



# Empowering Healthcare through Open Source: A Journey of Reflections



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QA Engineering Fellow  
GSoC 2023 Mentor  
OpenMRS





# Overview

During my OpenMRS Fellowship project, my primary focus was on improving the overall product quality of OpenMRS while enhancing the developer experience. The project aimed to achieve this by implementing effective End-to-End (E2E) tests using the playwright testing framework.





# Fellowship Journey

## Goals

1. Writing effective end-to-end (E2E) tests with playwright for OpenMRS 3.0 RefApp
2. Learning about software testing and test automation
3. Become a GSoC mentor

During my time I worked with my mentor Jayasanka, and collaborated with various contributors. I also interacted with the Ethiohri team and UCSF team for the capstone project.





# What I Learned

Faced several challenges during my fellowship, such as identifying test cases, encountering bugs that blocked the completion of E2E tests, issues with tests being running on actions and migration-related problems causing the Ethiohri server to go offline.

Tackled the challenges by collaborating with my mentor and fellow contributors to address bugs and issues.

Learned valuable problem-solving skills, effective communication within the community, and the importance of persistence and determination when faced with obstacles during a development project.



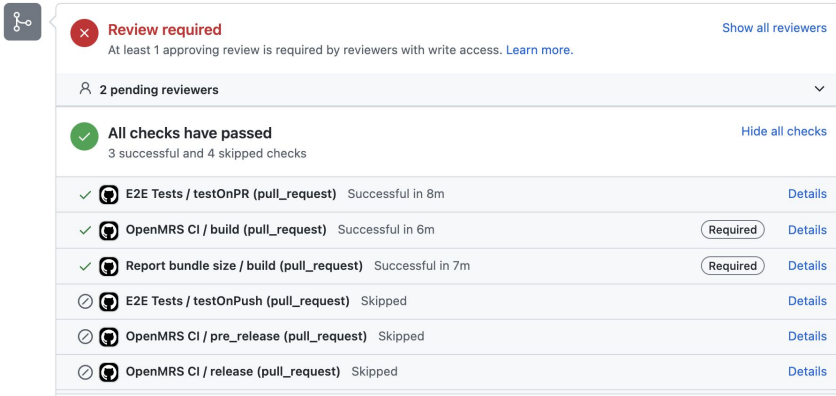


# Achievements

- Writing E2E tests with playwright for the OpenMRS 3.0 RefApp and Ethiohri project.
- Successfully merging and contributing to various pull requests related to E2E tests, unit tests, and integration tests.
- Creating epics and leading them
- Leading Squad calls
- Preparing a comprehensive capstone project proposal to implement test-driven development practices for Ethiohri.



# E2E test CI integration



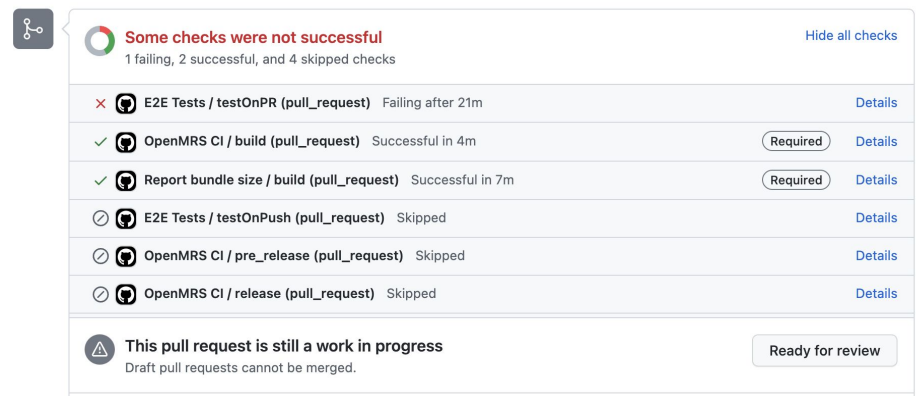
**Review required** [Show all reviewers](#)  
At least 1 approving review is required by reviewers with write access. [Learn more.](#)

2 pending reviewers

**All checks have passed** [Hide all checks](#)  
3 successful and 4 skipped checks

- ✓ **E2E Tests / testOnPR (pull\_request)** Successful in 8m [Details](#)
- ✓ **OpenMRS CI / build (pull\_request)** Successful in 6m [Required](#) [Details](#)
- ✓ **Report bundle size / build (pull\_request)** Successful in 7m [Required](#) [Details](#)
- ⊘ **E2E Tests / testOnPush (pull\_request)** Skipped [Details](#)
- ⊘ **OpenMRS CI / pre\_release (pull\_request)** Skipped [Details](#)
- ⊘ **OpenMRS CI / release (pull\_request)** Skipped [Details](#)

A PR that ensure that everything works as before



**Some checks were not successful** [Hide all checks](#)  
1 failing, 2 successful, and 4 skipped checks

- ✗ **E2E Tests / testOnPR (pull\_request)** Failing after 21m [Details](#)
- ✓ **OpenMRS CI / build (pull\_request)** Successful in 4m [Required](#) [Details](#)
- ✓ **Report bundle size / build (pull\_request)** Successful in 7m [Required](#) [Details](#)
- ⊘ **E2E Tests / testOnPush (pull\_request)** Skipped [Details](#)
- ⊘ **OpenMRS CI / pre\_release (pull\_request)** Skipped [Details](#)
- ⊘ **OpenMRS CI / release (pull\_request)** Skipped [Details](#)

**This pull request is still a work in progress** [Ready for review](#)  
Draft pull requests cannot be merged.

A PR that breaks something existing



# GSoC mentoring



Hi Anjula Samarasinghe,

Thank you for dedicating your time to mentor Randila Premarathne's GSoC project.

You can now visit your dashboard on the [GSoC program site](#) to submit your Midterm Evaluation of your contributor. Be sure to submit the Evaluation before July 14, 2023.

If you will be unable to submit the evaluation of your contributor between July 10, 2023 and July 14, 2023 be sure to ask another mentor or an Org Admin to complete the evaluation for you during this evaluation period. Evaluation questions are available [here](#).

Best,

GSoC Program Admins

<https://summerofcode.withgoogle.com>

For any questions, please contact [gsoc-support@google.com](mailto:gsoc-support@google.com). Replies to this message go to an unmonitored mailbox.

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Extending E2E test coverage project  
Primary mentor



Hi Anjula Samarasinghe,

Thank you for dedicating your time to mentor Ayush\_Mishra's GSoC project.

You can now visit your dashboard on the [GSoC program site](#) to submit your Midterm Evaluation of your contributor. Be sure to submit the Evaluation before July 14, 2023.

If you will be unable to submit the evaluation of your contributor between July 10, 2023 and July 14, 2023 be sure to ask another mentor or an Org Admin to complete the evaluation for you during this evaluation period. Evaluation questions are available [here](#).

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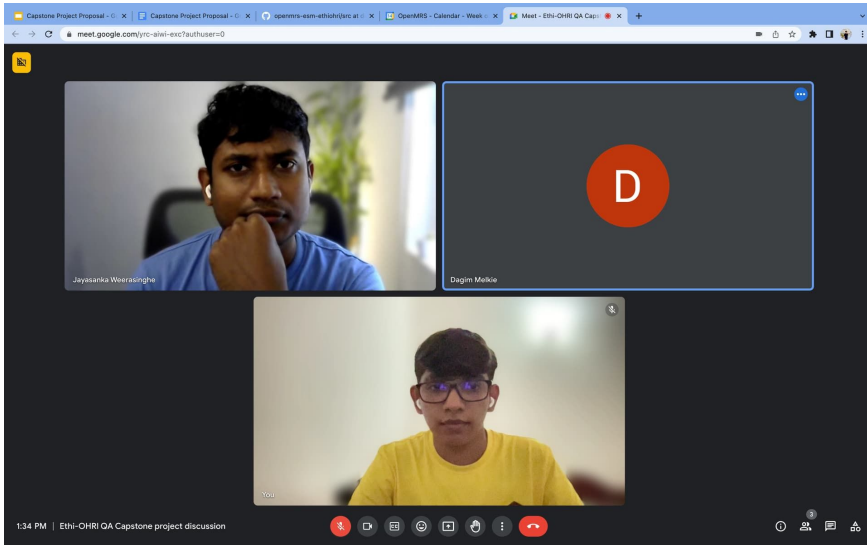
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Component test coverage project  
Secondary mentor



# Capstone project proposal discussion



Project discussion with Ethiohri team



Project presentation



# Organized Epics

**OpenMRS 3.x Frontend** / 03-2288  
**E2E test coverage for the Cohort Builder**

**Details**  
Type: Epic  
Priority: Should  
Status: **In Progress**  
Affects Version(s): None  
Resolution: Unresolved  
Component(s): Quality Assurance (QA)  
Fix Version(s): None  
Labels: None  
Complexity: Medium  
Epic Name: E2E test coverage for Form Builder

**Description**  
The goal of this epic is to add E2E test coverage for the cohort builder

**Attachments**

**Issue Links**  
mentioned in  
QA Support Team Notes

**Issues in epic**

Issue ID	Summary	Status	Assignee
03-2289	Configure E2E tests for the Cohort builder	<b>Done</b>	Anjula Samarasinghe
03-2270	Write a E2E test for search by Observations/Concepts feature	To Do	Unassigned
03-2271	Write a E2E test for search by demographics feature	<b>In Progress</b>	Unassigned
03-2272	Write a E2E test for search by encounters feature	To Do	Unassigned
03-2273	Write a E2E test for search by location feature	To Do	Unassigned
03-2274	Write a E2E test for search by program enrollments feature	To Do	Unassigned
03-2275	Write a E2E test for search by Drug Order feature	To Do	Unassigned
03-2276	Write a E2E test for combining searches feature	To Do	Unassigned

Cohort Builder E2E Coverage Epic

**OpenMRS 3.x Frontend** / 03-2040  
**E2E test coverage for Form Builder**

**Details**  
Type: Epic  
Priority: Must  
Status: **In Progress**  
Affects Version(s): None  
Resolution: Unresolved  
Component(s): Quality Assurance (QA)  
Fix Version(s): None  
Labels: None  
Complexity: Medium  
Epic Name: E2E test coverage for Form Builder

**Description**  
Click to add description

**Attachments**

**Issues in epic**

Issue ID	Summary	Status	Assignee
03-2042	Configure E2E tests for the Form Builder	<b>Done</b>	Anjula Samarasinghe
03-2043	Integrate E2E tests with the github actions	<b>Done</b>	Anjula Samarasinghe
03-2044	Write a E2E test for create a form using dummy schema	<b>Done</b>	Anjula Samarasinghe
03-2045	Write a E2E test for create a form using custom schema	<b>Done</b>	Anjula Samarasinghe
03-2046	Write a test to edit a created form	<b>Done</b>	Anjula Samarasinghe
03-2047	Write an E2E test for the interactive form builder	<b>Done</b>	Daniela Kigen
03-2089	Remove lost tracing for form builder	<b>Done</b>	Anjula Samarasinghe
03-2099	Write a test to publish and unpublish a form	<b>Done</b>	Anjula Samarasinghe
03-2195	Improve the form creation tests	To Do	Unassigned
03-2200	Use form search functionality when looking for a form in E2E tests	<b>Done</b>	Phumal Rathnayake

Form Builder E2E Coverage Epic





# What's Next

- Keep improving the test coverage and look for more strategies to improve the implementation
- Continue to implement tests for both OpenMRS and implementers
- Load and performance testing





# Final Reflections

Enjoyed various aspects of the program, including the opportunity to present at the Mini Community Meeting and the engagement with GSoC proposals and mentoring.

Had the opportunity to work on impactful projects, collaborate with mentors and contributors, and gain valuable insights into the open-source development community.





# Contributions

## Code

- 6 Repositories - 22 PRs
  - Patient management - 4 PRs
  - Form Builder - 9 PRs
  - Cohort Builder - 2 PRs
  - ESM Core - 1 PR
  - QA framework - 3 PRs
  - Ethiohri ESM - 3 PRs
- 30+ Issues created

## Blog Posts

<https://talk.openmrs.org/t/my-openmrs-fellowship-journey-anjula-samarasinghe/38687/>

[Just like that the openMRS fellowship begins](#)

[OpenMRS Fellowship: A Journey of Growth and Impact](#)

## Resources

[E2E tests](#)

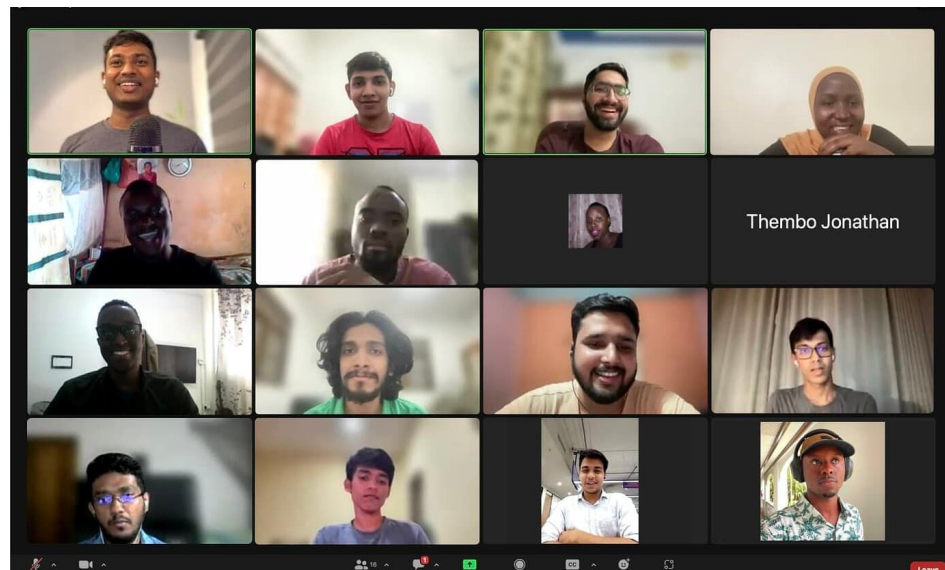
[Capstone project proposal presentation](#)

[Capstone project proposal](#)

# Some memories

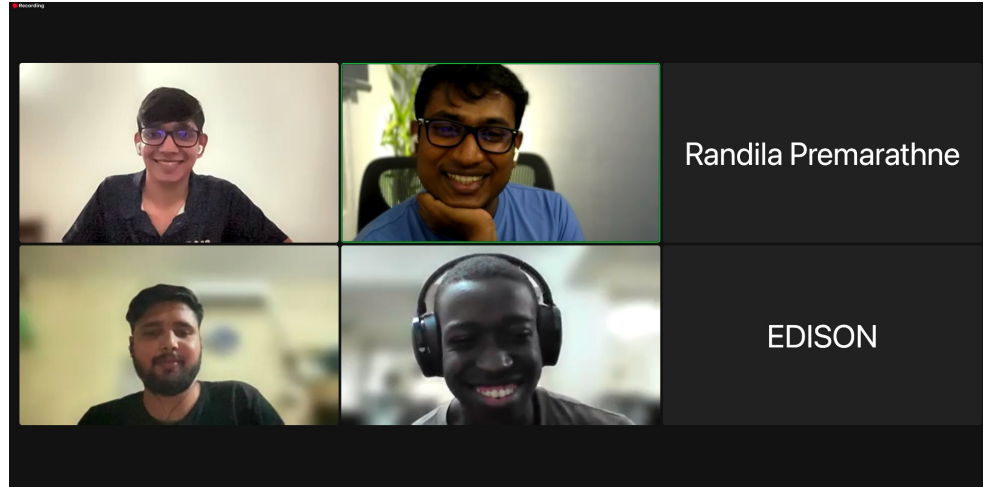
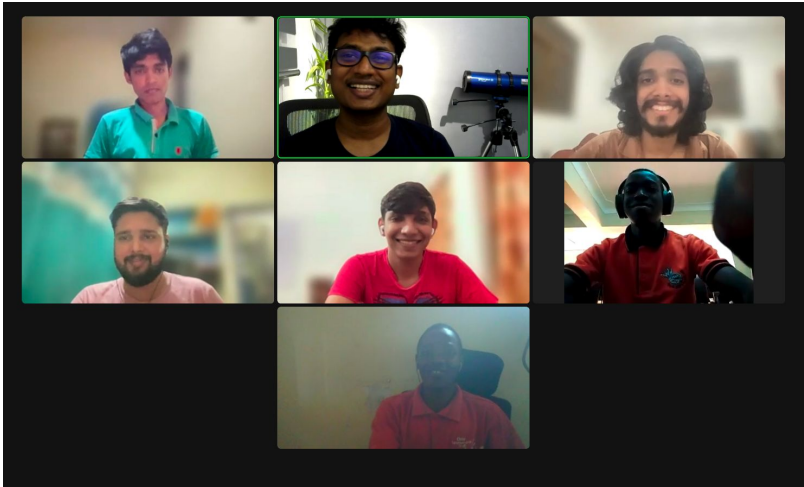


Mini community meeting



GSoC Mentor mentee call

# Some memories



QA Squad Calls



**Thank you OpenMRS!**

