

Tech Hack 2023

Healthcare

Team Name: Tech Hacks

Members:

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Problem Statement:

Background: Technological advances has paved a path towards immense transformations in the way healthcare is delivered to patients. With the advent of new technologies such as artificial intelligence, telemedicine, and wearable devices, healthcare is becoming more personalized, efficient, and accessible. The possibilities for healthcare technology are endless, and there is a great need for innovative solutions to deal with plethora of illnesses.

Deliverables: In the light of the background stated above, participants should provide a working prototype in form of a Mobile/ Web Application implementing solutions to deal with following cases related to healthcare sector. The application should be scalable, secure and user friendly. The application should have the following functionalities:

1. Chronic Illness
2. Mental Health
3. Visual Impairments
4. Secure Information sharing
5. Gamification
6. Desirable Common Features

➤ **Preparation and Requirements:**

To prepare and submit the requirements for the healthcare application project, you can follow these steps:

1. Define the scope of the project: Determine the boundaries of the project, including what features and functionalities will be included and what will be excluded. This will help to establish clear expectations and ensure that the project stays within the intended scope.
2. Identify the target users: Determine who the target users of the application are, including patients, healthcare providers, and caregivers. Understanding the needs of the target users will help to ensure that the application meets their requirements.
3. Define the functional requirements: Identify the specific functionalities that the application should have, including the following:
 - Chronic illness solution: The application should have a solution to help patients manage chronic illnesses, such as tracking symptoms and medications.
 - Mental health solution: The application should have a solution to support patients with mental health conditions, including resources for therapy and self-care.
 - Visual impairment solution: The application should have a solution to assist patients with visual impairments, including text-to-speech and voice-activated controls.
 - Secure information sharing functionality: The application should have secure functionality for patients and healthcare providers to share medical information, including secure messaging and file sharing.
 - Gamification functionality: The application should incorporate gamification elements to increase user engagement and motivation, such as rewards for completing tasks.
 - Desirable common features: The application should have additional common features, such as user profiles and notifications.
4. Define the non-functional requirements: Identify the specific requirements for the application that are not related to its specific functionalities, including the following:
 - Scalability: The application should be able to handle a large number of users and be scalable to accommodate future growth.
 - Security: The application should have strong security features to protect user data and comply with privacy regulations.
 - User-friendliness: The application should be easy to use and navigate for all users, including those with visual impairments.
5. Create a list of deliverables: Define the specific deliverables that will be expected from the project, including a working prototype of the mobile or web application that meets the functional and non-functional requirements outlined above.

6. Establish a timeline: Develop a timeline for the project, including key milestones and deadlines for each phase of the project.
7. Submit the requirements: Once the requirements have been defined, compile them into a document and submit them to the relevant stakeholders, such as the project sponsor or the development team.

➤ User Document Story

Healthcare Mobile/Web Application Prototype

- **As a healthcare professional**, I want to use a mobile/web application that allows me to deliver personalized and timely interventions to patients with chronic illnesses like renal disorders and tumors.
- **As a patient**, I want to use a mobile/web application that allows me to track my health data and receive personalized healthcare solutions that help me prevent or manage chronic illnesses effectively.
- **As a caregiver**, I want to use a mobile/web application that allows me to monitor the health data of my loved ones and receive timely alerts and interventions if there are any potential health risks.
- **As a developer**, I want to contribute to building a mobile/web application that leverages new technologies such as artificial intelligence, telemedicine, and wearable devices to provide innovative solutions for chronic illnesses.
- **As a user**, I want to use a mobile/web application that is secure, user-friendly, and scalable to ensure my data privacy and seamless user experience.

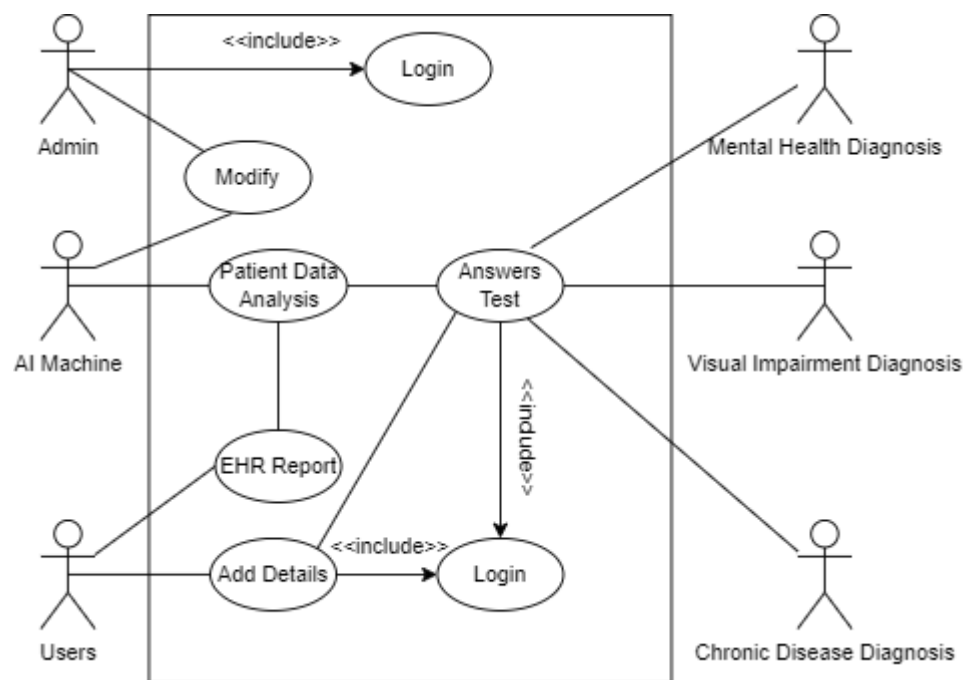
Features:

- Personalized healthcare solutions for chronic illnesses like renal disorders and tumours.
- Health data tracking and monitoring for patients and caregivers.
- Timely alerts and interventions for potential health risks.
- Integration of new technologies such as artificial intelligence, telemedicine, and wearable devices.
- Secure and scalable application architecture.
- User-friendly interface for easy navigation and seamless user experience.

Overall, the healthcare mobile/web application prototype aims to provide personalized and innovative healthcare solutions to patients, caregivers, and healthcare professionals, leveraging new technologies and a user-friendly interface to ensure a seamless user experience.

➤ UML Diagrams

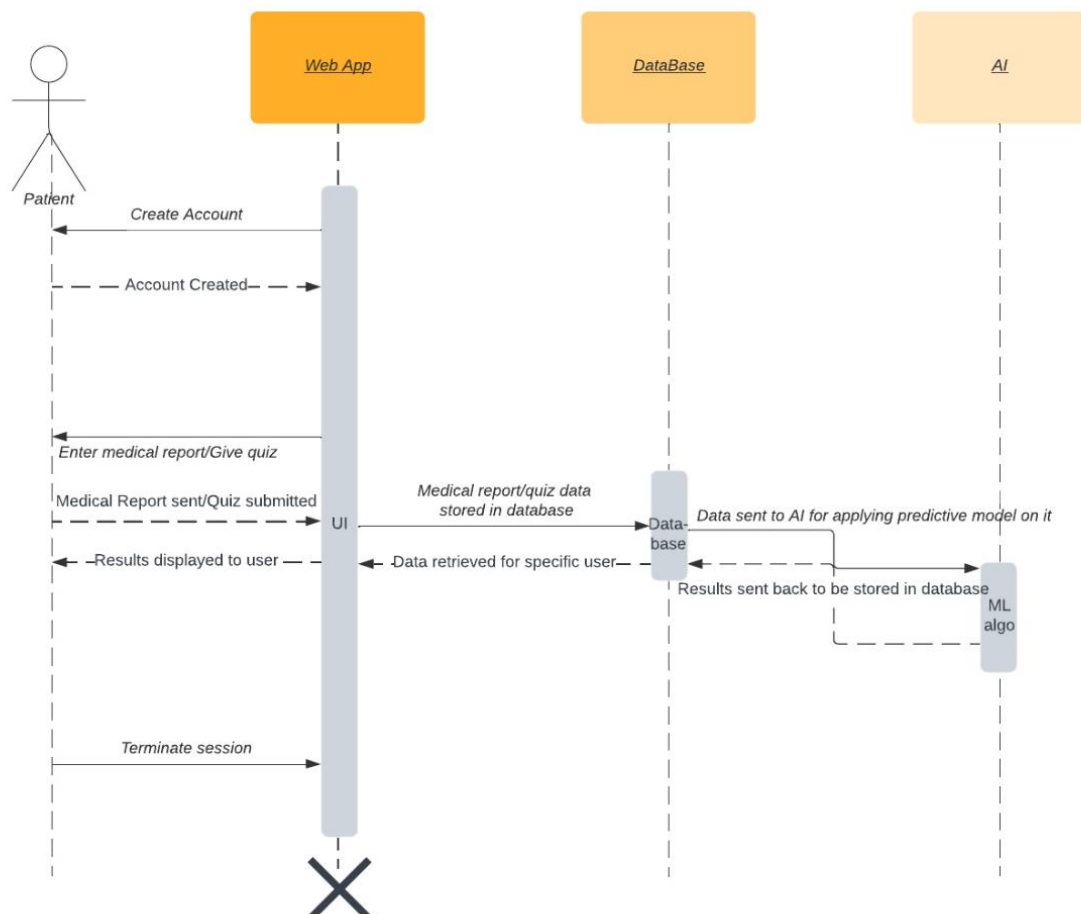
1. Use Case UML



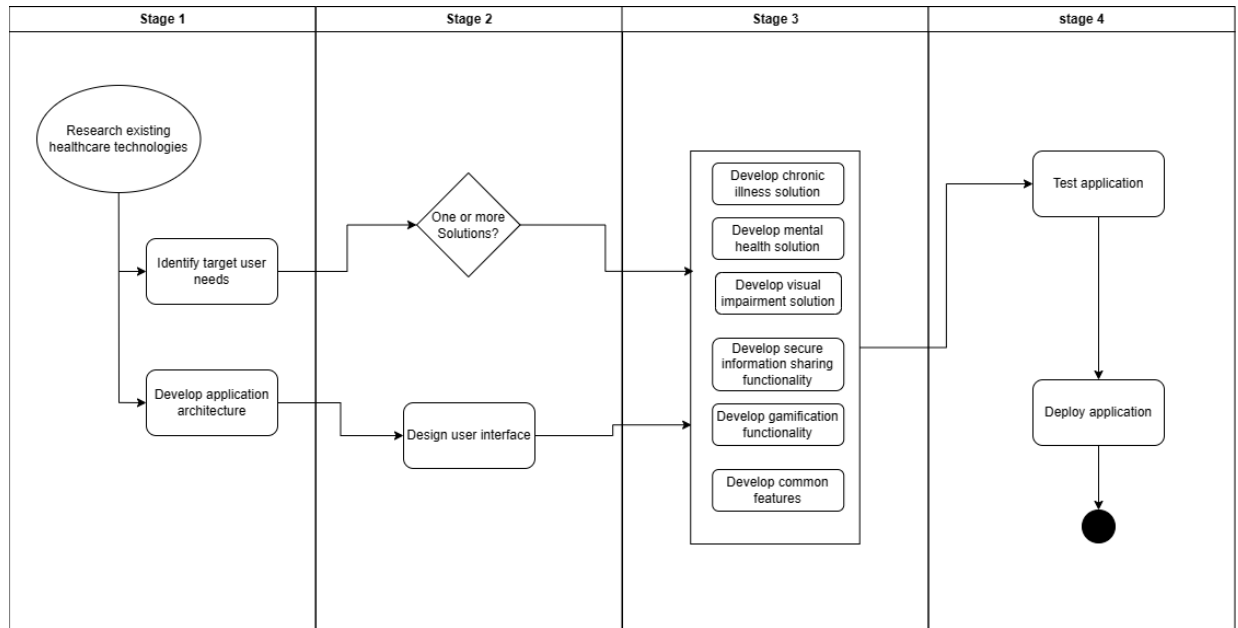
2. Sequence UML

Sequence diagram

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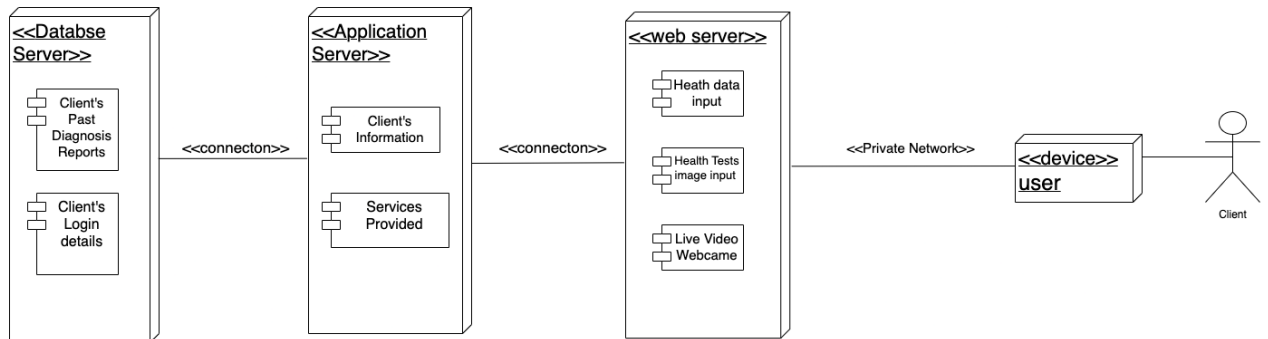


3. Activity UML



4. Deployment UML

Deployment UML



➤ **Open-Source Licensing Statement**

MIT License

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