1. **User Stories**

**User story 1**

As user I would like to learn more about the World War 2, and I would like to test my knowledge about the war. I would like to have some questions, with 4 alternatives. As user I would like to know if I got the question right or wrong. I would like to see my result at the end of all the questions. As user I would like to navigate through the app and the questions easy. As user I would like to get some kind of response when I click on the buttons (sound and passing on to another activity or next question).

**User story 2**

As teacher I would like to test my 7grade students in class with an application about the ww2 in the end of the lessons to see if they have been listening. This will make it both fun and educational for my students, instead of the old fashion way with pen and paper. As teacher I would like the app to be simple and easy to get through. I would like it to have some misleading alternatives for the student to see if they remember or even was listening. Some cool colours for the theme, the buttons when they have been clicked so the students understand that it was correct or incorrect answer. I would like to have response sound when the buttons are clicked so I now they have been clicked.

1. **Realtime database, (Firebase)**

For my application I only use Realtime database through firebase. The Realtime database is a cloud hosted database. My questions and their alternatives/options are stored as a JSON file in the Realtime database, as in figure 1.

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Figure 1, Realtime database

In Figure 1 you can also see that there is an option to import a JSON file. You can also see one of my questions and the alternatives and the correct answer. In the application source code, you will see that “Fragor” is a childreference that will be asked for when connecting to the Realtime database.

**JSON file that is stored in the Realtime database**

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Figure 2, JSON code that is stored in the Realtime database

In this JSON file you can see all the questions that are stored in the database. There are also the alternatives that will appear in the app. Finally, the answers will be also seen, so that it can be three incorrect alternatives and only one correct alternative.

1. **Flowchart** En bild som visar karta, text

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Figure 3,Flowchart for navigation between the activities

1. **Why this particular design pattern?**

Why I have chosen this navigation pattern is just because, it’s a very easy way to navigate through an application of this kind. Only necessary buttons are made in my application, because I needed to create a simple and easy application so that young student would be able to navigate through it without any help from a teacher. Simple start button that will start the quiz/questions and then the user will need to just klick on just one alternative and hope that it is the correct answer. Then on the result page there is two buttons that will allow the user to either go back to the main page or take the quiz again directly to increase the amount of correct answers.

1. **Graphic design**

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Automatiskt genererad beskrivningScreenshots of the app “WW2Frågor”

Figure 8, Result page

Figure 5, Main page

Figure 7, Wrong answer

Figure 6, Correct answer

Figure 4, Splashscreen

My app doesn’t have any particular design or anything unusual, but it has a theme, gold and white. I wanted an easy and simple design with not too much of different colors or background images.

I wanted to have some color similarity and connection between the icon of the war tank and the buttons and the upperbar in the application. Also when the alternatives are clicked on, there is a difference between the incorrect(red color) and the correct answer(green color) which indicates and gives the user a response.

**Here is a link to a navigation video**

Link to video: <https://1drv.ms/u/s!ApHUvZR4XqQug48gyVtatpNd_tnYOA?e=HgQ7Lv>

1. **If there is a piece of code that is not standard code, you can describe it, but do not include too much code in the report**

Here is the link <https://youtu.be/ja1Jli7bHNM>  of the YouTube tutorial that helped me getting started with my app, but I have also got help from firebase homepage about the connection and how to store and get the data and so on, there are step by step tutorials from their homepage and even YouTube. I have also got some help from developers on stackoverflow about some questions I had about some part of my code.

**References**

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