprint retrospective

- What went well?
  - All the user requirements were completed
  - Version Control
  - Good initial understanding of testing (JEST, Chai, Mocha)
  - Good use of resources, understanding the strengths and weaknesses of each developer.
- Improvements?
  - More continuous testing, test after completing the component
  - Realistic backlogs

Conclusion

This sprint has improved our knowledge:

- Front end calls to backend
- Testing : Mocha, Chai, JEST

MVP met:

- Crud functionality
- Testing
- Using a database

Improvements?

- More realistic goals of each sprints

Thank you for listening!