Research Plan

HeardIT

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Date: 16-03-2024

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1. Introduction

The purpose of this document is to outline the planning for the research that I am going to undertake during the development of the HeardIT application. In this document I will outline the project research question and the main questions that will follow from the project question. These main questions will be used to split the project question into smaller topics so that I can focus on the different aspects individually. Finding the answer to each main question will allow me to create a comprehensive answer for the project question in the end of my research.

This research will take a significant amount of time during the duration of the assignment. This means that this research document will be only the planning stage for the research. Changes may occur during the research process. Specific research reports will be created where I will present the answers to each question in detail.

1. Project question

In this section the project question will be established. In order to complete the research, the project question needs to have a concrete answer. For this reason, it is important to define it well. The project question will also allow us to create the main questions that will help us answer the project question.

The project research question is:

*How can the HeardIT application be developed in alignment with the modern standards for software applications?*

Answering this question will allow us to definitively prove that HeardIT is an application that meets the modern demands and standards for software applications. To answer this question, main questions that focus on specific aspects of the development are established. Finding the answer to those will allow me to conclude a definitive answer for the project question. In the next section, I will establish the main questions and the DOT research methods that I am going to use in order to answer them.

1. Main questions
2. What is the most suitable architecture type for the HeardIT web-application?

Methods used: Literature study, Security test, Design pattern research, Available product analysis, IT architecture sketching, Community research

1. What is the most suitable approach for distributing and storing the data used by HeardIT?

Methods used: Literature study, Document analysis, Problem analysis, Domain modelling, Available product analysis, Ethical check, Community research, IT architecture sketching

1. What technologies and methods are most suitable for deploying HeardIT to the cloud?

Methods used: Literature study, Non-functional test, Available product analysis, Prototyping, Document analysis, Community research, Unit test, Peer review, Root cause analysis

1. How can I ensure that HeardIT provides its users with sufficient data security mechanisms and follows the modern standards and regulations for data protection?

Methods used: Literature study, Best good and bad practices, Community research, Available product analysis

1. Conclusion

To conclude this research plan, the project question and the topic specific main questions that were derived from the project question are established. The main DOT research methods that are going to be used during the research for each of them are also determined. The next step is to start actually researching these topics. This will be documented in detail in separate reports where I will focus on each of these questions and conduct the research on each topic. These documents will be linked in this document when they are created.

1. Results

Answering the project question is the final part of this research. To do so, the results of the researches to each of the main questions have been structured into multiple documents. This way, it is clear how I answered each of the main questions and to what conclusions and results I came to. Combining them is the answer to the project question. With this I can conclude the research for the HeardIT application.

For the detailed information about the researches that were done in order to answer each of the main questions, please refer to each respective document:

* 1. *Research-Architecture-HeardIT.docx*
  2. *Research-DataDistribution-HeardIT.docx*
  3. *Research-CloudDeployment-HeardIT.docx*
  4. *Research-SecurityAndDataProtection-HeardIT.docx*