SEG 2105 - Introduction to Software Engineering
Fall 2024

Event Attendance Management System (EAMS)

Group 5

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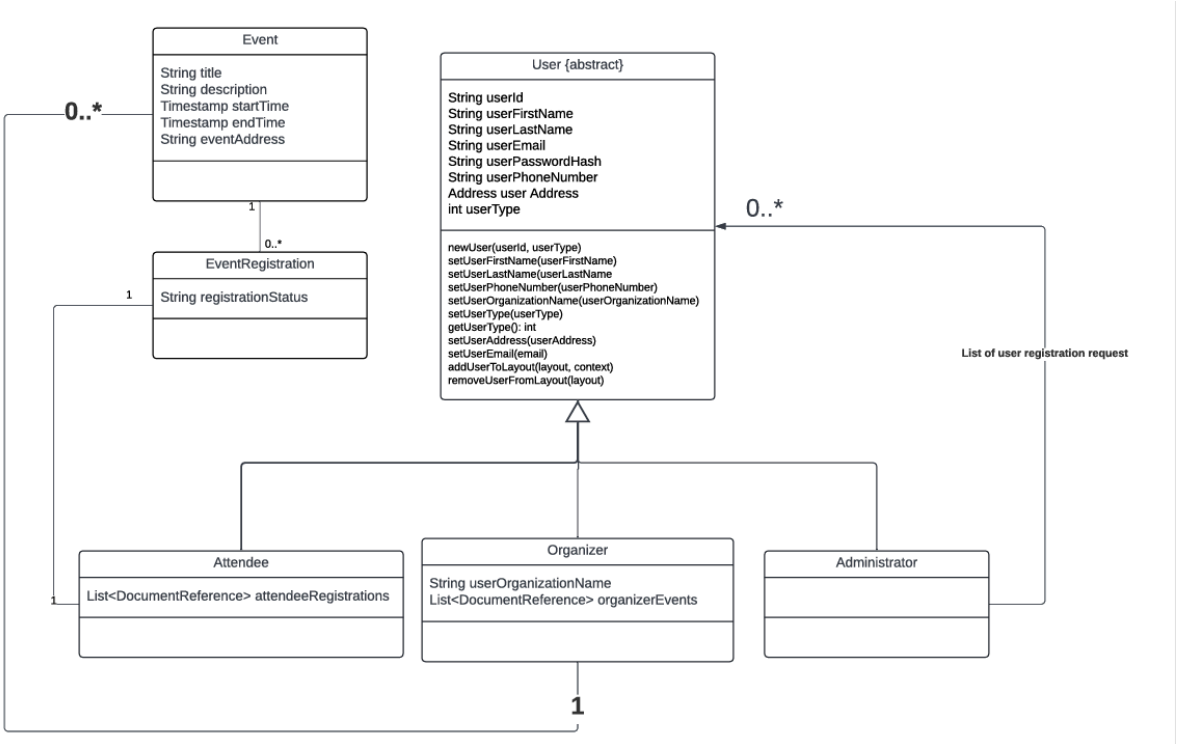
introduction)

The Event Attendance Management System (EAMS) is a mobile app designed to make organizing, registering, and tracking attendance at university events easier. The system is designed to serve a wide range of users, with specific functionality for Attendees, Organizers, and Administrators, offering a complete event management solution.

EAMS was developed incrementally, with five deliverables focused on implementing and enhancing key features. Beginning with Deliverable 1, which provided the framework for user account management, further deliverables included Administrator approval processes, Organizer event development and management, and Attendee participation capabilities. The final stages brought all capabilities together into a unified framework, ensuring strong interactions between user roles and maintaining data consistency throughout the program.

This report provides an overview of the entire project, including a description of key features, the evolution of the system through the deliverables, updated UML diagrams, and lessons learned. By adhering to best practices in software engineering and utilizing tools like Firebase for data management and Android Studio for development, the EAMS project demonstrates the application of theoretical concepts to solve real-world challenges.

UML Diagram)



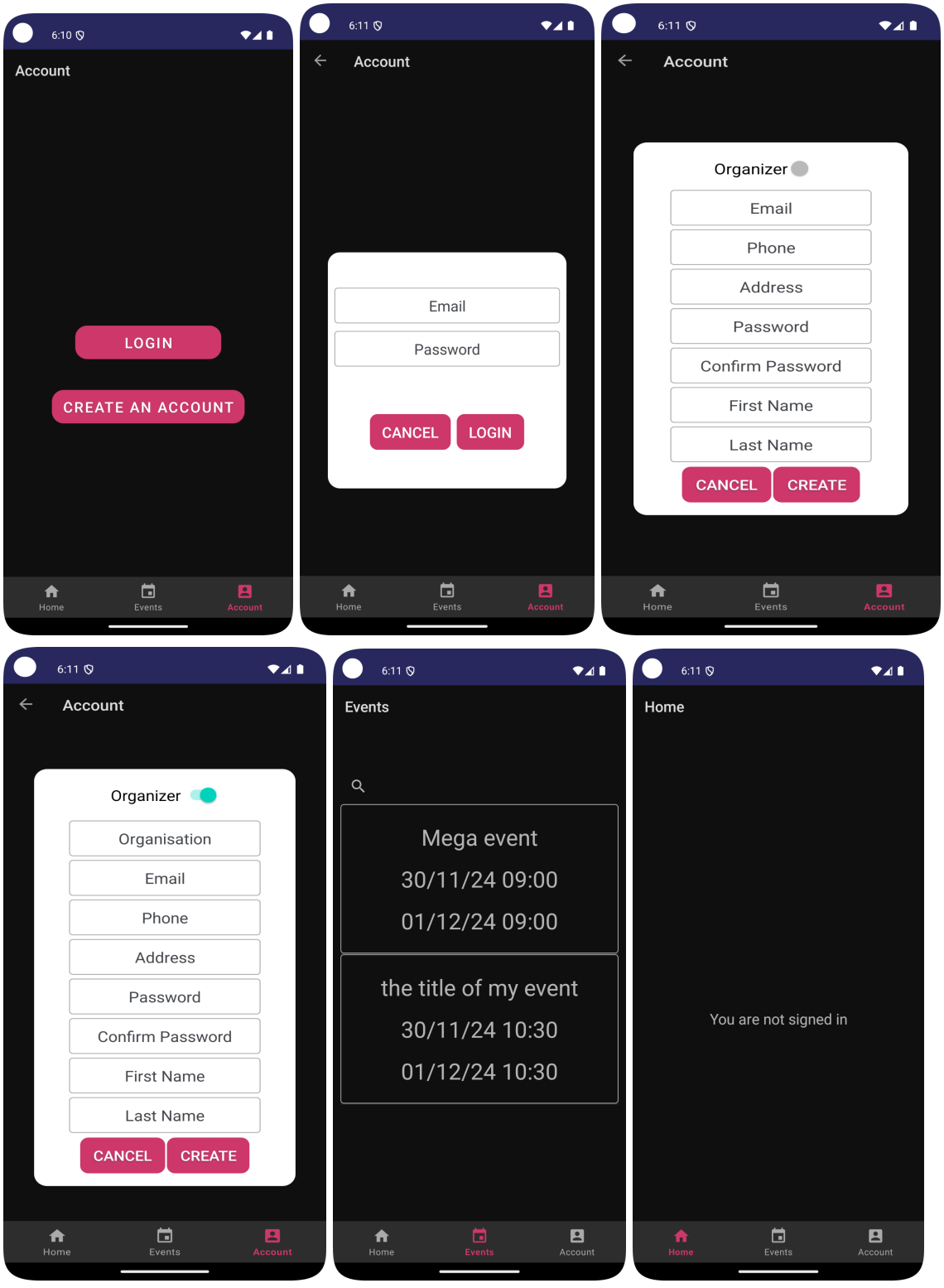
Team contribution)

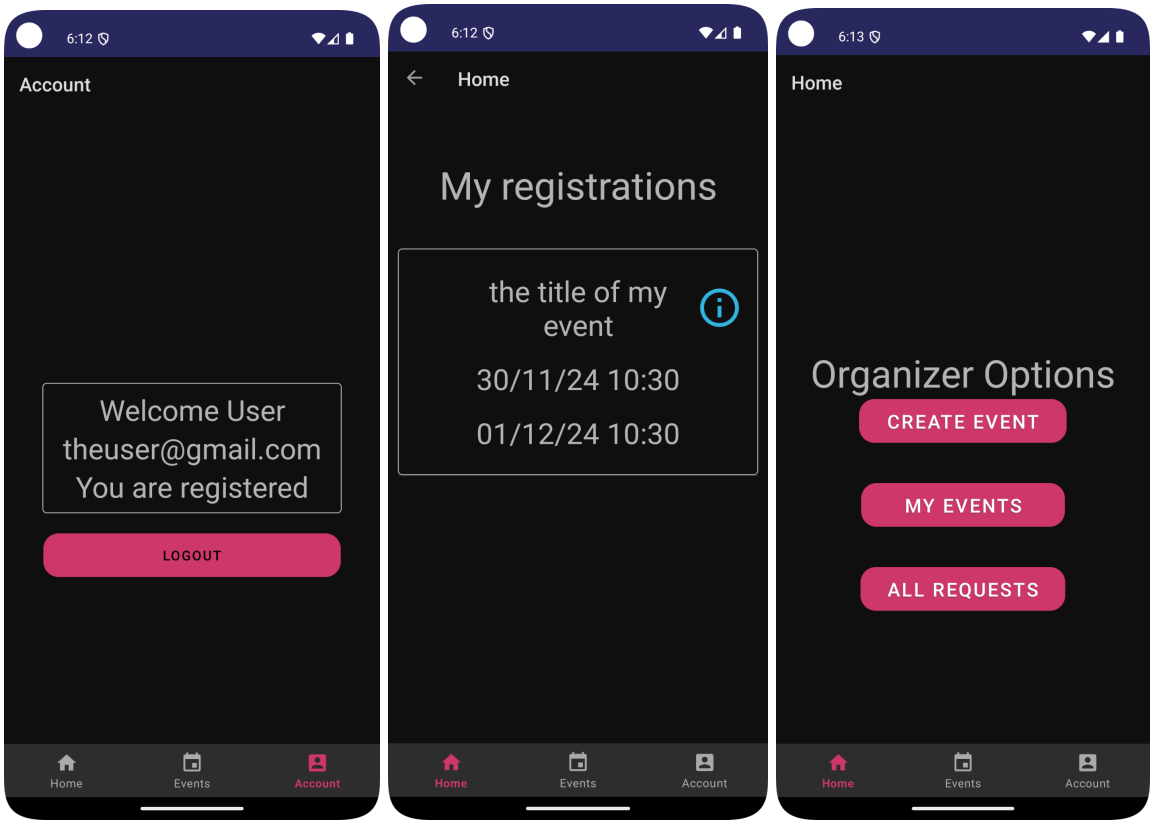
Teammate name	Deliverables mostly done	Contribution
Ryan	1,2,3,4	- Implemented Administrator functionality, including registration approval/rejection workflows and database handling. - Designed and implemented key Attendee functionalities, including viewing event statuses, registration requests, and conflict prevention. Managed related database logic. - Coordinated team activities, ensured deadlines were met, and maintained overall project direction.
Brad	1,4	- Conducted unit testing for all deliverables, focusing on field validation, functionality, and error handling. - Compiled and wrote the project report, including team contributions, lessons learned, and final documentation.
Nabil	2,3	- Developed Organizer-specific

		features such as event creation and management. Integrated Organizer UI components. - Enhanced the Organizer screens for better usability, including event creation and attendee management interfaces. - Refined UI components for the Attendee module, ensuring consistency with Organizer and Administrator views
Ali	2,4	- Conducted unit testing for all deliverables, focusing on field validation, functionality, and error handling. - Compiled and wrote the project report, including team contributions, lessons learned, and final documentation.
Josh	1,2,3	- Designed and implemented the database schema to support user accounts and registration requests - Developed Organizer-specific features such as event creation and management. Integrated Organizer UI components. - Designed and implemented Attendee functionalities, including viewing

		event statuses, registration requests, and conflict prevention.
Peter	1,3	- Organized and cleaned the project repository, ensuring a structured and maintainable codebase. - Refined UI components for the Attendee module, ensuring consistency with Organizer and Administrator views

Screenshots)

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Account
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You are registered
LOGOUT
Home
Events
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6:12
Home
My registrations
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Home
Organizer Options
CREATE EVENT
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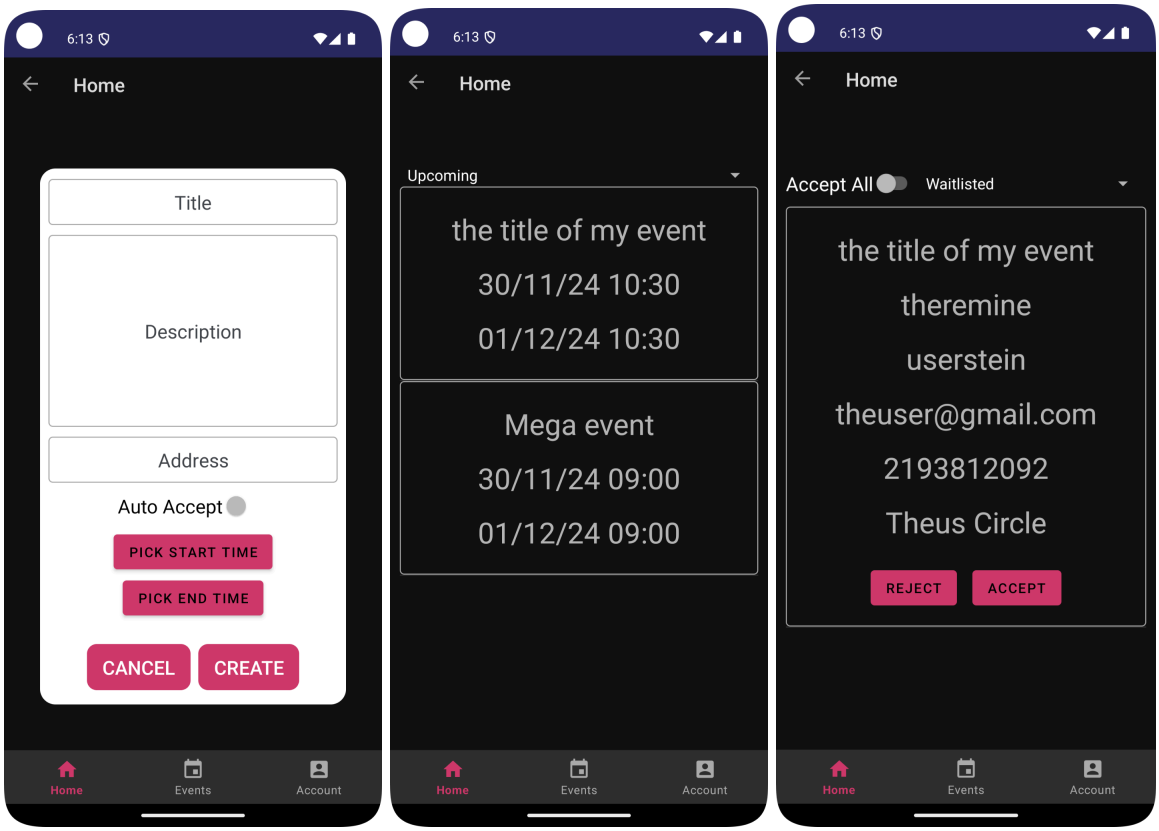
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REJECT
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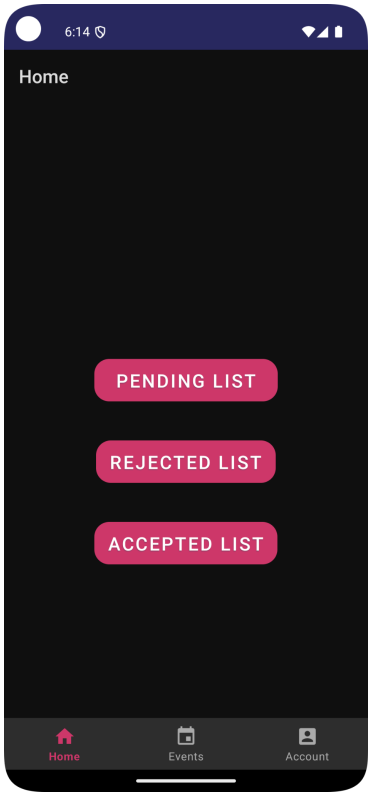
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PENDING LIST
REJECTED LIST
ACCEPTED LIST
Home
Events
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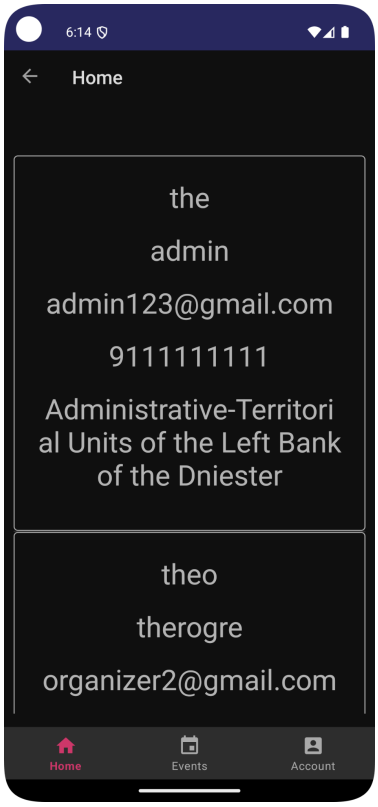
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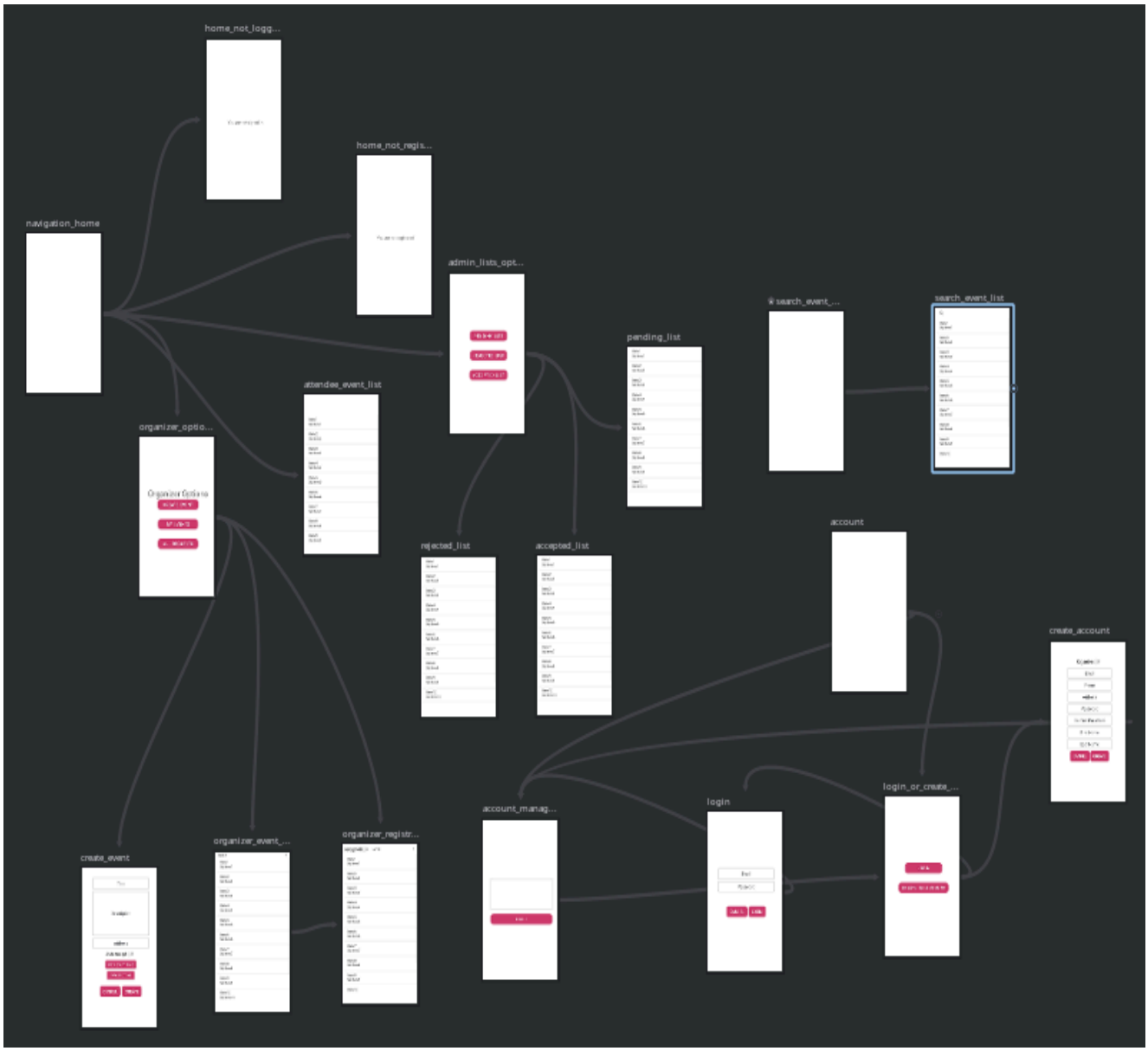
Navigation graph:



Lesson learned)

Technical Skills

From this project, we developed a set of key technical skills pertinent for software development. From design to implementation, learning in Android Studio and Java imparted a solid foundation for crafting the functional mobile application while allowing us to integrate Firebase for database-related exercises. This tool is beneficial in storing and retrieving users' and events' information efficiently. Also, version control using GitHub added to the learning curve because through it, our team collaboration was organized, and the history of the project followed a very straightforward trend. Unit testing was also another important aspect of this project. It showed the importance of code reliability and how many issues can be detected early in development.

Teamwork and Collaboration

Collaboration has been an integral part of this project and offered considerable insight into effective teamwork. One of the important takeaways was that roles and responsibilities must be clearly defined for productivity within the group. Again, conflict resolution, be it technical or interpersonal, helped us to develop better ways through which challenges could be dealt with constructively. Also, effective communication played a big role, especially in clarification of project requirements, updates, and problem solving in teams. This experience instilled in us the importance of strong collaboration skills, which we will definitely need in all future academic and professional settings.

Project Management

The project has also reiterated how project management strategies could help in developing the work progressively to manage the overall complexity and sustain order throughout the semester. To meet the deadlines, one needed to show a very strong time-management approach, particularly when one needed to balance individual responsibility with group tasks. The other important component was maintaining comprehensive documentation, including UML diagrams and progress logs, which highlighted the importance of detailed record-keeping, not only for development but also for project evaluation.

Problem-Solving

The development process gave us ample opportunity to hone our problem-solving skills. Debugging runtime errors and design flaws required a structured and analytical approach, which proved essential in making the application work as intended. We also learned how to implement robust field validation for anticipating user errors and ways to prevent them. These experiences were so valuable in developing problem-solving skills, the ability to think critically, and to adapt to the challenges-which is generally expected in any technical field.

System Design

This project gave a better understanding of how system design should be effectively done. We learned the importance of scalability, designing the application with the potential for future expansions, such as adding new roles or features. While user interface design was not the primary focus, we gained an appreciation for creating a system that is both functional and user-friendly. Balancing these considerations highlighted the need to think holistically about software design, keeping both technical requirements and user needs in mind.

Therefore, the project has been truly inclusive by bringing in an improvement into our technical abilities, skills in teamwork, and principles concerning ethical practices in software development. These lessons will undoubtedly be valuable as we continue our academic and professional journeys in software engineering.