Design Documentation

Free choice

Revision History

Date	Version	Description	Author
22/09/21	1.0	Initial discussion of design	Fanny Söderlund, Malek Alabed, Nishat Jahan, Suzanne Zomer
06/10/21	1.1	Design of mock lab	Fanny Söderlund, Malek Alabed, Nishat Jahan, Suzanne Zomer
20/10/21	1.2	Additions of figures 4 and 5	Malek Alabed
21/10/21	1.3	Addition of D4 and complementing figure 4	Fanny Söderlund
23/10/21	1.4	Rearranging text, check spelling and details	Fanny Söderlund, Malek Alabed, Nishat Jahan, Suzanne Zomer, Ismail Eyamba
23/10/21	1.5	Addition of explanation of ‘mocked environment’ in D3	Suzanne Zomer
23/10/2021	1.6	Additions of figure 2 and 3	Nishat Jahan

Design item List

Design name	Requirements related	Priority
D1. Client android app environment	R1, R2, R3	Essential
D2. Client web app environment	R1, R2, R3	Essential
D3. Server/API connection	R2, R4, R5, R6, R8	Essential
D4. Home page designs	R4, R5, R7, R8, R9	Desirable

Design Item Descriptions

D1.

A collection of the designs for the requirements relating to the android client side of the system.

Mocked environment

The mocked environment allows the features to be developed incapsulated without outside interaction. The mocked client app is a simple android app that contains the necessary components for the related requirements. The mocked environment is created using Android Studio using Java to integrate with the other subgroups. As seen in *figure 1*, the mocked environment aims to be simple with a few components to make it easy for us to develop our features in it.

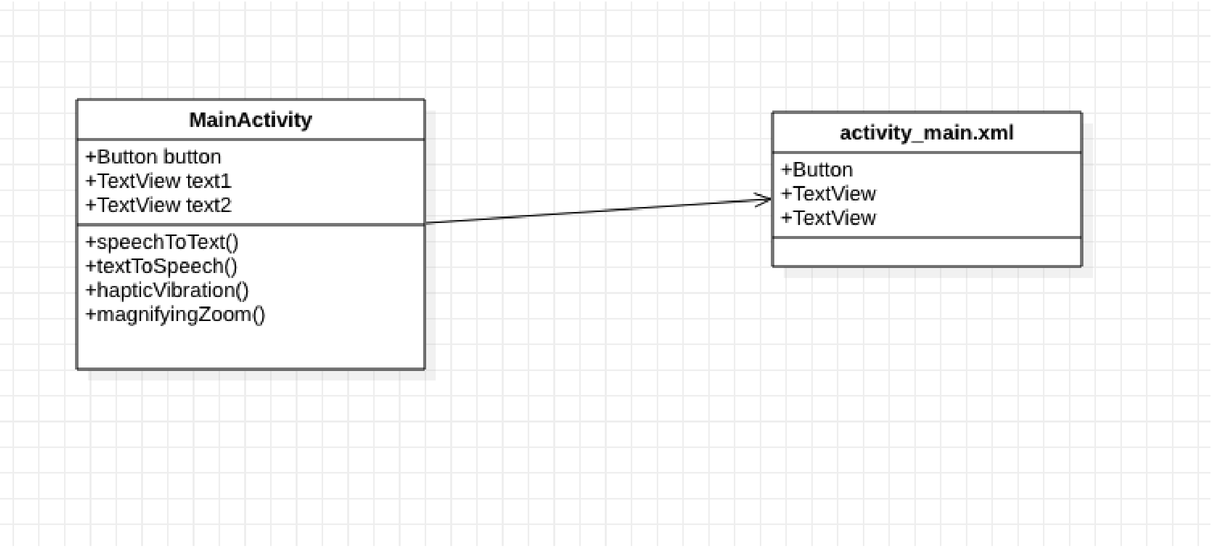


Figure 1 - Class diagram of mock client android app

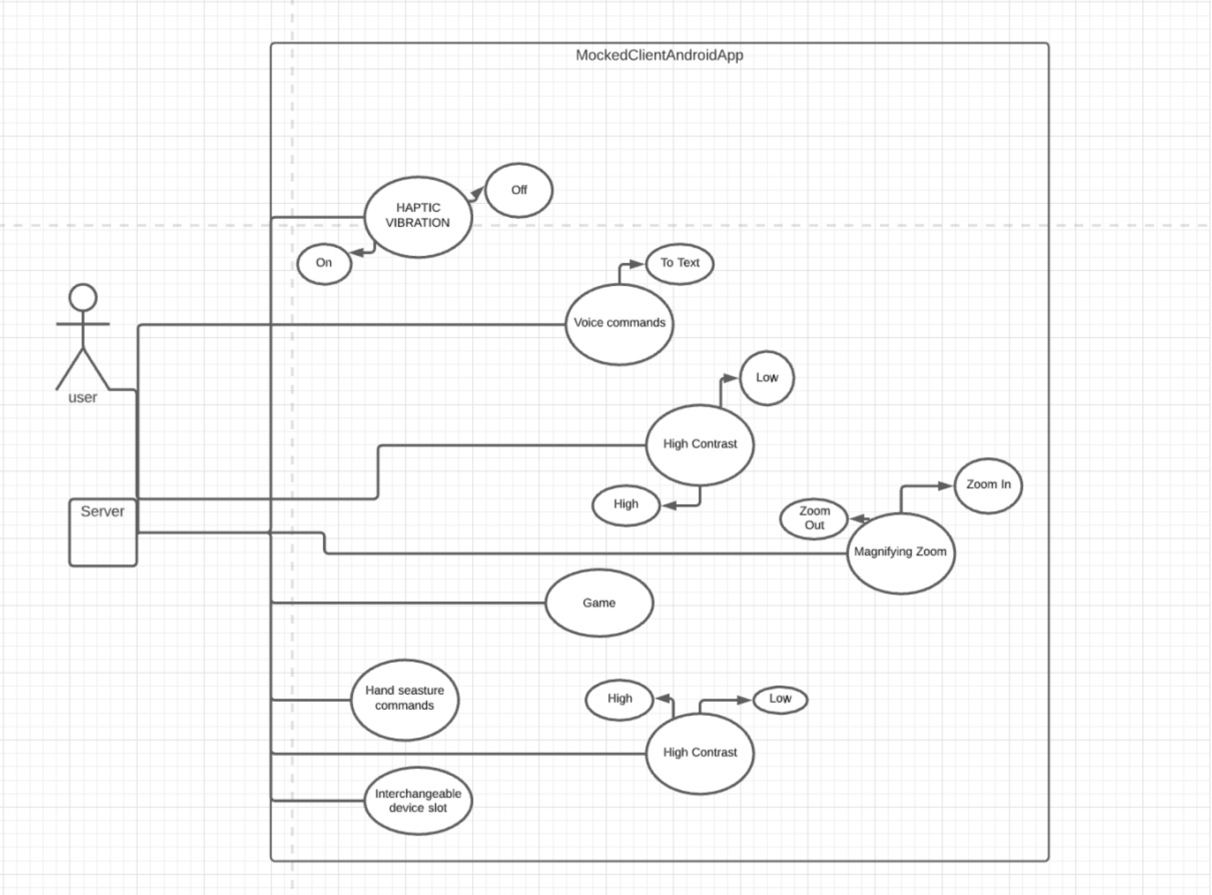


Figure 2: use case diagram 1 Mock client android app

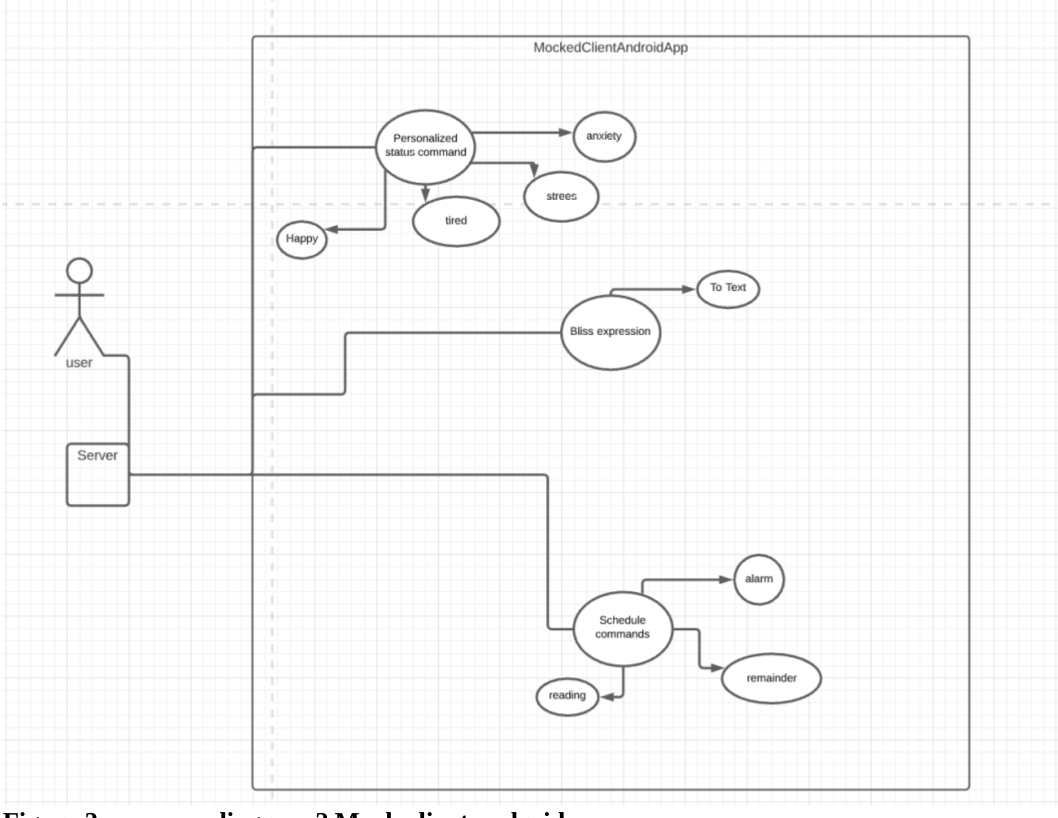


Figure 3: use case diagram 2 Mock client android app

D2.

A collection of the designs for the requirements relating to the web client side of the system.

Mocked environment

The mocked environment allows the features to be developed incapsulated without outside interaction. The mocked client app is a simple web app that contains the necessary components for the related requirements. *Figure 2* shows the shell of the mock environment of the web client. *Figure 3* shows the connection of the mocked web client to the sever, whether a mocked API call or the actual system server.

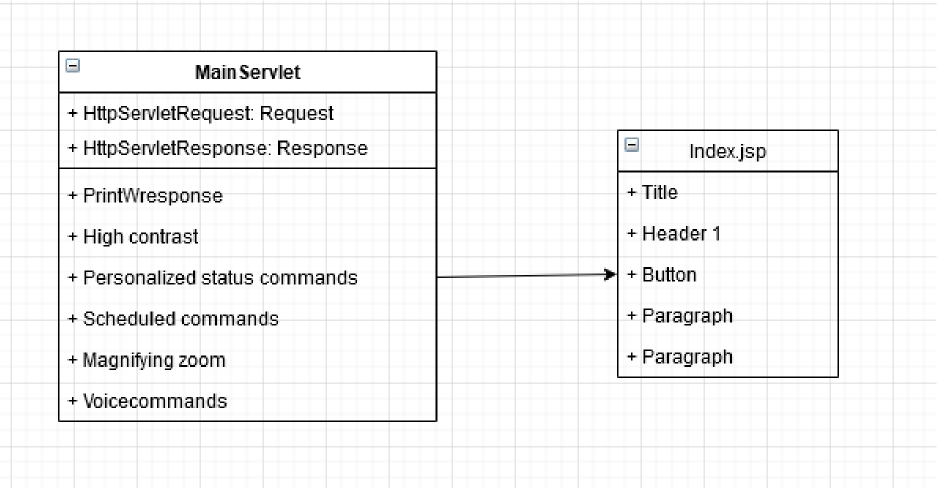


Figure 4- Class diagram of mock client android app

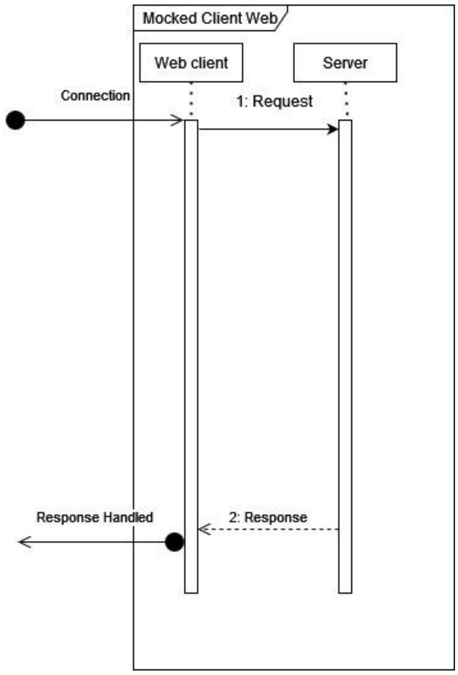


Figure 5 - Sequence diagram of connection of the mocked web client

D3.

A collection of the designs for the requirements relating to the server of the system. Initially, for testing and developing, the mocked environment will be used, but eventually the implementations will migrate to the actual server/API.

Mocked environment

The mocked environment allows the features to be developed incapsulated without outside interaction. The mocked server allows for testing and implementing of features not yet handled by the current system.

The platform used to create a mocked API server is Postman. It is commonly used for building or working with API's. The platform allows for making HTTP requests to public and private servers and provides the response from the corresponding server. This will be beneficial for testing API calls to our own server throughout development of the project. Not only does the platform allow us to work as a team in the same workspace, but it also let the team manage the progress and keeps track of the history.

Postman has a feature to create your own mock API server. With this HTTP requests can be made with a simulated server response. The platform generates a URL with customized paths to make requests from the client side, to request and receive data in JSON format from/to the server. This appears useful for the early stages of our project to develop and implement new features for the Android application and web app.

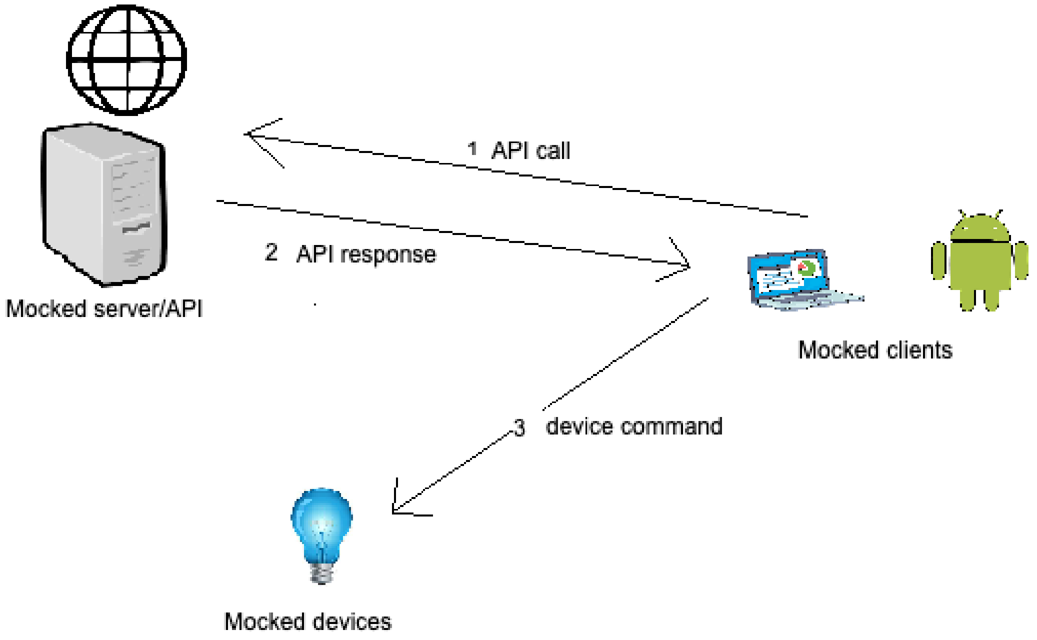


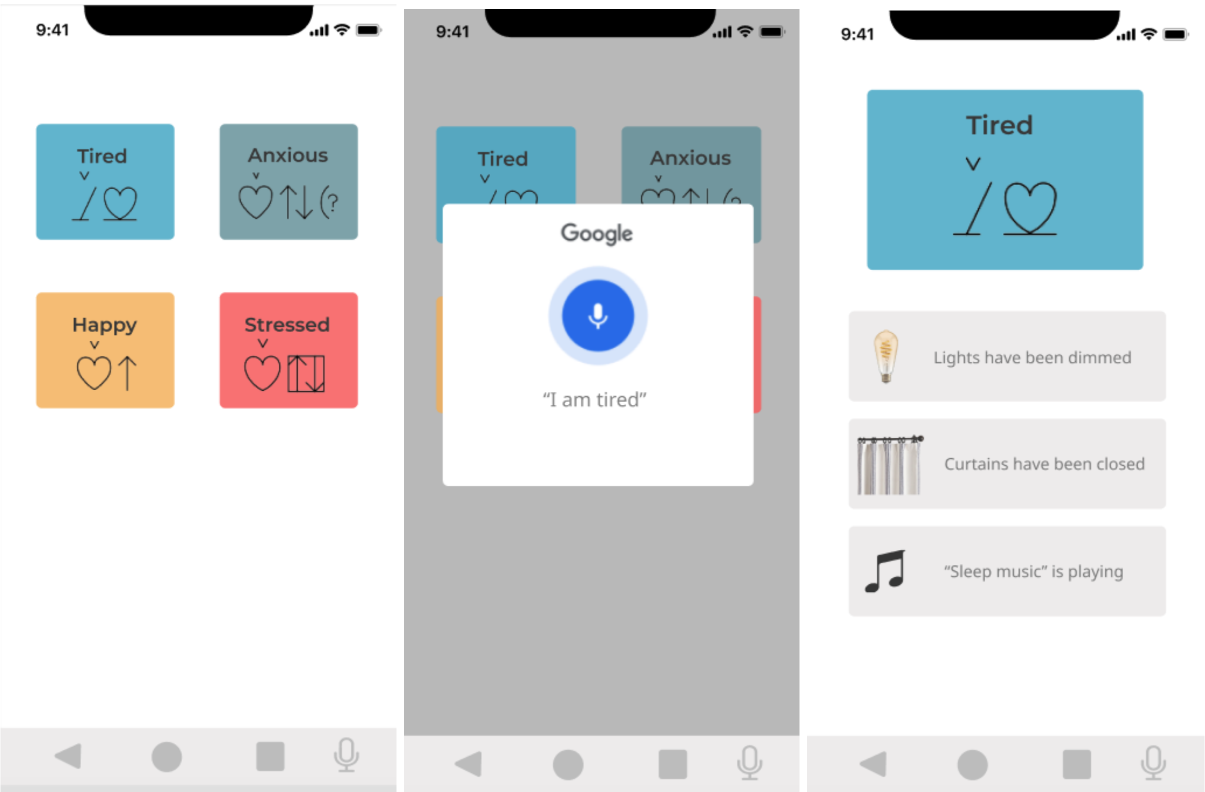
Figure 2 - General layout of mocked sever/client interaction

D4.

A collection of the designs for the requirements related to the home page, meaning all requirements that are features that the user does not toggle on and off. These features are constant to the system much like the feature to turn on and off different devices.

R4 – Personalized status commands

This feature is a home page where the user can set different command buttons that perform different actions set by the user. More is discussed in our requirements document under [R4]. For designing and implementing this feature, following figures (Figure 3) have been made. This is not a definite look of the system, but it gives an understanding of the requirement itself and allows us as a group to explain it better to other subgroups and be clear within the group how the feature should function.



"I am tired"

Lights have been dimmed

Curtains have been closed

"Sleep music" is playing

Figure 3 - Explainational figures of R4 (Figma, n.d.)

Contents

Figma. (u.d.). *Figma* . Hämtat från Figma presentations: https://www.figma.com/proto/qpTRnpeAb3j8zieV8muJEV/Mood-commands?node-id=3%3A360&scaling=min-zoom&page-id=0%3A1