UGANDA TECHNOLOGY AND MANAGEMENT UNIVERSITY

WEEKLY JOURNAL REPORT

MUHWEZI ASAPH

SEP23/BSC/3567U/F

BACHELOR OF SCIENCE COMPUTER SCIENCE

WEEK 1: 30th/JUNE/2025 – 05/07/2025

1.	What have been your success/ accomplishments?	• Successfully completed orientation and understood the internship structure and expectations. • Installed essential tools such as Visual studio code, Git, Node.js, and extensions like Live server. • Built a basic HTML "About Me" webpage using proper tags and structure. • Practiced markdown and created a professional README.md. • Understood Agile methodology
2.	What have been the challenges, fears	• Initial nervousness about handling many new technologies in a short time. • Some difficulties during software installations due to internet issues. • Confusion with Git commands and connecting local to remote GitHub repository.
3.	What are the relationships between your internship and your previous job training?	• Internship reinforces previous theoretical classroom training with real-world, hands-on application. • Prior knowledge of basic HTML helped understand web structure more quickly. • This internship adds depth to Git/GitHub usage, which was just hinted on in class. • The practical Agile approach bridges the gap between theory and how modern teams actually work.

4.	What could be the difference between what you have observed in the field and what you learned in class?	• In class, emphasis was more on theory; here, the focus is on doing and experimenting. • Class projects less structured, while internship activities organized using Agile. • In the field, code is managed professionally using version control and GitHub, unlike the local only file management in school.
5.	What could be the experience you have gained so far from being part of the organization/community?	• Learned the value of teamwork, collaboration, and peer accountability. • Gained exposure to real software development tools and workflows used by professionals. • Became part of a tech-driven culture focused on innovation and continuous improvement. • Experienced a blended learning format (physical and online) requiring time management and discipline
6	List activities done for the week	• Monday — Orientation to internship program • Tuesday and Wednesday — Installed development tools (VS code, Node.js, Git, extensions) and learning of how agile methodology works • Thursday — Git and GitHub orientation • Friday and Saturday — HTML5 basics – Created "About Me" webpage

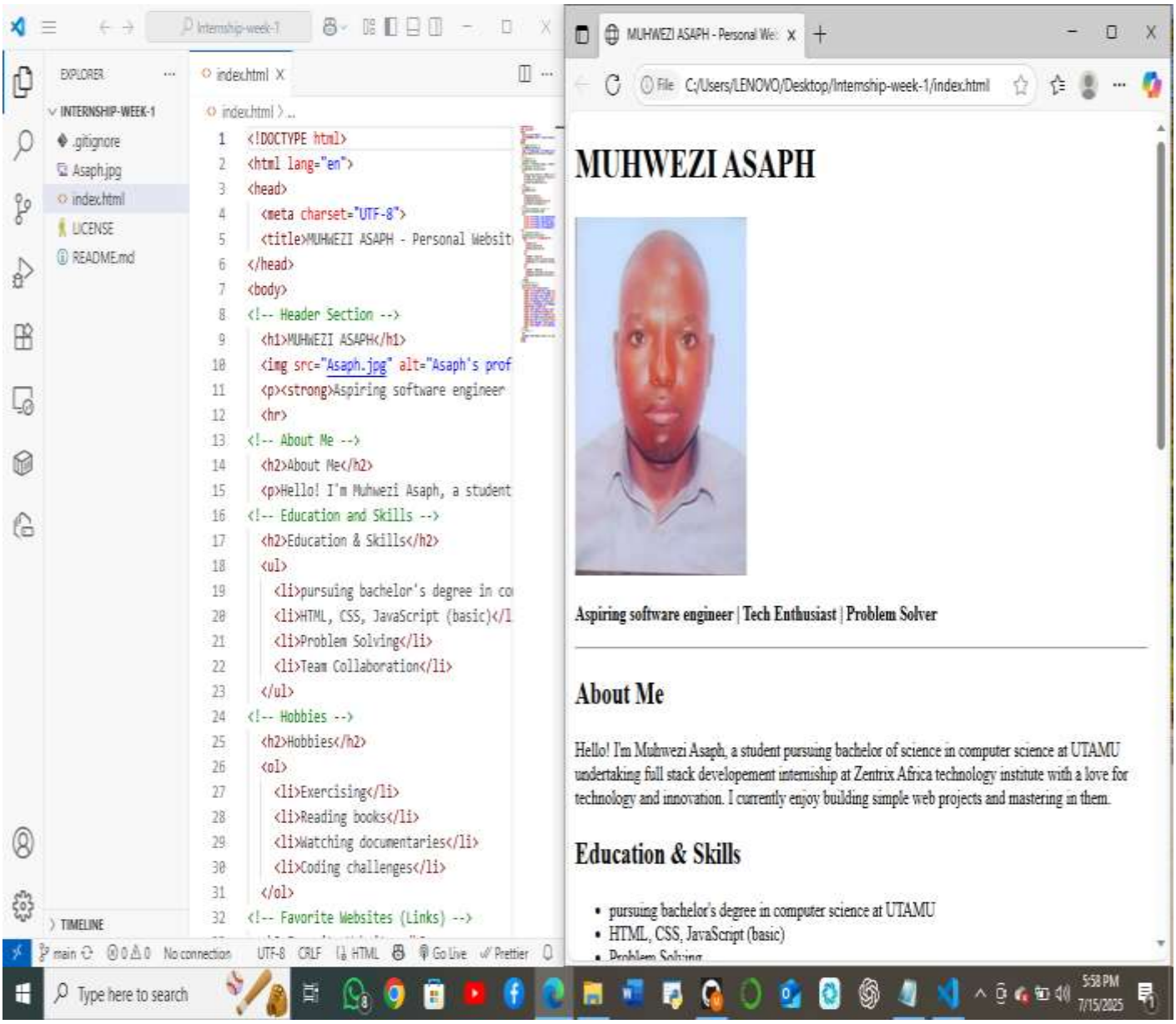

Figure 1 of week 1 report shows screenshot of created "about me" webpage

Figure2 of week 1 report shows screenshot of final page of weekly report with the signature and name of the field supervisor

Below is the link to the repository of internship week 1

https://github.com/muhweziasaph/Internship-week-1.git

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WEEK 2: 7th/July/2025 – 12th /July/2025

1.	What have been your success/ accomplishments?	• Successfully learned and applied foundational CSS styling techniques including text formatting, color schemes, spacing, and layout. • Styled a responsive personal profile webpage created in week 1 as a mini project using flexbox and positioning concepts. • Gained practical skills in linking external stylesheets and managing folder structure for frontend projects. • Understood and implemented box model, positioning, and flexbox, crucial for frontend layouts.
2.	What have been the challenges, fears	• Confusion between padding versus margin and absolute versus relative positioning. • Initial errors in linking external CSS files due to incorrect file paths. • Difficulty making the webpage fully responsive on smaller screens. • Fear of forgetting CSS rules and proper layout syntax. • Concern about mastering layout techniques in a short timeframe.
3.	What are the relationships between your internship and your previous job training?	• Internship reinforces prior school knowledge in HTML and CSS, but with practical, real-world application. • Unlike school, where learning is mostly theoretical, this internship applies those concepts in actual projects and team workflows.

		• Agile methodology and Git usage complement theoretical project planning taught in class but are executed more rigorously here.
4.	What could be the difference between what you have observed in the field and what you learned in class?	• In class focus is on syntax and rules where as in the field focus is on how to use CSS to build user-friendly interfaces with best practices and real deadlines. • Class projects are often individual. Internship projects encourage version control, collaboration, and GitHub publishing. • Exposure to debugging tools like browser developer tools was limited in class, but essential during internship.
5.	What could be the experience you have gained so far from being part of the organization/community?	• Acquired hands-on experience in writing clean, maintainable CSS for real projects. • Learned how to collaborate in a tech workspace (physical and remote), share code on GitHub, and follow structured workflow. • Developed confidence to tackle frontend design challenges independently. • Felt the value of being part of a supportive tech community at the National ICT innovation hub.
6	List activities done for the week	• Monday: Introduction to CSS (inline, internal, external) • Tuesday: Text styling, font properties, color schemes • Wednesday: Understanding the box model and spacing • Thursday: CSS positioning and floats • Friday: Flexbox layouts and alignment • Saturday: Mini project; Personal profile webpage using all learned CSS techniques

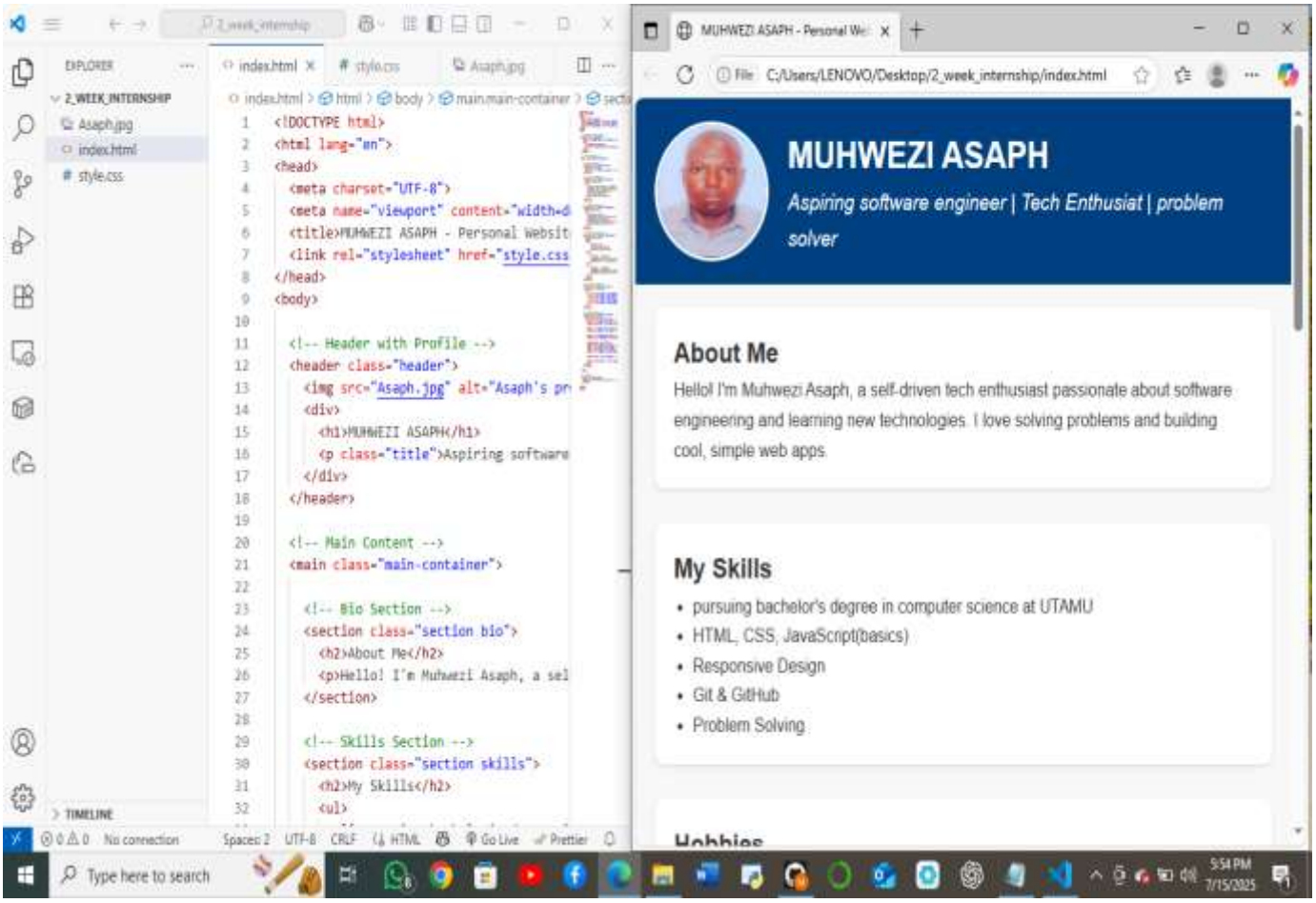

Figure 2 of week 2 report is the screenshot of the mini project

Figure 2 of week 2 report shows screenshot of final page of weekly report with the signature and name of the field supervisor

Below is the link to the repository of internship week 2

https://github.com/muhweziasaph/Internship-week-2.git

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WEEK 3: 13th/July/2025 – 19th /July/2025

1. What have been your successes/accomplishments?

- Successfully completed a JavaScript-enhanced interactive portfolio project.
- Built a clean HTML layout, applied CSS styling, and wrote JavaScript code to add interactivity.
- Implemented JavaScript DOM manipulation to dynamically populate a skills list.
- Used JavaScript to toggle a dark/light theme.
- Practiced separating HTML, CSS, and JavaScript into structured files.

2. What have been the challenges/fears?

- Initial difficulty understanding how to interact with the DOM using JavaScript.
- Debugging form behavior, especially with radio buttons and text areas.
- Adjusting from designing static pages to implementing dynamic functionality.
- Uncertainty about how deep JavaScript is required for future internship phases.

3. What is the relationship between your internship and your previous job training?

- The internship expands on the foundational knowledge gained in school.
- Prior training provided basic theory; the internship adds real-world practice and project experience.
- Got introduced to version control using GitHub, which complements prior academic skills.

4. What is the difference between what you observed in the field and what you learned in class?

- Classroom learning focused on theory, while the internship emphasizes practical application.
- In the field, real-time debugging, browser developer tools, and client-like expectations are common which is not the case in classroom learning.
- Internship projects are more open-ended, requiring critical thinking and real problem-solving compared to the ones of classroom.

- Field work shows how HTML, CSS, and JavaScript integrate to build usable interfaces and such was not covered in classroom.

5. What experience have you gained so far from being part of the organization/community?

- Learned to manage weekly tasks and meet deadlines.
- Gained confidence in building projects from scratch.
- Improved problem-solving skills when encountering coding errors.
- Experienced version control and GitHub uploads for professional tracking.
- Understood the importance of UI/UX (user interface and user experience) in frontend development.

6. List activities done for the week:

- Day 1: Introduction to JavaScript syntax, variables, and data types.
- Day 2: **Functions and operators**.
- Day 3: **Conditionals and control flow**.
- Day 4: **Loops and Arrays**.
- Day 5: **DOM manipulation basics**.
- Day 6: **DOM events and final mini project**.

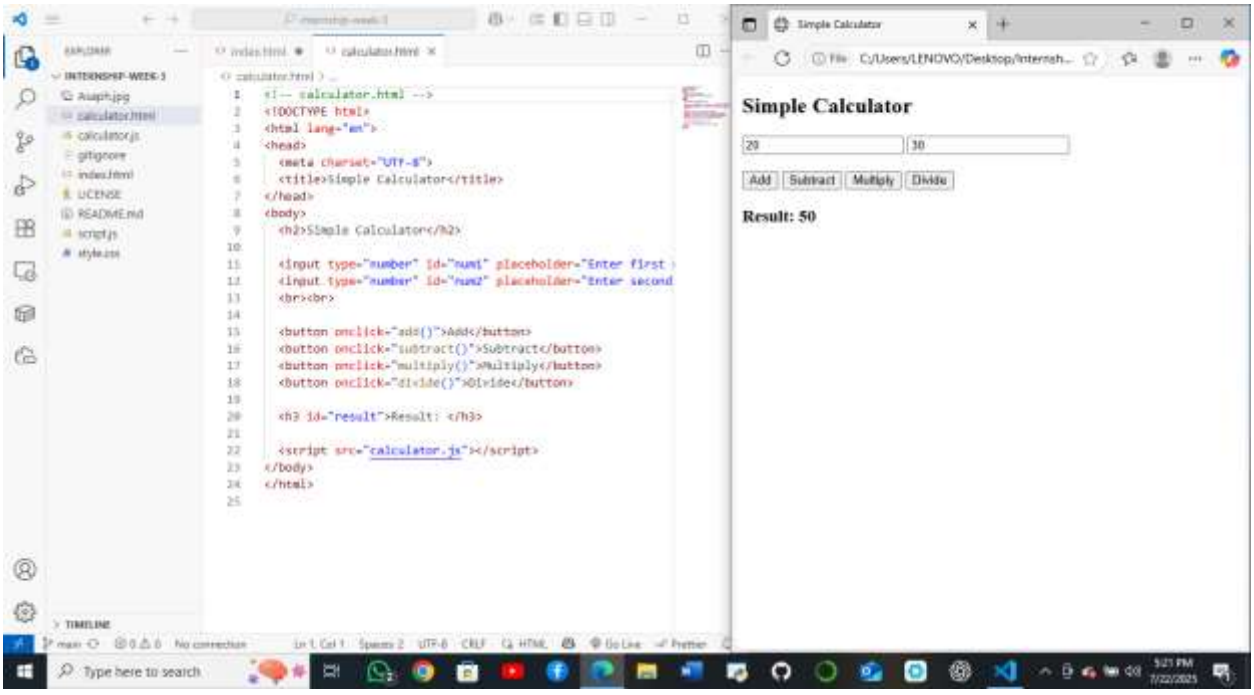

Figure 3 of week 3 report shows screenshot of the created simple calculator functions sub project

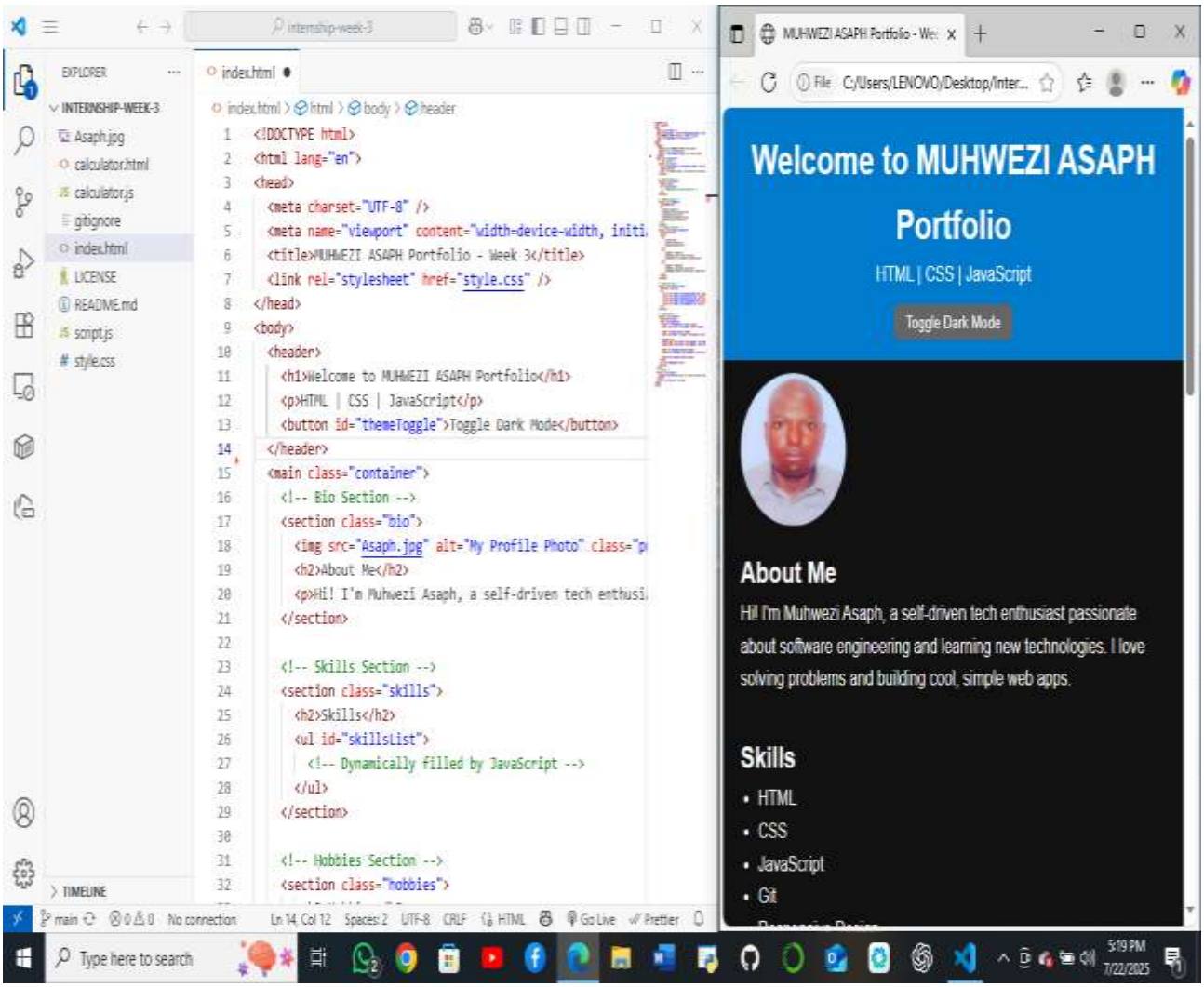

Figure 4 of week 3 report shows screenshot of the mini project of the incorporated JavaScript in the personal profile webpage

Figure 3 of week 3 report shows screenshot of final page of weekly report with the signature and name of the field supervisor

Below is the link to the repository of internship week 3

https://github.com/muhweziasaph/Internship-week-3.git

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WEEK 4: 20th/July/2025 – 27th /July/2025

1. What have been your successes/accomplishments?

- Successfully set up and initialized a React application using create-react-app.
- Built multiple mini-projects including:
  - A simple calculator using React state and event handlers.
  - A counter app with increment, decrement, and reset features.
  - A To-do list app that supports adding, deleting, and toggling task completion.
- Applied concepts of JSX (JavaScript XML), props, state, and component structure.
- Deployed the React to-do app to Netlify, making it accessible online.
- Improved understanding of how component-based architecture improves frontend development.

2. What have been the challenges/fears?

- At first, understanding React' s JSX syntax felt unfamiliar compared to HTML and JavaScript.
- Managing state and props between components was confusing, especially when lifting state up.
- Encountered bugs when implementing event handling and conditional rendering in the to-do app.
- Deployment to Netlify had issues like missing build files or improper routing.
- Fear of not mastering React before moving to backend development in Week 5.

3. What is the relationship between your internship and your previous job training?

- Previous job training introduced basic frontend tools like HTML, CSS, and JavaScript only and this internship built upon that foundation by introducing modern frontend frameworks like React, which are widely used in real-world projects.
- Prior training provided basic theory; the internship adds real-world practice and project experience.

4. What is the difference between what you observed in the field and what you learned in class?

- In class, focus was mostly on theory and isolated code snippets; in the field, we apply that theory into complete real-world projects.
- React and version control tools like GitHub were briefly mentioned in class but not implemented practically as in internship.
- Class learning is mostly individual, but internship involves collaboration, documentation, and teamwork.
- In the field, there's greater emphasis on clean code, performance, and user experience more than in class.

5. What experience have you gained so far from being part of the organization/community?

- Learned how to collaborate and communicate effectively in both physical and online sessions.
- Experienced real project development workflow: from setup, coding, testing, to deployment.
- Improved my problem-solving skills by debugging and troubleshooting issues independently and with peers.
- Gained confidence in using modern technologies like React, GitHub, and Netlify.
- Inspired by mentorship and teamwork culture, which motivates growth and professionalism.

6. List activities done for the week:

- Day 1: Introduction to React and creating-react base app.
- Day 2: Built a calculator app using JSX (JavaScript XML), and state.
- Day 3: Created a counter app with React state and event handlers.
- Day 4: Developed a To-Do List UI (user interface) using input fields, buttons, and component structure.
- Day 5: Implemented delete & toggle functionality in the to-do app.
- Day 6: Reviewed all React apps, learned how to deploy the to-do app to Netlify, documented project.

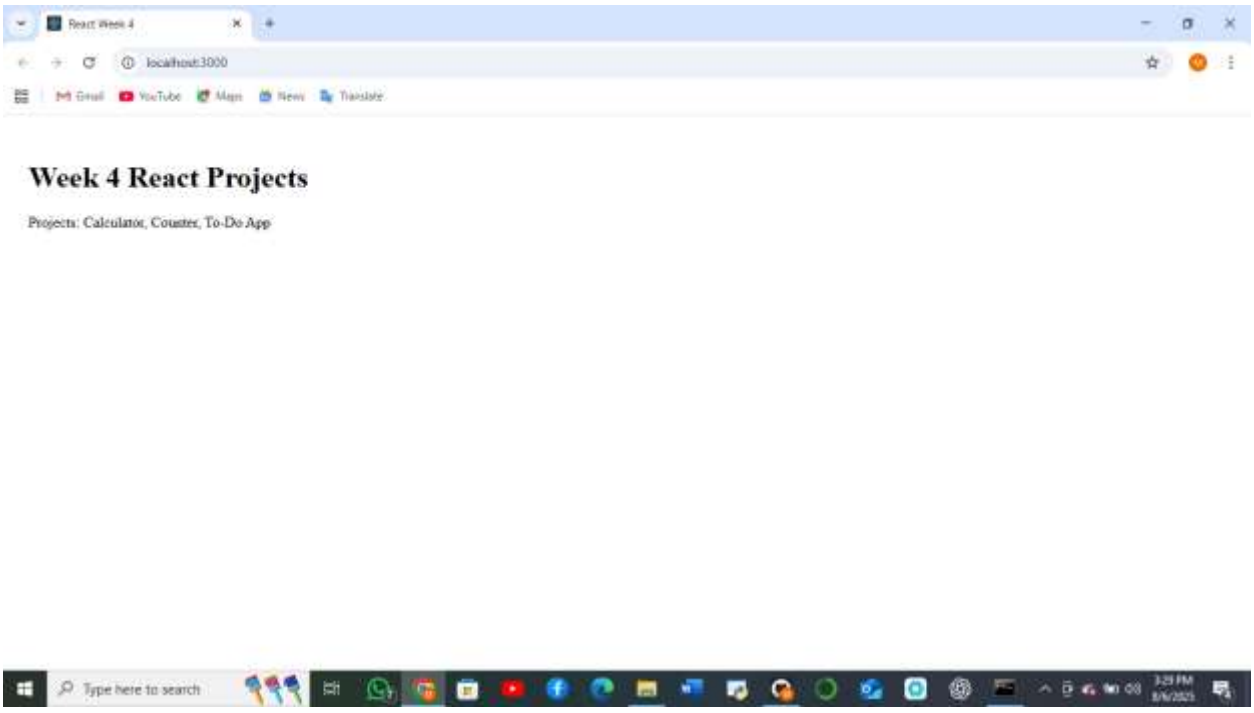

Figure 5 of week 4 report shows screenshot of the created react base app

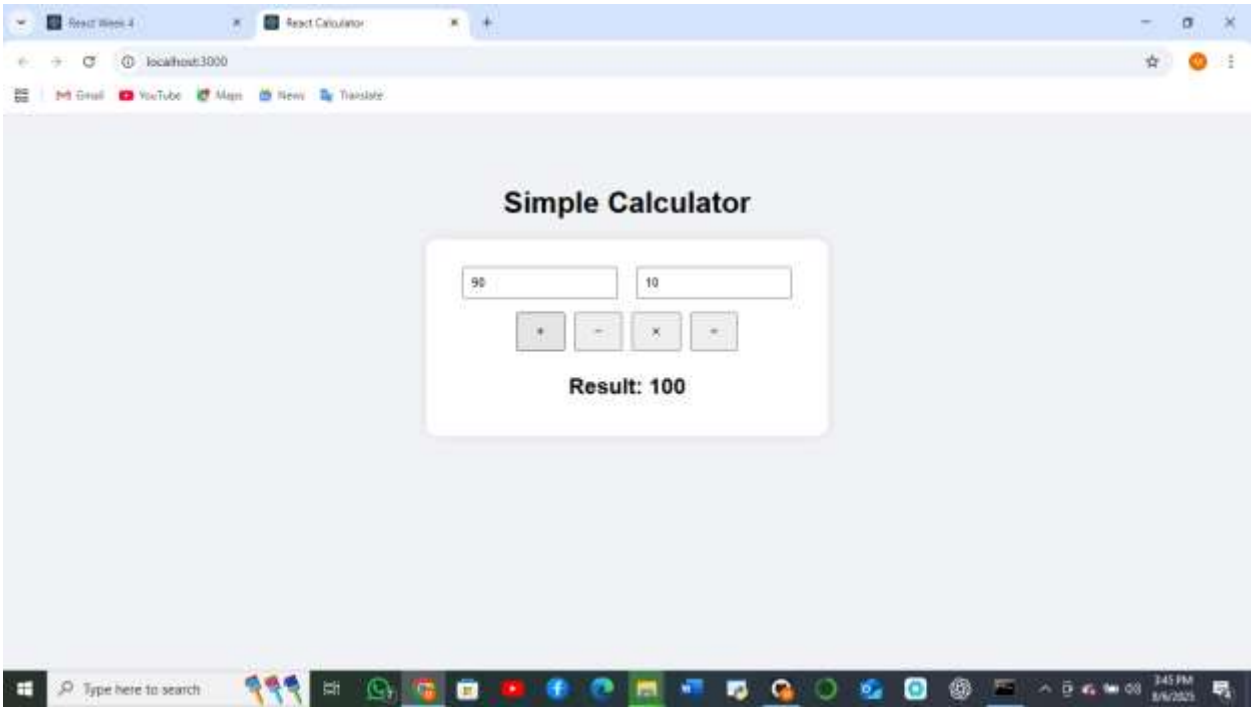

Figure 6 of week 4 report shows screenshot of day 2 created calculator app

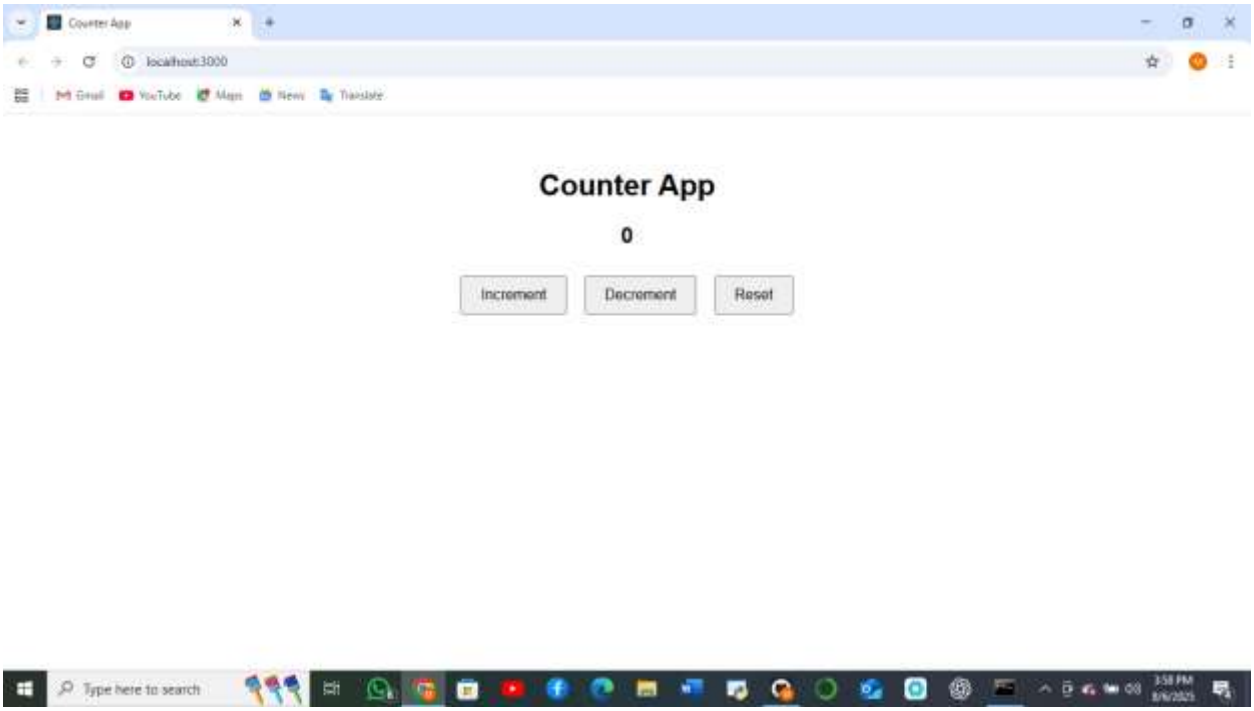

Figure 7 of week 4 report shows screenshot of day 3 created counter app

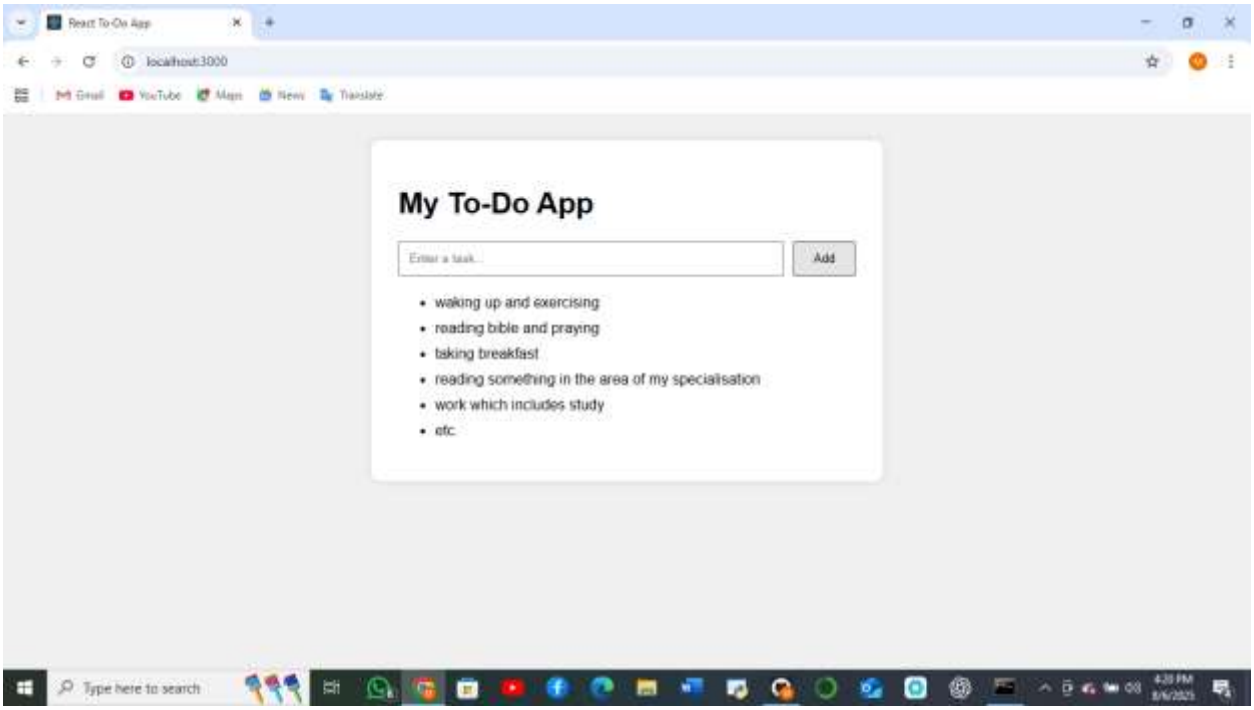

Figure 8 of week 4 report shows screenshot of created day 4 my to do list app

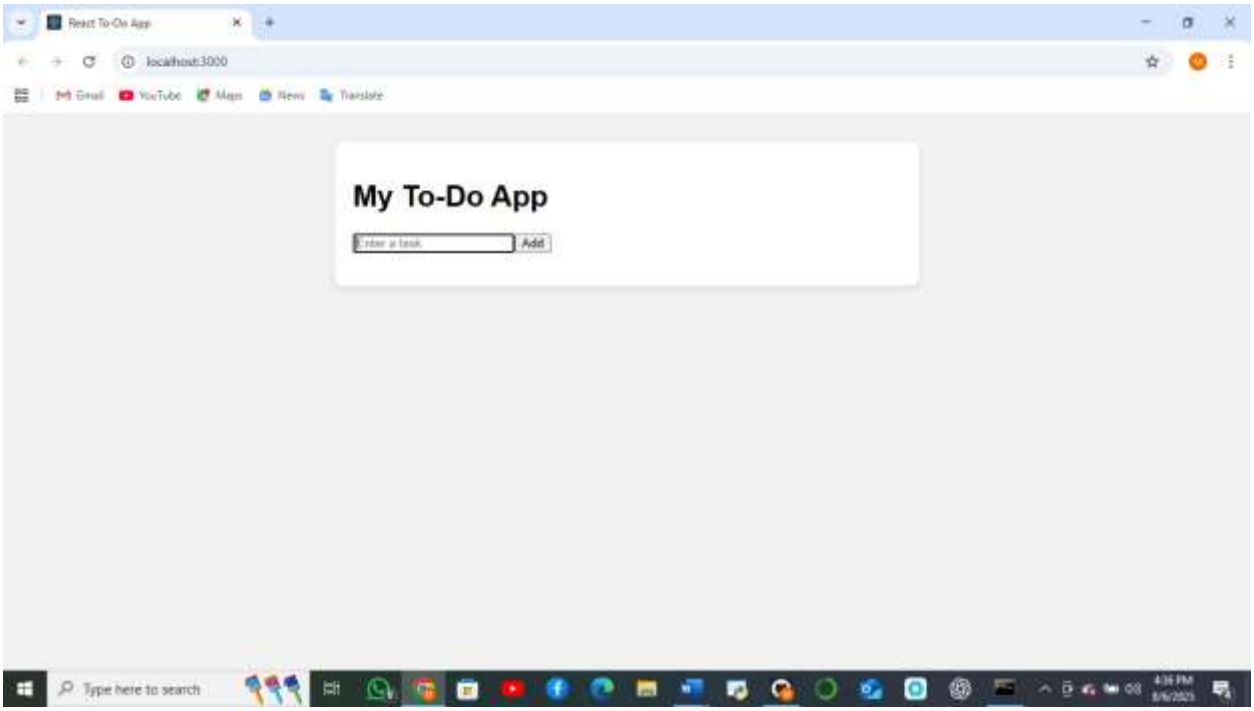

Figure 9 of week 4 report shows screenshot of day 5 created my to do list app

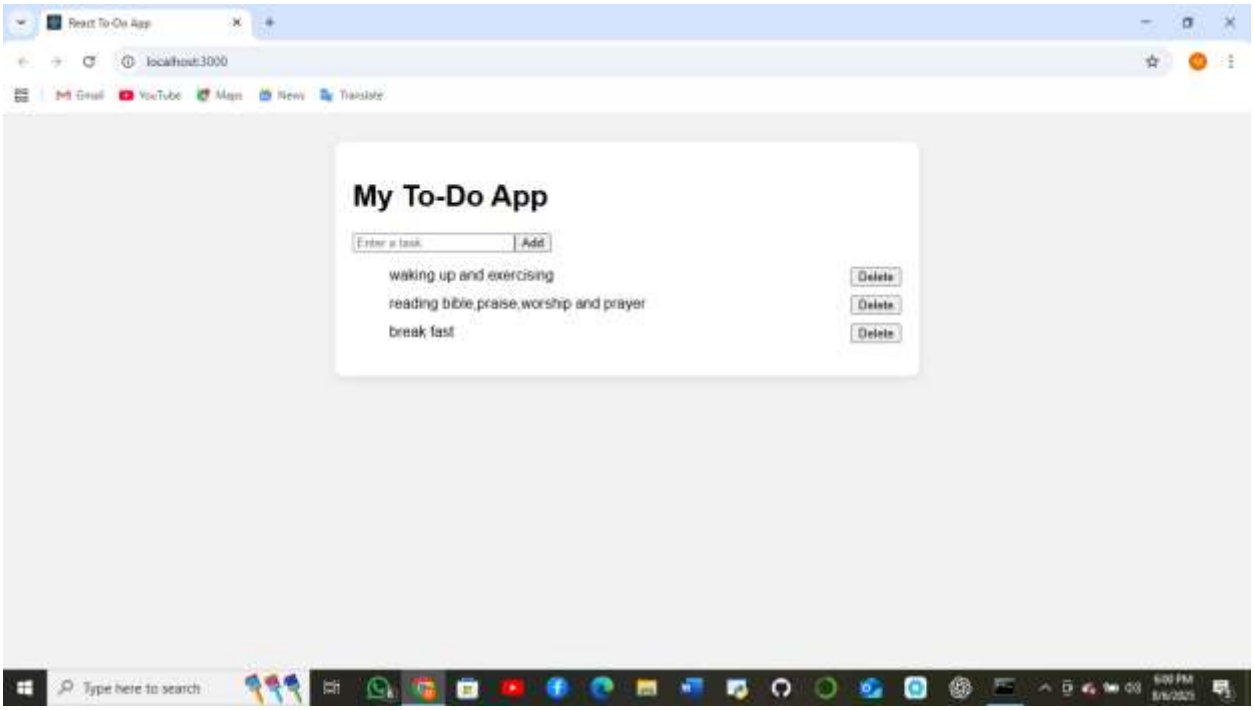

Figure 10 of week 4 report shows screenshot of the same app created on day 5 but now with added to do list to show the implementation of delete

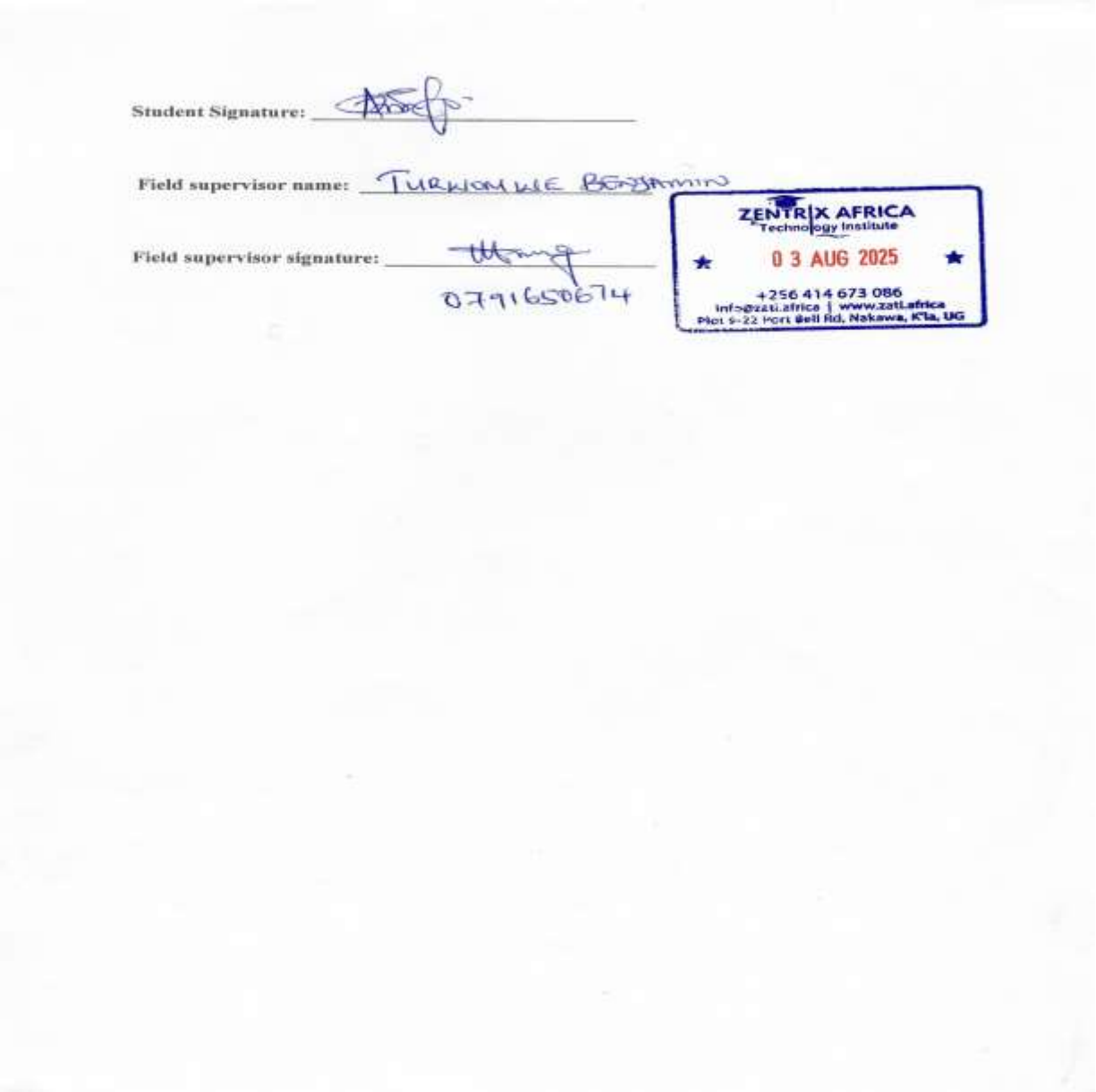

Figure 7 of week 4 report shows screenshot of final page of weekly report with the signature and name of the field supervisor

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https://github.com/muhweziasaph/Internship-week-4.git

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WEEK 5: 28th/July/2025 – 03rd /August/2025

1. What have been your successes/accomplishments?

I successfully set up a backend server using Node.js and Express, connected it to a MongoDB database, and implemented CRUD operations for a bookstore API. This was a major step as it marked my first fully functional backend project.

2. What have been the challenges/fears?

Some challenges included debugging database connection issues and handling environment variables securely. I also had a fear being my first time to do so of whether i would complete the backend integration on time, but through hard work, practice and research, I overcame it.

3. What is the relationship between your internship and your previous job training?

The internship built directly on my previous training. For example, i had learned HTML, CSS, and JavaScript basics in class, and now i applied them practically in a real backend environment with Node.js and MongoDB.

4. What is the difference between what you observed in the field and what you learned in class?

In class, the focus was mainly on theory and simple projects. In the internship, i experienced real-world challenges such as version control using GitHub, deploying code, error handling, and managing dependencies.

5. What experience have you gained so far from being part of the organization/community?

I have gained hands-on experience in collaborative development, working with GitHub for project hosting, and building scalable backend APIs. I also learned the importance of testing and writing clean code for teamwork.

6. List activities done for the week:

- Setup of Node.js and Express backend
- Connection of MongoDB database
- Implementation of CRUD operations
- Testing API endpoints with Postman
- Writing documentation for the project repository
- Documentation of weekly report and reflection

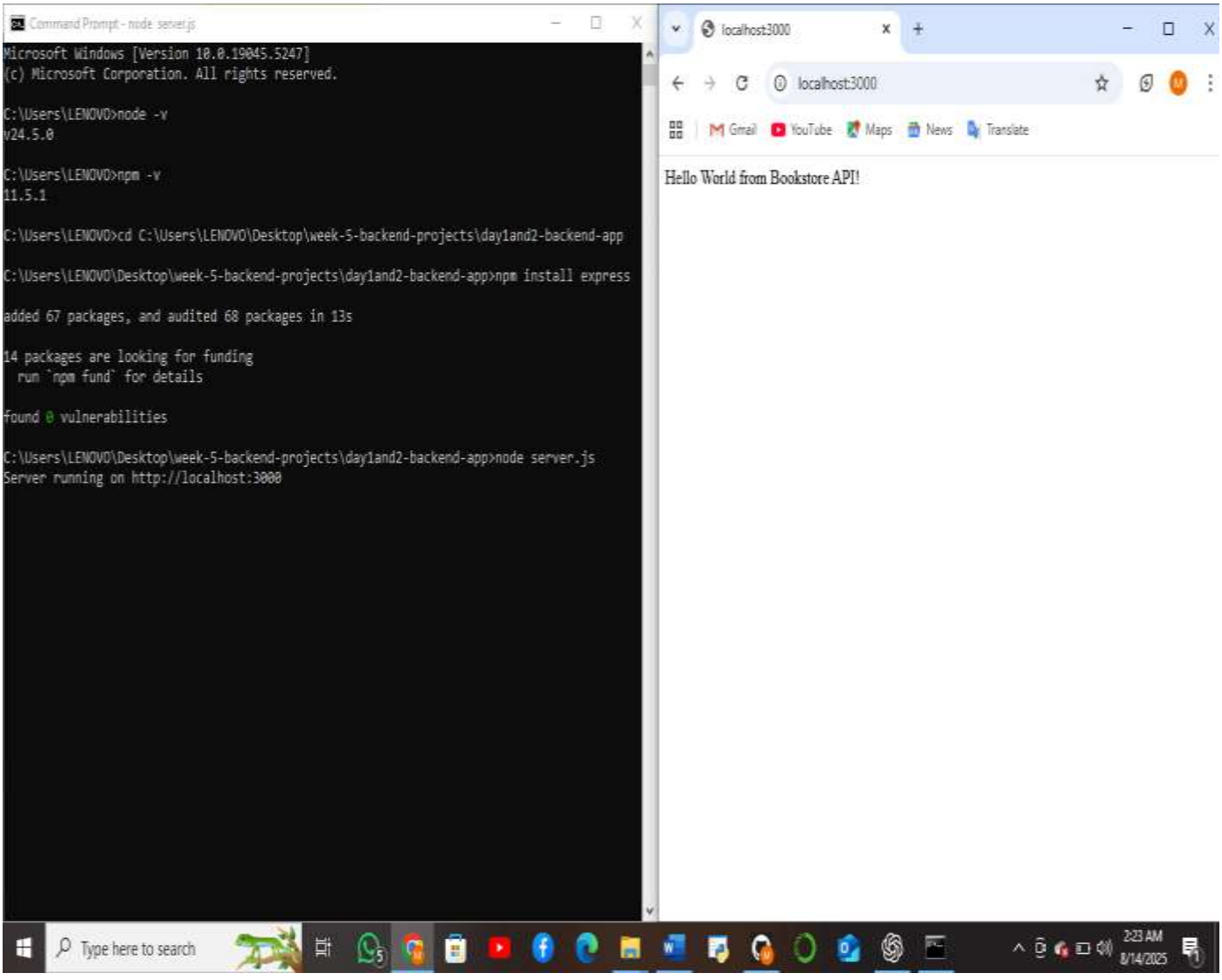

Figure 11 of week 5report shows screenshot of day 1&2 work of running backend app on local host

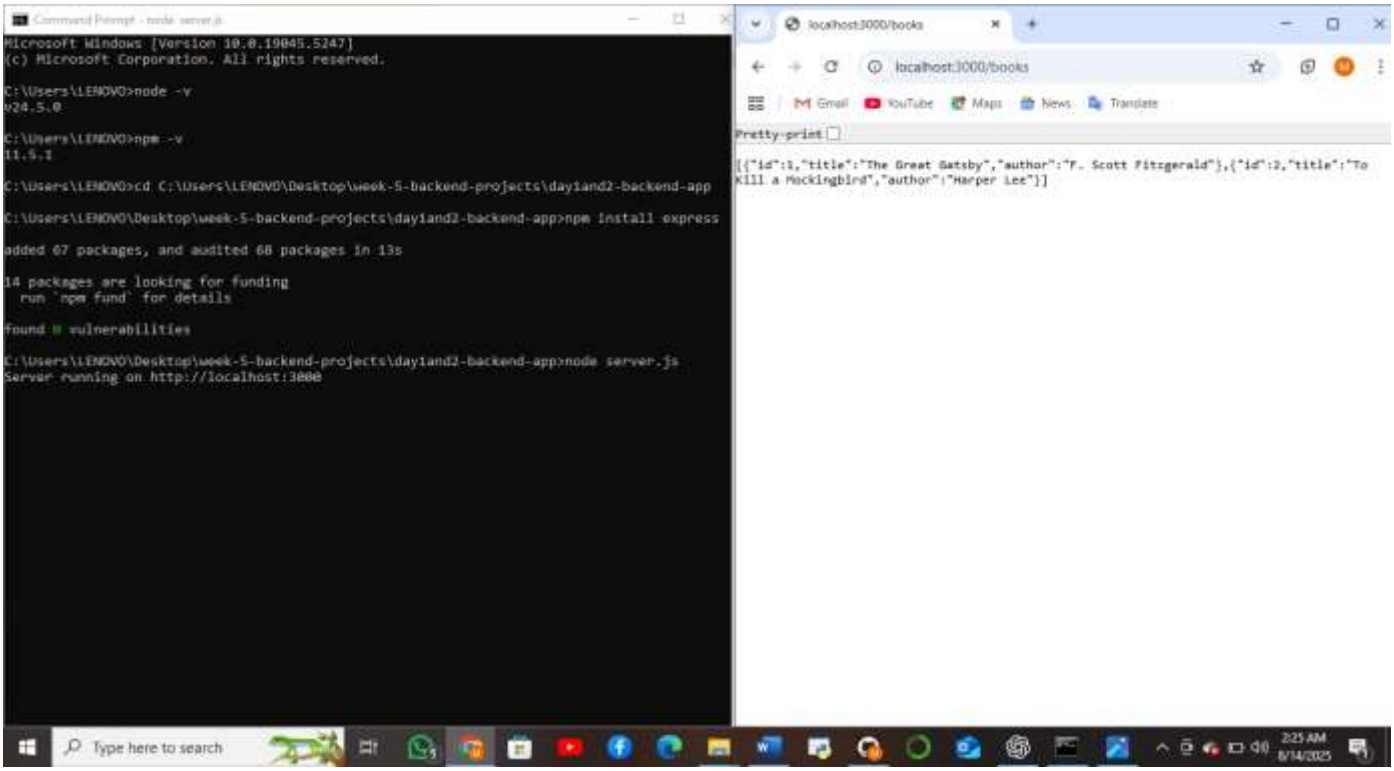

Figure 12 of week 5report shows screenshot of day 1&2 work of running backend app books on local host

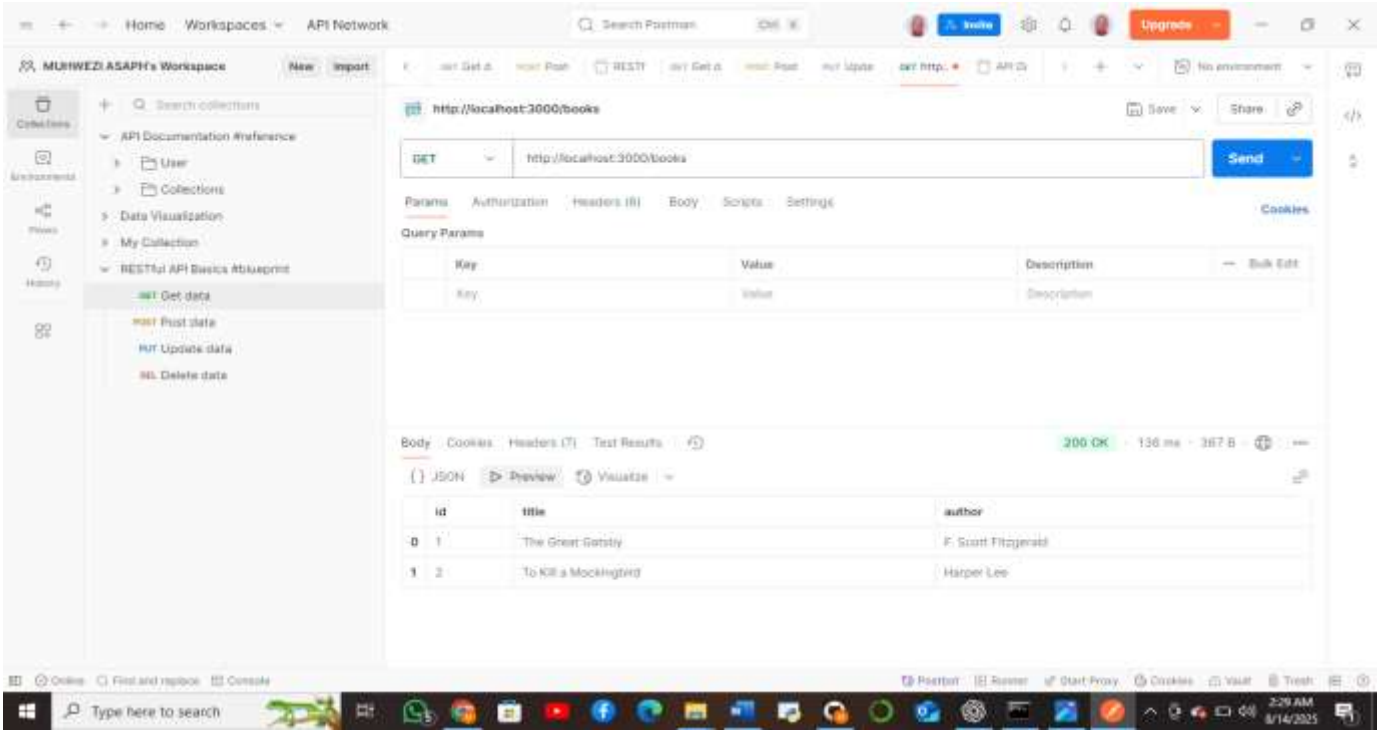

Figure 13 of week 5report shows screenshot of day 1&2 work API testing on postman

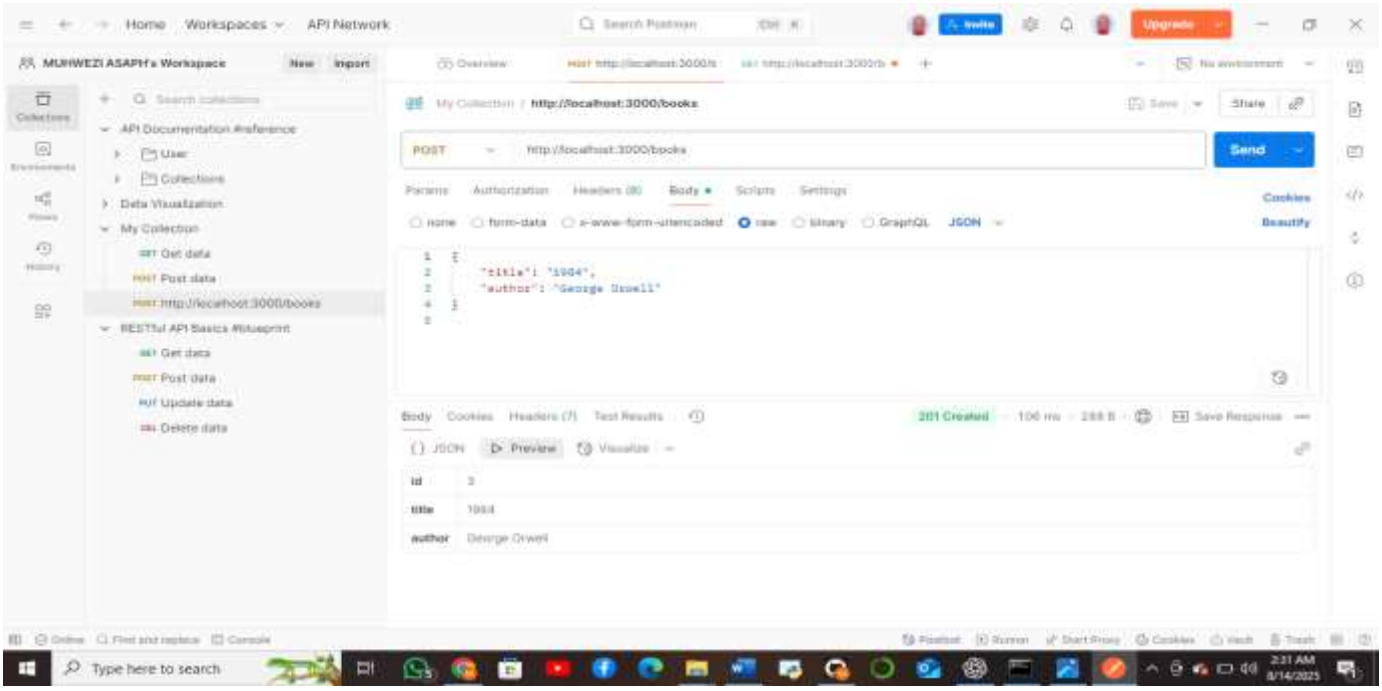

Figure 14 of week 5report shows screenshot of day 1&2 work API testing on postman

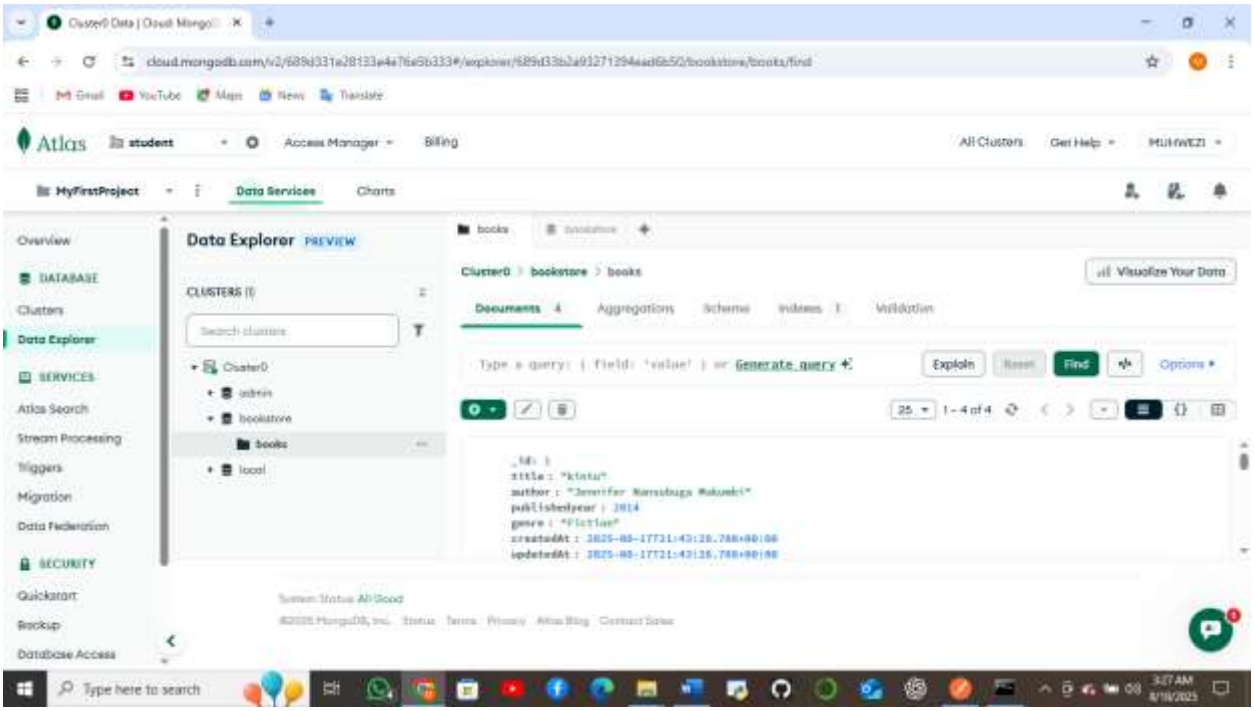

Figure 15 of week 5report shows screenshot of week final project work using MongoDB atlas

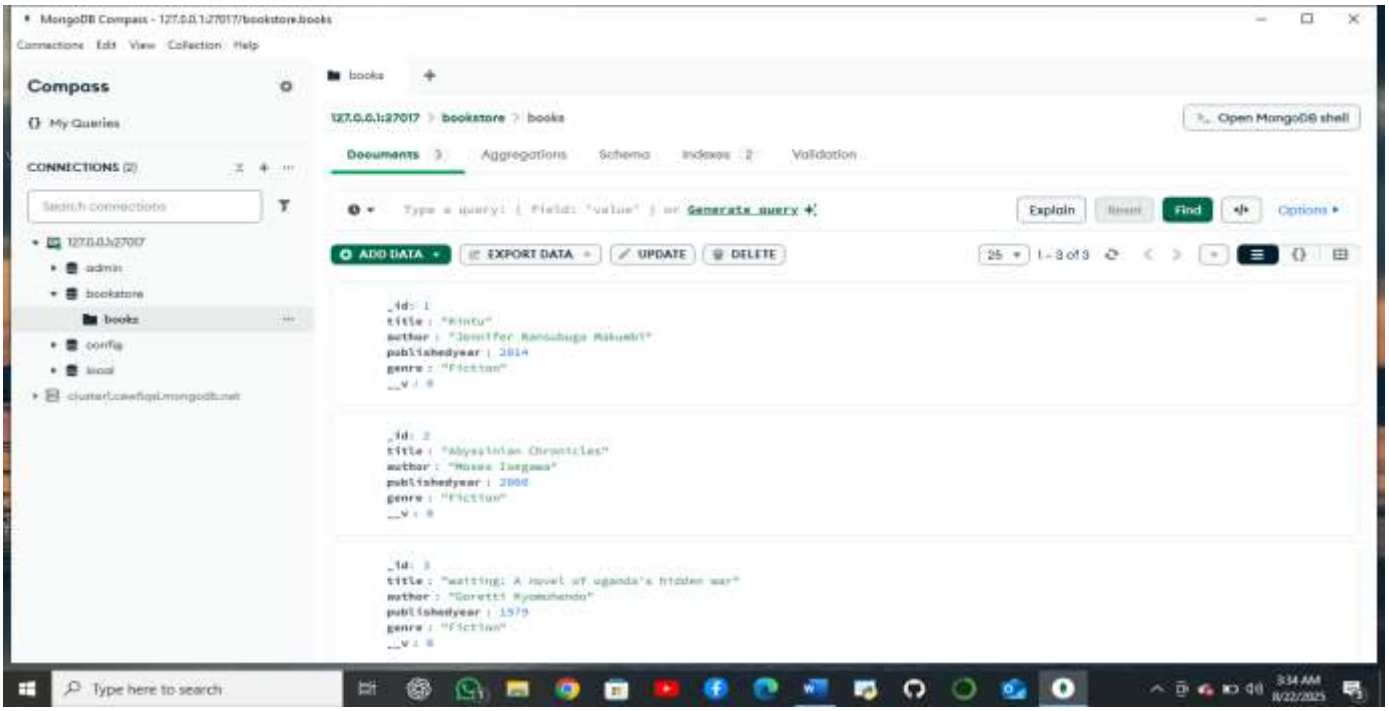

Figure 16 of week 5report shows screenshot of week final project work using locally hosted MongoDB compass

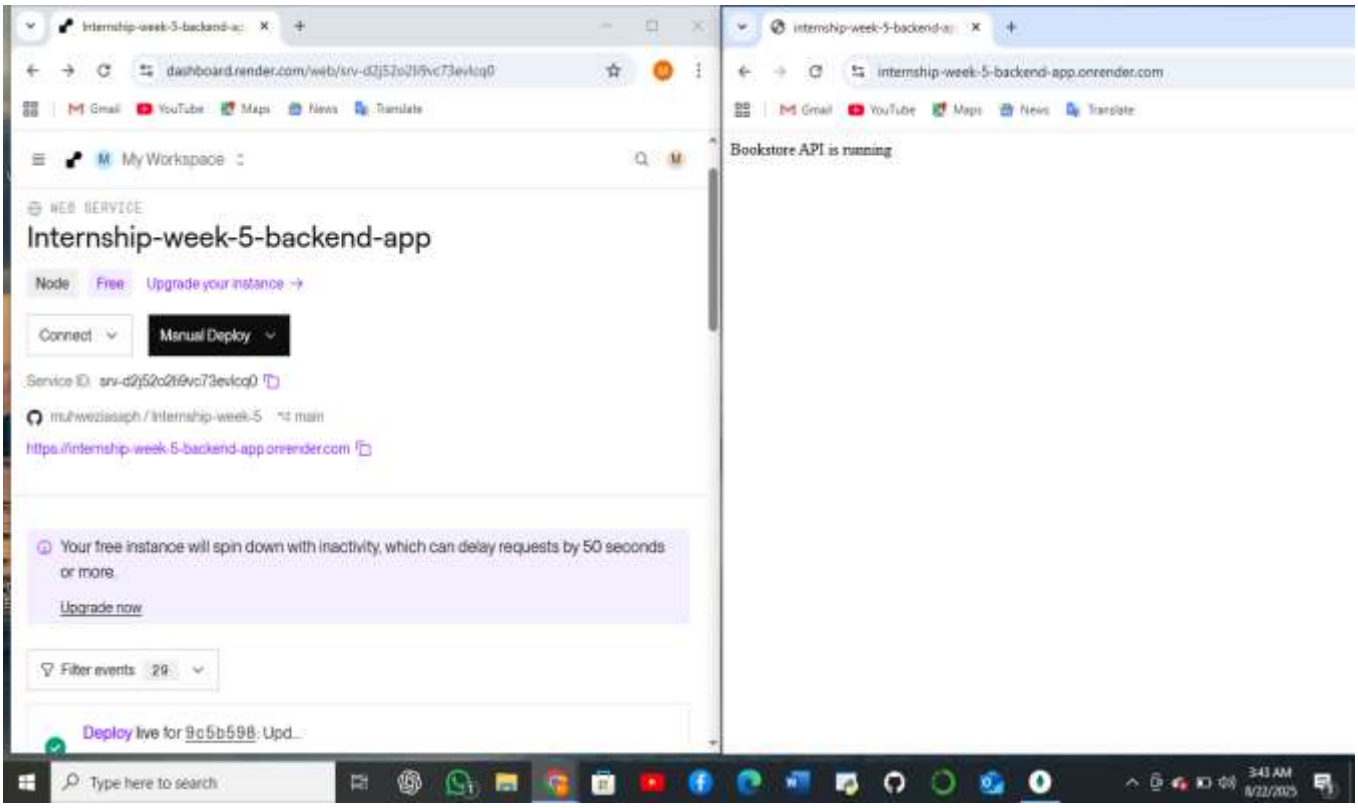

Figure 17 of week 5report shows screenshot of week final project deployed work running

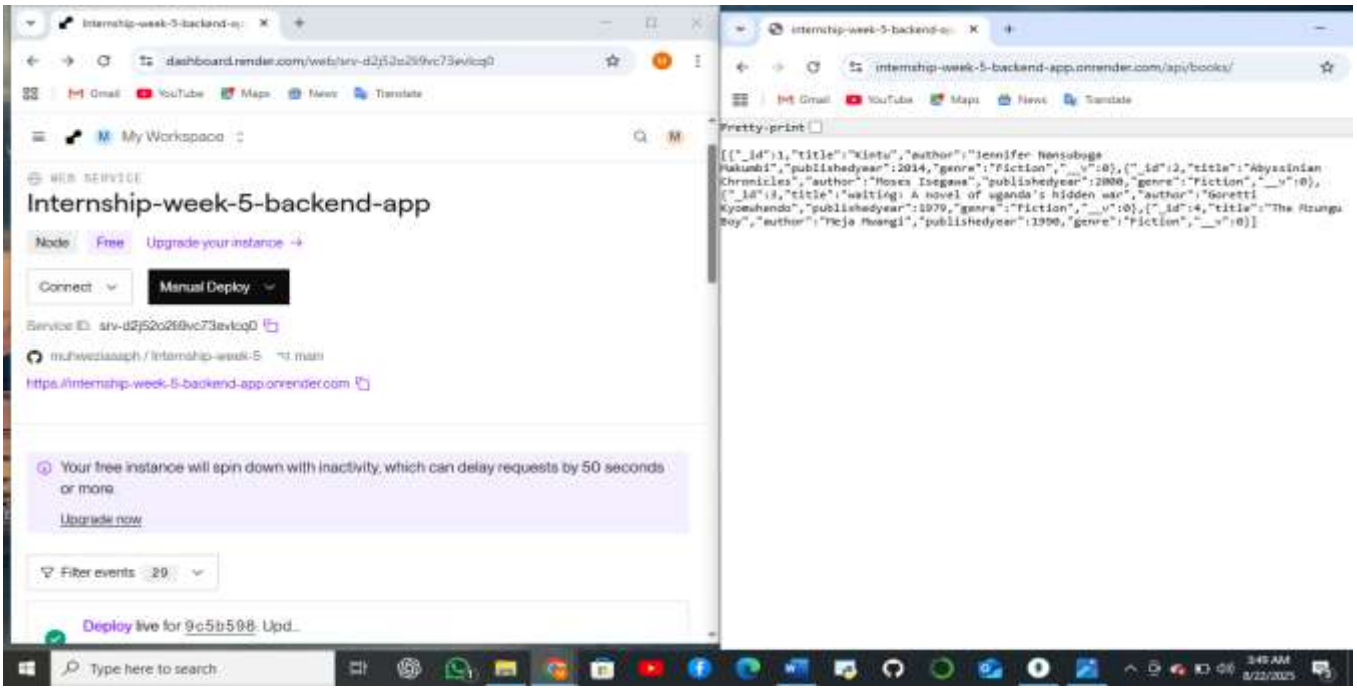

Figure 18 of week 5report shows screenshot of week final project deployed work seeded books on browser

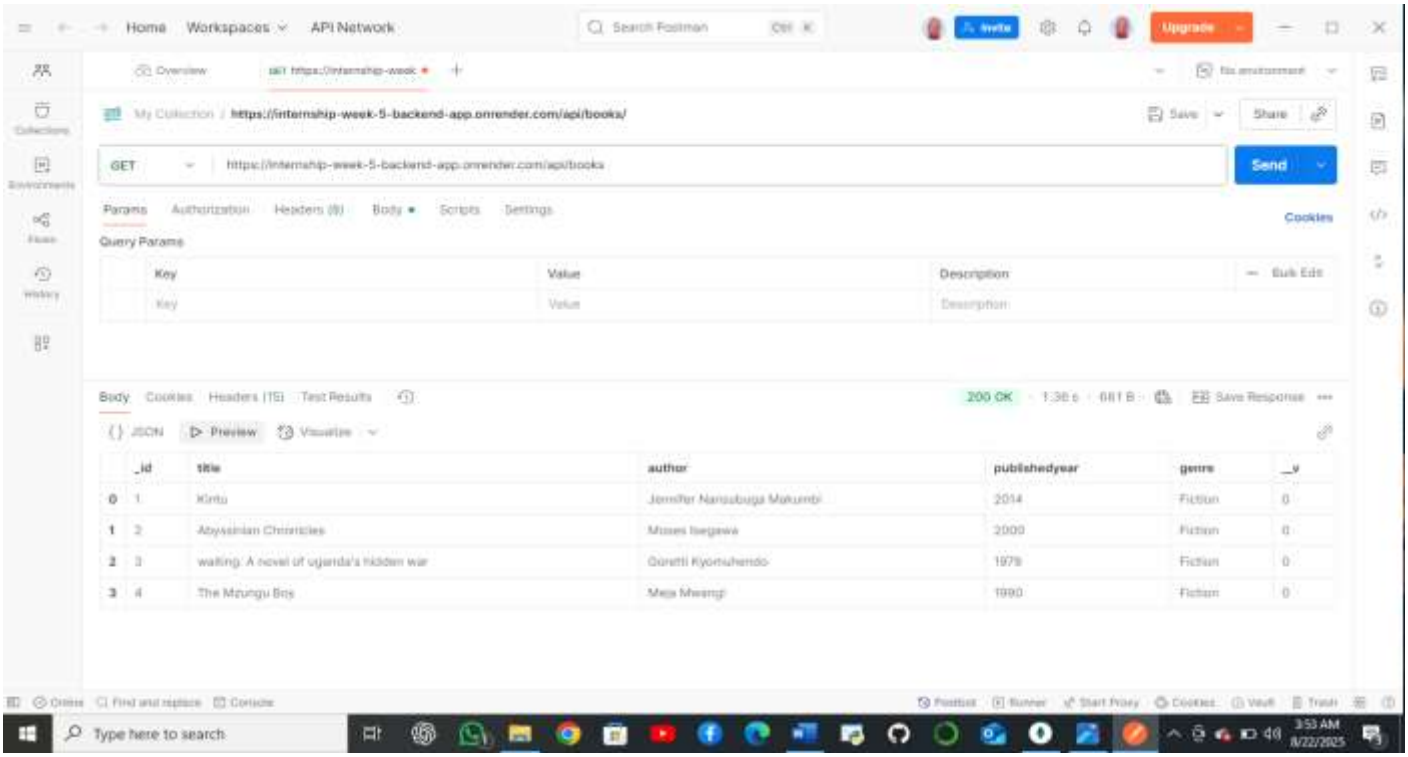

Figure 19 of week 5report shows screenshot of week final project deployed API testing on postman

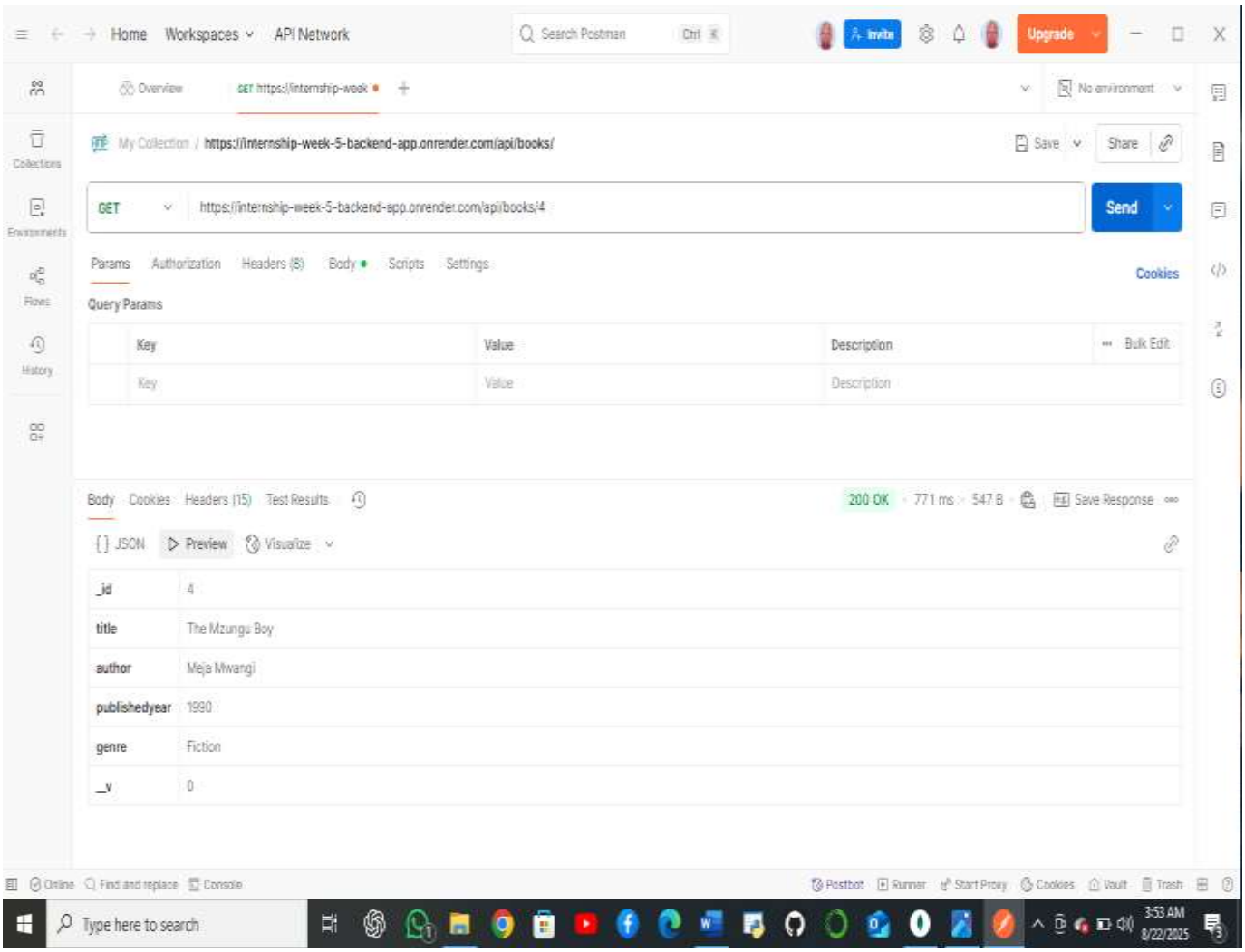

Figure 20 of week 5report shows screenshot of week final project deployed API testing on postman

Figure 11 of week 5 report shows screenshot of final page of weekly report with the signature and name of the field supervisor

Below is the link to the repository of internship week 5

https://github.com/muhweziasaph/Internship-week-5.git

1. What have been your successes/accomplishments?

- Successfully integrated the frontend React application with the backend Node.js + Express + MongoDB API.
- Implemented user authentication using JWT and bcrypt for secure password storage.
- Created protected routes in both backend and frontend to restrict access to authenticated users only.
- Learned how to manage state persistence by storing tokens in local storage.
- Deployed and tested a working MERN Full stack Authentication App locally.

2. What have been the challenges/fears?

- Configuring CORS issues when connecting frontend to backend.
- Struggled with managing authentication tokens and keeping sessions secure.
- Fear of handling security vulnerabilities like token theft and unencrypted environment variables.
- Difficulty in debugging server errors when connecting to MongoDB Atlas.

3. What is the relationship between your internship and your previous job training?

- Previous training introduced theory of backend and databases, but internship allowed hands-on application in real projects.
- Job training taught JavaScript and React basics, while internship expanded into full MERN integration.
- Training emphasized frontend design, but internship showed the importance of security, authentication, and API integration.

4. What is the difference between what you observed in the field and what you learned in class?

- In class concepts were mostly theoretical and based on small isolated exercises where as in the field applied knowledge to real-world full stack projects with deployment is considerations.
- Fieldwork highlighted best practices like version control, environment configuration, and error handling, which were not emphasized in class.
- Internship revealed the importance of teamwork and documentation, unlike classroom coding done individually.

5. What experience have you gained so far from being part of the organization/community?

- Practical experience in building production-ready applications with fullstack architecture.
- Improved ability to collaborate with a team using GitHub.
- Learned how organizations handle project structure, security, and scalability.

- Gained exposure to industry standards like. gitignore, README.md, and structured project documentation.
- Developed confidence in debugging and solving real-world coding problems under deadlines.

6. List activities done for the week:

- Set up backend server with Node.js + Express.
- Created user authentication system (register, login, token validation).
- Integrated frontend React app with backend API.
- Implemented protected routes in both frontend and backend.
- Used MongoDB Atlas for database management.
- Wrote documentation (README, .gitignore) for projects repositories.

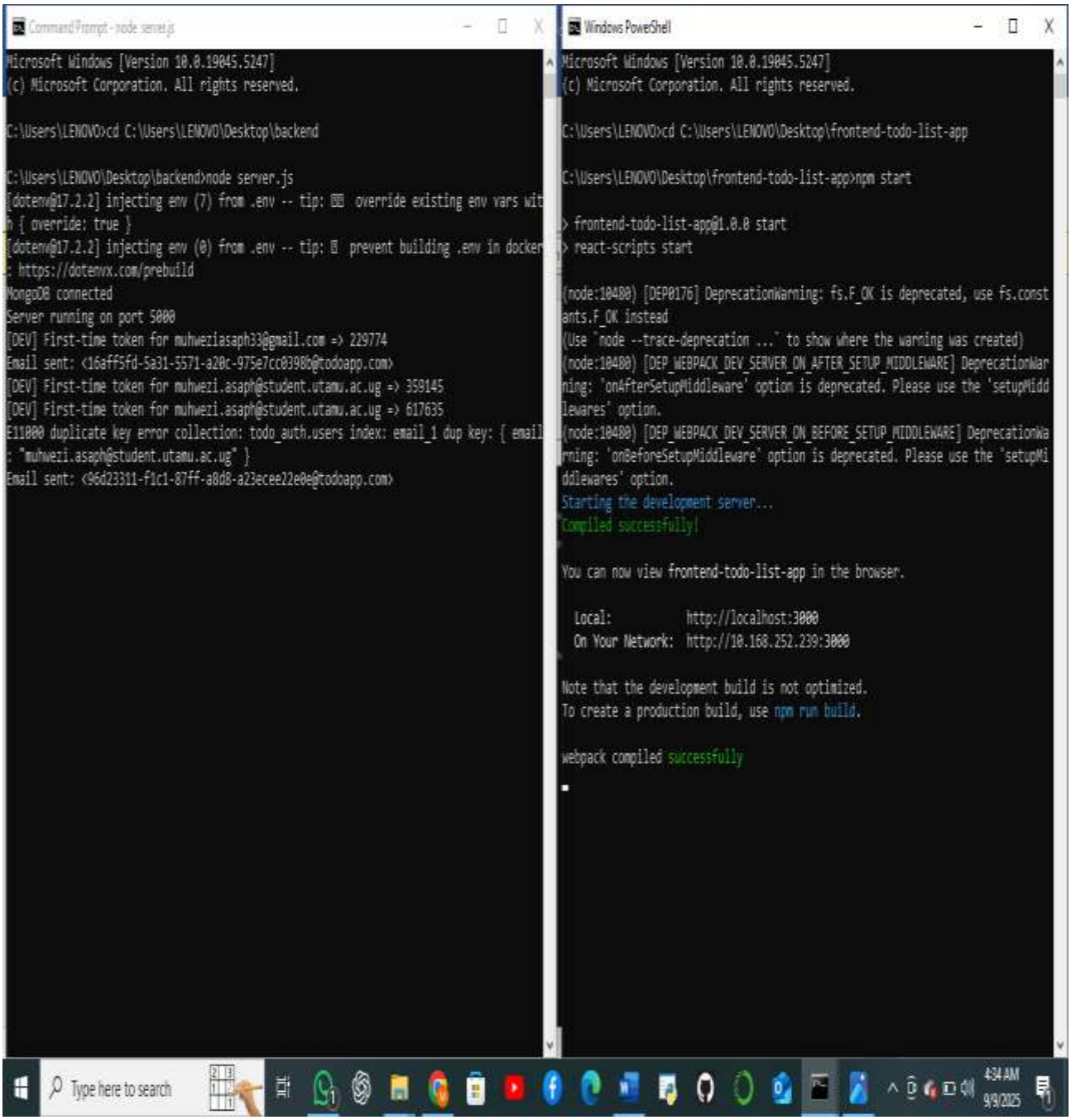

Figure 21showing screen shot of testing frontend and backend locally

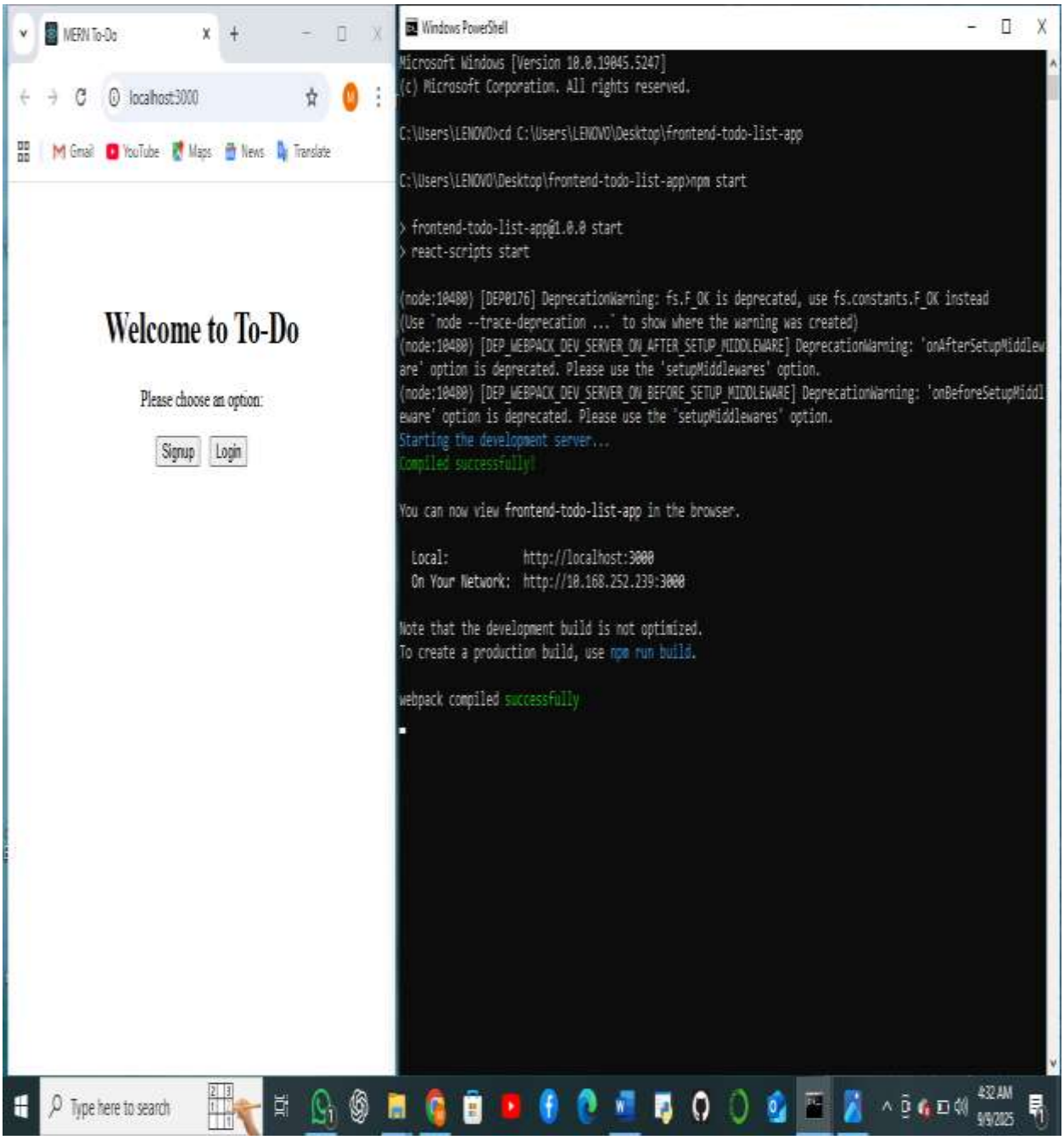

Figure 22screenshot of functioning MERN app tested locally

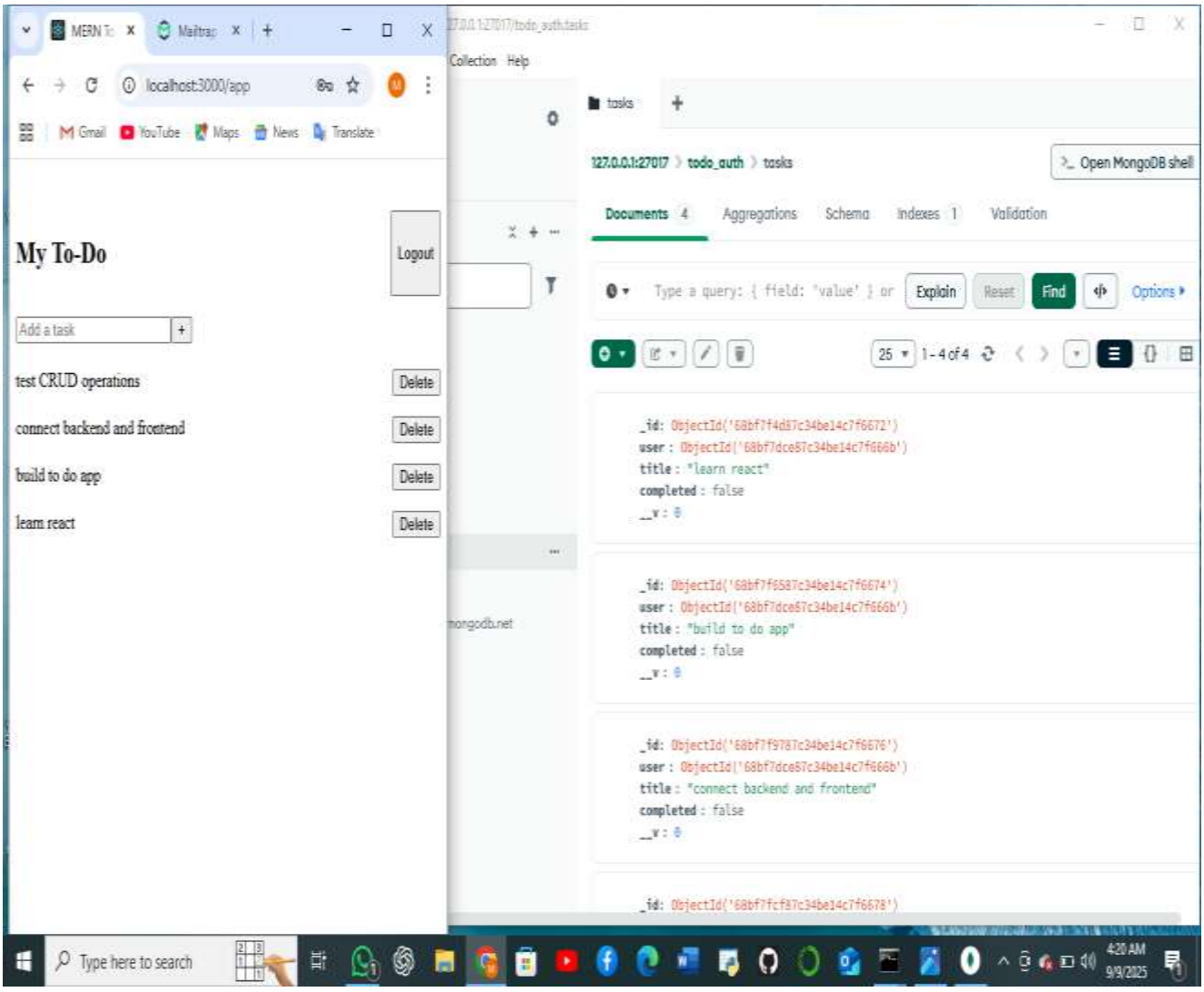

Figure 23showing the screenshot of a well-functioning app frontend well communicating with backend at local testing

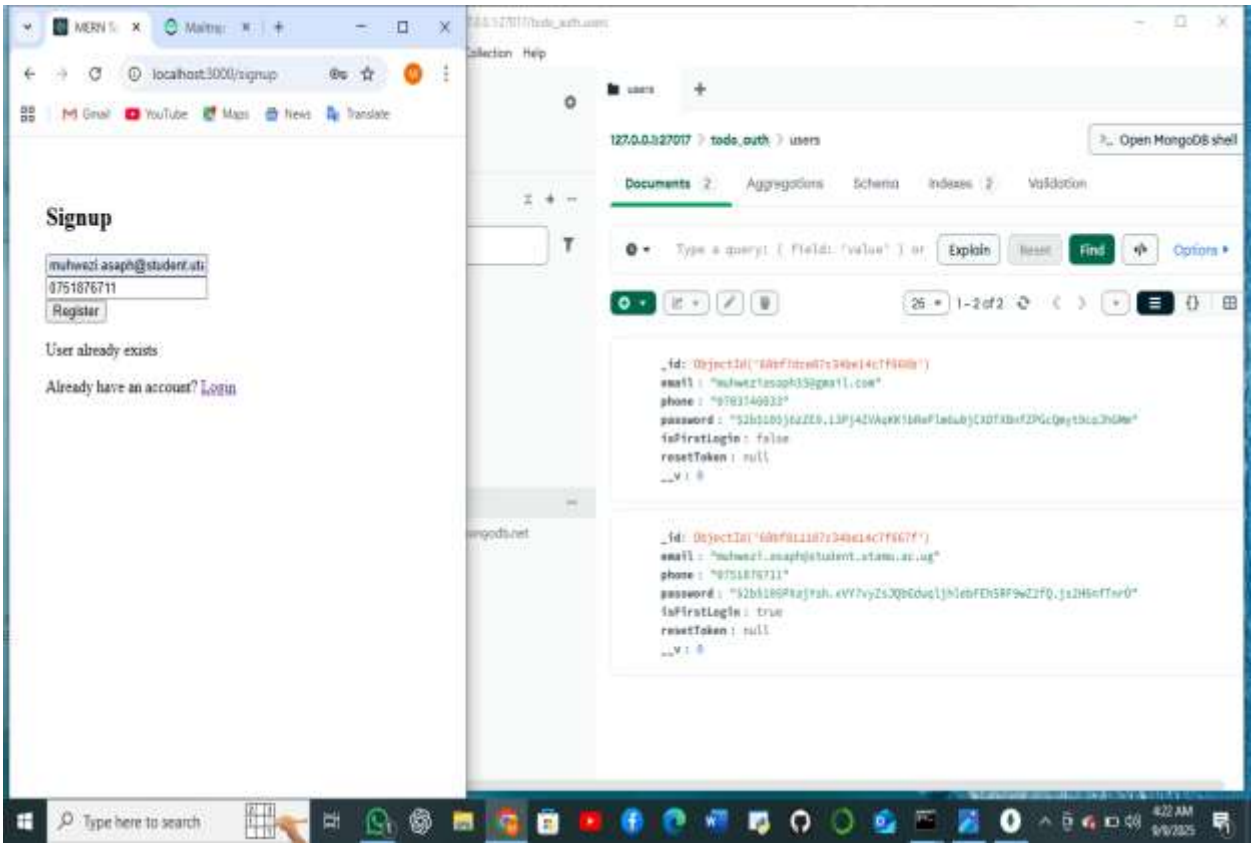

Figure 24 showing a well-functioning app registering new user

Figure 25 of week 6 report shows screenshot of final page of weekly report with the signature and name of the field supervisor

Below is the link to the repository of internship week 6

https://github.com/muhweziasaph/Internship-week-6.git