**Project plan**

***HeardIT***

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| **Date : 04/03/2024** |
| **Version : 0.1** |
| **Status : In progress** |
| **Author : Mihail Vasilev** |

#### Version

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| **Version** | **Date** | **Author(s)** | **Amendments** | **Status** |
| 0.1 | 04/03/2024 | Mihail Vasilev | Initial project plan version | Complete |
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**Communication**

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| **Version** | **Date** | **To** |
| 0.1 | 04/03/2024 | Mihail Vasilev |
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# Project Assignment

## Context

HeardIT is a music sharing platform where you will be able to discover, listen and learn how to play to your favorite songs from a plethora of indie bands. The website focuses on small to medium music creators and people interested in learning how to play the songs on their instruments. The application provides several features that allow users to have an interactive experience combining the listening and learning aspect in one easy-to-find place.

Songwriters will have the ability to upload their tracks, the chords/tabs, lyrics and any other information that will allow their fans to be able to not only listen to the songs but also learn to play them.

Fans will be able to experience these features easily through the interactive user interface and will be able to leave comments, likes and make playlists with their favorite songs.

This way HeardIT will be a place where music creators and fans will have the opportunity to interact, share their experience, learn and get closer to the art of music together.

## Goal of the project

The goal of the HeardIT music sharing application is to provide its users with a place where they can share, enjoy and learn their favorite music. The application will occupy the niche of being a music sharing platform where users can not only find the tracks from their favorite artists but also the chords and lyrics that they can learn so that they can play/sing along with the songs.

In technical terms, the main goal of the project is to create a scalable, reliable and user-friendly web-application that follows the established enterprise standards for developing mainstream software services. The project will focus on delivering a working solution capable of passing the modern requirements for software solutions. The application will follow the modern principals of software developing, utilizing the most suitable technologies, software architecture principles, the best practices and methods of testing. HeardIT will be a modern application that lives up to the high standards of the modern IT world.

## Scope

|  |  |
| --- | --- |
| **The project includes:** | **The project does not include:** |
| 1. Back-end services and database structure | 1. External hardware |
| 1. Front-end web application | 1. Paid software |
| 1. Documentation |  |

## Conditions and technologies

In this paragraph I will state the technologies and working methodologies that I am going to be using and following during the creation of this project. These technologies have been chosen due to my expertise, proficiency and previous experience with them. The working strategy that I am going to use is also chosen based on the assignment’s requirements and my previous experience.

These technologies include:

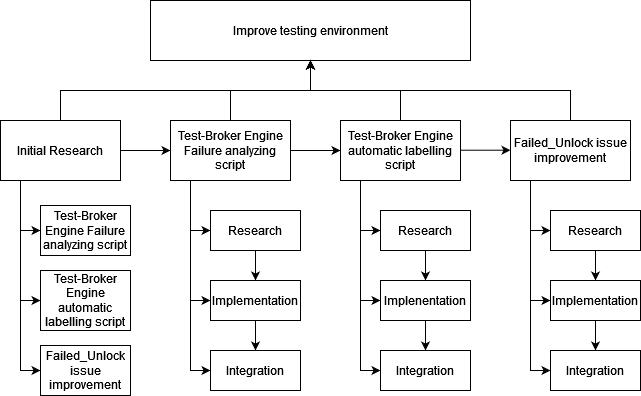
* Back-end and services
  + Java SpringBoot
* Front-end
  + ReactJs
* Git
* Database
  + MySQL
* Deployment
  + Docker
  + Kubernetes

Work strategies include:

* Agile
* Scrum

## Finished products

The finished products are divided into



## Research questions

**Main research question:**

* How to improve and further extend the testing infrastructure around the current testing environment for the Loopsorter stream?

**Sub-questions:**

* How can test engineers determine what kind of failures occur for the Test-Broker Engine and how often?
  + How to analyze Bamboo build logs with custom regular expressions?
* How can test engineers find the root cause of a failed build more easily?
  + How to automatically analyze a single Bamboo build log with custom regular expressions and then put a label on it inside the Bamboo build environment?
* What are some of the most common issues that occur?
  + How to prevent the builds from failing because of issues with the unlocking of the stations?

# Approach and Planning

## Approach

The approach that I am going to use during the development of the HeardIT application will follow the Agile working methodology. During my previous studies, internship and work experience I have acquired a significant amount of experience working Agile I believe that this will suit my project the best.

The tasks will be described in one or more large epics with specific research and user stories with their own acceptance criteria. These user stories will be then planned accordingly over the sprints. At the end of each sprint, the results of each sprint will be presented to the teachers and coaches. At the end of the assignment the results will be presented in more detail to the semester teachers and coaches. All work will be documented and reviewed according to the modern software development standards. The application will be version controlled in several Git repositories.

### Test approach

Testing will be performed to ensure the quality of the project and its components. To this end the testing strategy that will be performed will include: manual testing,…………………………

## Research methods

The most important research strategies and methods from the DOT framework that will be used during the whole project research are from the library research, field research and lab research strategies. These methods will be used for the main question, since it will require research in a wide range of different fields in order to find a suitable solution to the problem the main research question poses.

For the sub-questions these research methods will be applied:

* How to analyze Bamboo build logs with custom regular expressions? - Literature study, Expert interview, Document analysis, Brainstorm, Prototyping, Problem analysis, System test, Data analytics
* How to automatically analyze a single Bamboo build log with custom regular expressions and then put a label on it inside the Bamboo build environment? - Literature study, Expert interview, Document analysis, Brainstorm, Prototyping, Problem analysis, System test, Data analytics
* How to prevent the builds from failing because of issues with the unlocking of the stations? - Literature study, Expert interview, Document analysis, Brainstorm, Prototyping, Problem analysis, System test, Data analytics

## Learning outcomes

**Learning outcome 1:**  
[Professional duties] You carry out the professional duties on a junior bachelor level resulting in professional products in line with the IT-area you are working in.

The deliverables of the project will be working products that are used by the testing engineers inside the testing environment. The final product will be a package of different features that all contribute to improving the automated build test environment. For more information about each of the specific features, check the *Products* folder inside the portfolio.

**Learning outcome 2:**  
[Situation-orientation] You apply your previously acquired knowledge and skills in an authentic context to deliver relevant results for the project and company.

The project is contained within the Technology OT testing department and Agile SAFe working methodology will be applied during the project. My previously acquired knowledge and skills are going to be applied in all aspects of the creation of the products, be it in planning the process, creating the research, implementing the solution to the issues and in the testing and final refinements of the products. Since the company uses some technologies that I have not worked with before, I need to study and learn the practices that are applied when using these technologies. I this context I will also acquire new knowledge and skills and will use them to deliver the required results.

**Learning outcome 3:**[Future-Oriented Organization] You explore the organizational context of your project, make business, sustainable and ethical considerations and manage all aspects of the execution of the project.

The project plan will contain the relevant information about monitoring and managing all aspects of the execution of the project. It will contain the main plan that was established at the beginning of the internship assignment. During the whole duration of the assignment, new and additional documents will be created to monitor and keep track of progress. These documents will include, the planning of each product creation, sprint planning and sprint reports on what actually happened during them, weekly tasks in the form of FeedPulse, research documents for each product and product reports where an in-depth look is taken into each of the individual features.

**Learning outcome 4:**  
[Investigative Problem Solving] You take a critical look at your project from different perspectives, identify problems, find an effective approach and arrive at appropriate solutions.

The research document will contain the research process that was conducted in order to identify and solve the specific issues. Specific approaches, depending on the essence of the problem, will be used to find the best possible solution to each issue and deliver valuable working products. In the end, the goal is to deliver the best possible solutions to the issues. For this reason, extensive research will be conducted and different idea and approaches will be taken into consideration. This will be presented inside the research documents inside the folders of each product of the portfolio.

**Learning outcome 5:**  
[Personal Leadership] You are entrepreneurial around your projects and personal development; you pay attention to your own learning ability and keep in mind what kind of IT professional and/or what type of positions you aspire to.

The main planning and splitting the project into specific tasks will be done and kept track inside the project plan. As the intern, I will be responsible for taking the initiative and leading the project forward. I will be responsible for contacting the relevant professionals in their field in order to learn and get feedback on his work. I will also be responsible for explaining and proposing my ideas and defending them when I am certain that my idea would result in a better product. My main goal from this internship is to gain valuable experience and insight into the possible professional developments and possible career options I can choose in the future. I believe that an assignment like this allows me to get a good understanding about some of the main processes that take place in a proper development environment.

**Learning outcome 6:**  
[Targeted Interaction] You determine which partners play a role in your project, collaborate constructively with them and communicate appropriately to achieve the desired impact.

The project plan will contain the relevant information about the stakeholders and the appropriate contact people. This way, the different parties will be able to communicate and collaborate so that the desired product is created and the desired impact is met. The communication between the company mentor and the university mentor will be through the student in general, however, contact details are provided to both mentors so that communication between then directly is also possible. Transparency will be kept in all aspects of the assignment and feedback will be provided from all sides.

## Breakdown of the project

The project will be split into 5 sprints each following the Agile methodology. At the beginning of each sprint the tasks will be split and planned accordingly. At the end of the sprint a short personal retrospective will be created. Each sprint will follow this approach.

## Time plan

|  |  |  |  |
| --- | --- | --- | --- |
| **Phasing** | **Delivered** | **Start** | **End** |
| Sprint 1 | Project Plan, Research Plan | 04/03/2024 | 24/03/2024 |
| Sprint 2 |  | 25/03/2024 | 14/04/2024 |
| Sprint 3 |  | 15/04/2024 | 12/05/2024 |
| Sprint 4 |  | 13/05/2024 | 02/06/2024 |
| Sprint 5 |  | 07/06/2024 | 23/06/2024 |

# Project Organization

## Team members

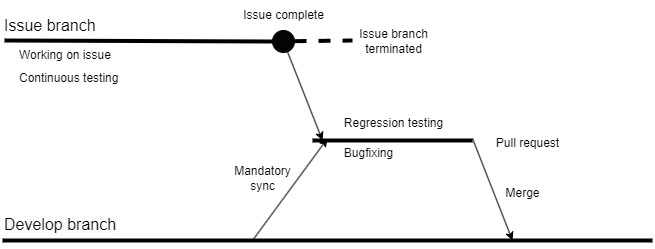
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| --- | --- | --- | --- |
| **Name + Phone + e-mail** | **Abbr.** | **Role/tasks** | **Availability** |
| Mihail Vasilev, +359884921350,  m.vasilev@student.fontys.nl | *Student* | *Implementer* | *Available 5 days a week* |
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## Communication

* Technical supervisors:
  + Weekly meetings
  + Reports in FeedPulse
* Semester coach:
  + Bi-Weekly meetings
  + Reports in FeedPulse

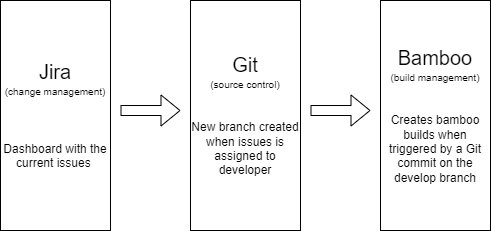
## Test environment

The use of Atlassian Bamboo CI/CD development test environment will be used in order to test and deliver the solutions of the issues. Depending on the issue, different hardware and software products will be included in the test environment. Each issue will be tested before it is merged into the development branch. Once the changes are approved the code will be merged into develop and the issue branch will be terminated. Project procedures in line with the team’s current way of work will be conducted in order to have maximum transparency and suitable results.



## Configuration management

The project will be kept inside a GIT repository. It will follow the existing company branching strategy and methodology. Each issue will have a ticket created in Jira. When the issue is assigned to the intern, a new branch will be created with the ticket’s id. The intern works on the issue on their branch. Once the intern has made their changes, the changes have been approved and tested by other developers, the branch will be merged into develop. Successfully implemented and tested features will be put in use in the production environment. This strategy will be used to implement all required features.



## Architecture

# Finance and Risks

## Cost budget

For this project there are no specific costs expected. New work equipment and software investments into outside sources will not be required in order to complete the project.

## Risks and fallback activities

|  |  |  |
| --- | --- | --- |
| **Risk** | **Prevention activities included in plan** | **Fall-back Activities** |
| 1. Issue is outside of the project’s scope | Refine issue | Scale down issue requirements |
| 1. Inaccurate estimation of the complexity of an issue | Refine issue | Scale down and re-prioritize features |
| 1. Supervisors are not available | Arrange help | Coaching is redistributed |

# Other

The assignment’s main objectives are to show that I am capable of delivering a web-application that adheres to the modern standards of software development. For this reason, the main resources used during the development will be focused on satisfying the non-functional requirements that I have established in my *Project Pitch* document and \_\_\_\_\_\_\_\_. This means that the functionalities, design and visual aspects of the application (the UI for example) will not be the main focus points of this assignment. All implemented functionalities will be tested but I will not focus on creating every single one that I had proposed in my *Project Pitch*.

Since this project will follow the Agile way of working, the application will be flexible and continuously developed, with the possibility of change in the focus points during the duration.