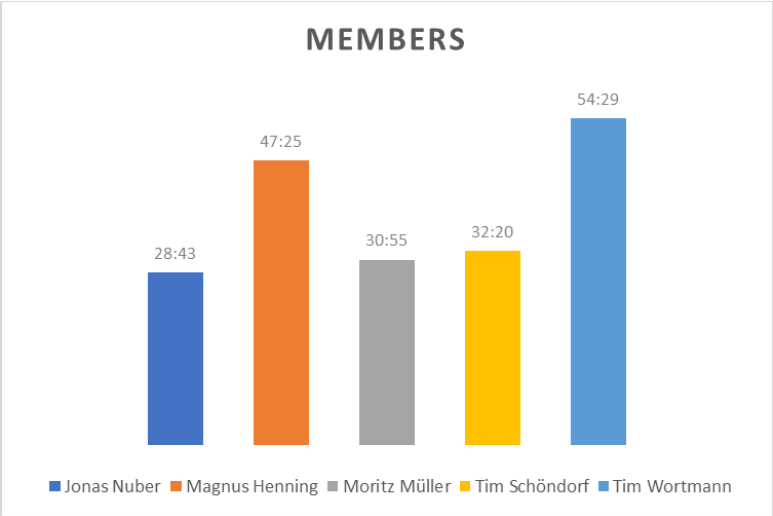
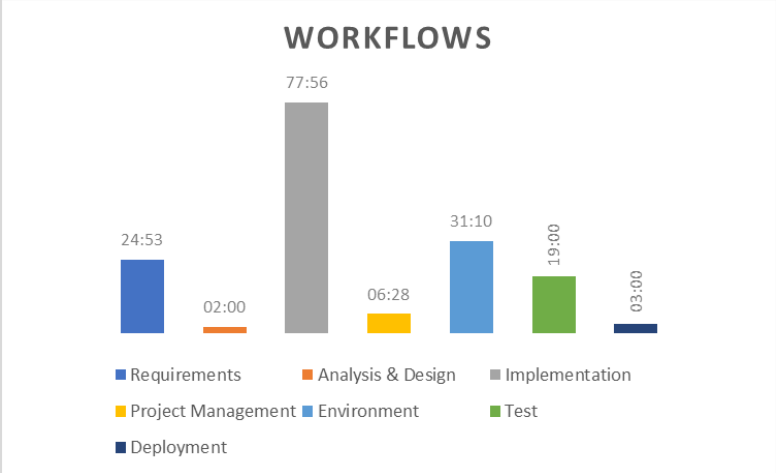
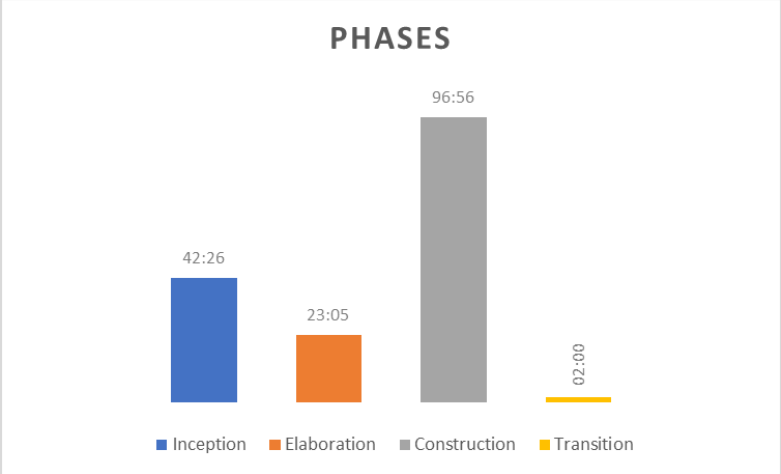
Brainstorm - Handout

Statistic of efforts







Tech Stack / Tools

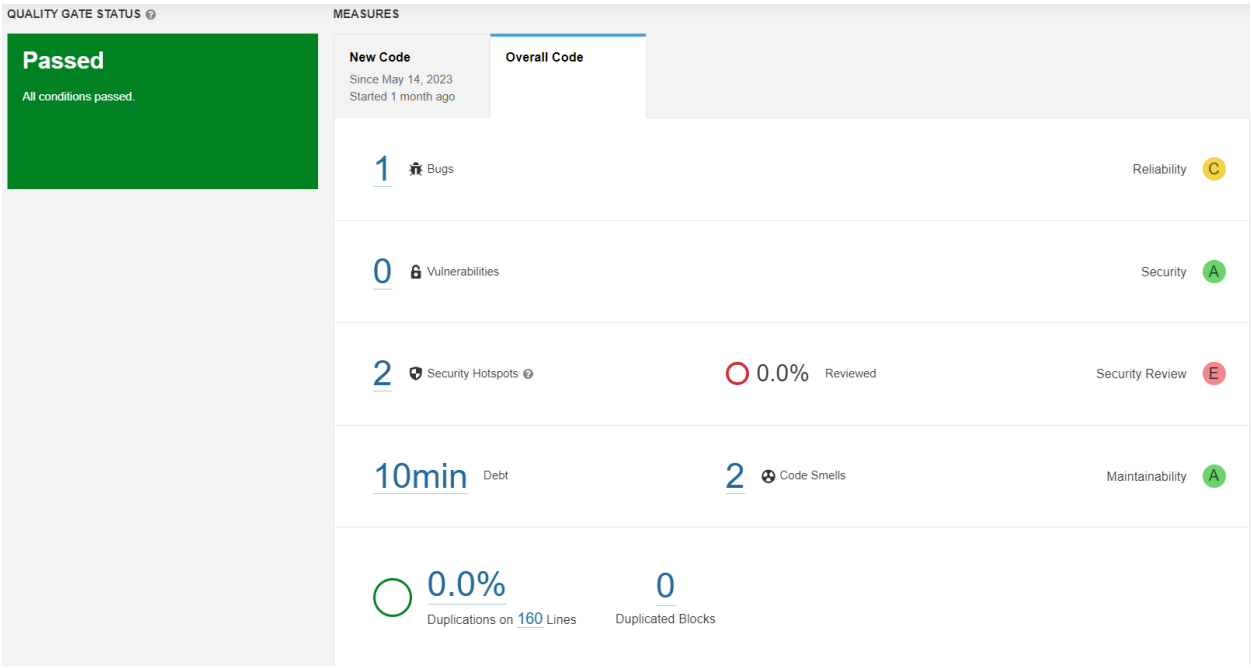
SupaBase	The backend is built using SupaBase which is an open-source BaaS (backend as a service) Firebase alternative. It provides many desirable features like user management and file storage out of the box. It is built on top of a PostgreSQL database and provides the capability to create a secure service with its edge and database functions in a fast and easy manner. The services are hosted on their servers but can also be self-hosted as containers if desired.
Flutter	The frontend is written in the Flutter framework developed by google, which uses the Dart language to write reusable user interfaces. This framework allows to write code once and to compile and deploy it on different platforms like iOS and Apple as well as native desktop apps and webapps.
IDEs	For development the Android Studio IDE as well as Visual Studio Code are used to write the dart code and the browser to build the SupaBase service.
SonarQube	SonarQube is used for code quality metrics. SonarQube is an open-source platform designed for continuous code quality inspection, also known as static code analysis. It provides developers and development teams with a comprehensive set of tools and functionalities to assess and improve the quality of their codebase.
Jenkins	For the CI/CD pipeline Jenkins is used. Jenkins is an open-source automation server that facilitates the continuous integration and delivery (CI/CD) process in software development. It allows developers to automate various stages of the software development lifecycle, including building, testing, and deploying applications.

Architecture

The software architecture of Brainstorm follows a monolithic design pattern. The backend of the application is built using SupaBase, a framework that provides a comprehensive set of tools for developing web and mobile applications.

The backend serves as the central component of the application, handling all business logic and data processing. It exposes an API (Application Programming Interface) that the frontend, developed using Flutter, interacts with. The frontend, built using the Flutter framework, provides a user-friendly interface and handles the presentation layer of the application.

Measurements



Frontend Code analysis.

Testing

Brainstorm incorporates a comprehensive Test suite that includes both unit and database tests. The database tests focus on validating the functionality of SupaBase's database functions, which are defined through functional definitions rather than traditional code. On the other hand, the frontend is subjected to thorough unit testing, and if time permits, theoretical integration tests would also be conducted to ensure seamless integration between different components of the application.