Architectural Report

1. Main quality attributes of the application

Reliability

Our application is reliable because of its **compatibility** and **portability**. It is highly compatible because it is based on the Flutter framework, which supports a variety of different platforms and operating systems. It is also portable because the users only need to download the application itself in order to be able to start using it. Because of the way it was designed, **availability** is also not an issue, as the application can even run without an internet connection, because it runs locally.

Usability and reusability

Our application is easy to use for the customer because of its intuitive UI and design, especially because of the graphical floor presentation of the restaurants' tables. It is also **reusable** because of how easy it is to create different table configurations, on different floors of the restaurant.

2. Effect on stakeholders

Our application enables our stakeholders(Boema House, The Junction Grill, Mike's Pub) to increase efficiency and productivity in running their restaurant businesses by digitalizing their logistical management and servicing processes because of the application's focus on usability, which also results in higher customer satisfaction.
The application's reliability is also important for our investor, The Junction Grill, because it helps them further market the application to more restaurant business, expanding its customer lineup and increasing their ROI(return on investment).

3. Tactics used to satisfy QAs

In order to have a more efficient QA process, before any changes are reviewed by the QA team, a Github Actions pipeline is run which performs regression tests which validate that the core actions of the application are still fully functional and behave as expected. Our development team has also performed Negative Testing and User Acceptance Tests on the application during development, but also on the final version.

4. Architectural Design Pattern used in your application

Our application is designed and implemented based on a Layered architectural pattern. Data is transferred between the three different layers of the application:
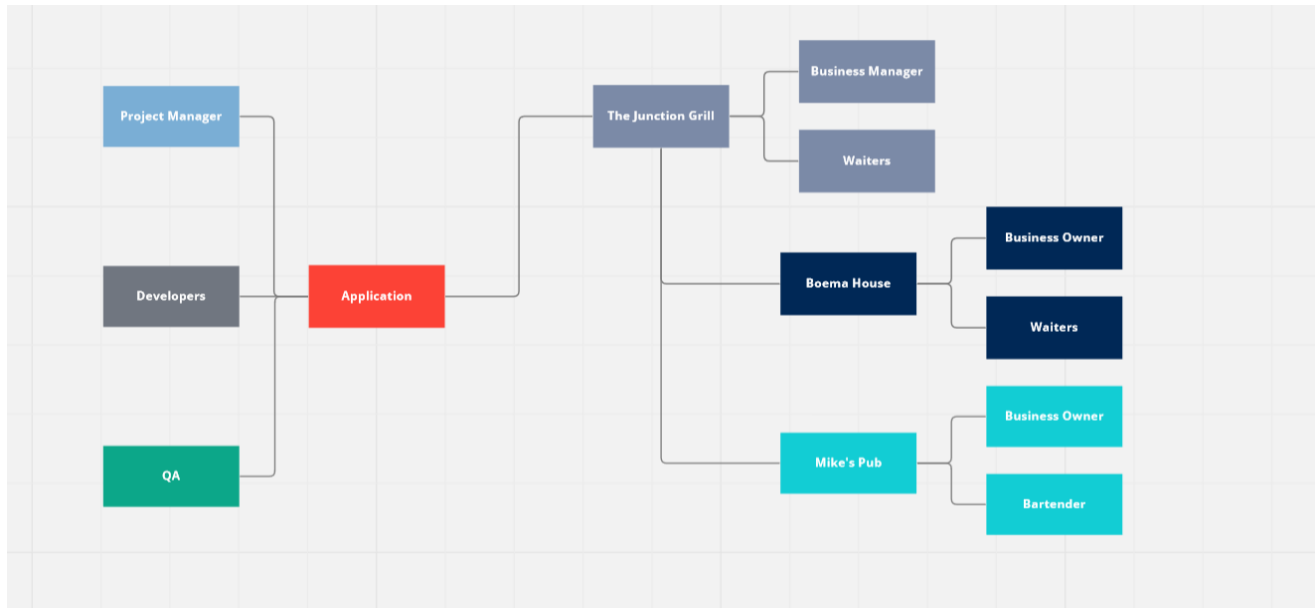
- Presentation
- Service and business logic
- Data access
  This was a conscious choice which our development team made during the Discovery phase
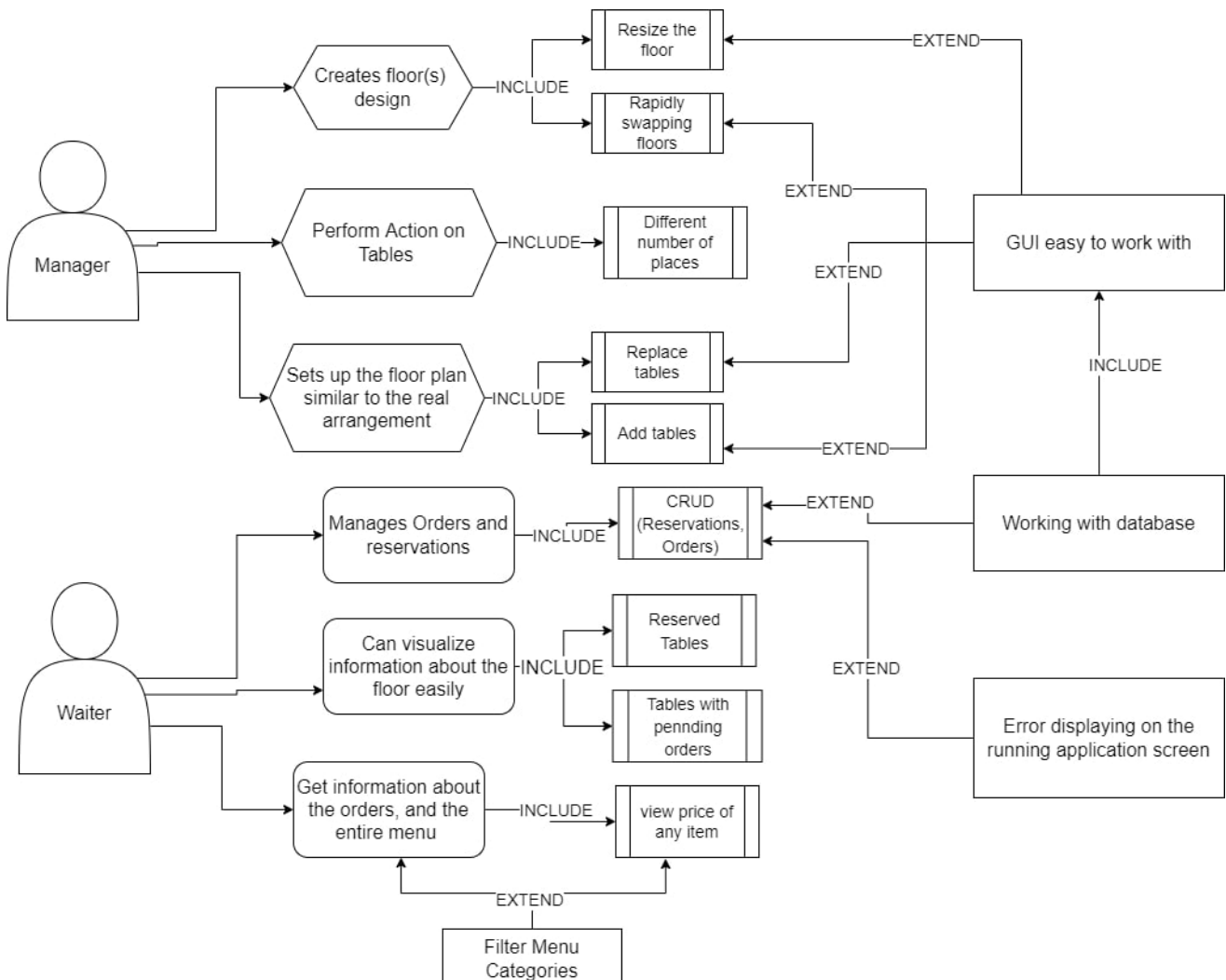
which was made because this pattern increases code readability, scalability and modifiability.

5. Diagrams that describe application architecture

For product owner

For developers, QA, devops

For clients

Manager

- Design table layout for different floors of the restaurant
- Can add reservations, orders, food menu items

Waiter

- Can add, manage, orders and reservations
- Can easily visualize information about the table layout, orders, reservations and menu items