**Project Plan**

**Ticketpass**

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| **Date : 19th January 2024** |
| **Version : 6.0** |
| **State : Final Stage of Development** |
| **Author : Hristo Ganchev** |

#### Version history

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| **Version** | **Date** | **Author(s)** | **Changes** | **State** |
| 1.0 | 6th September 2023 | Hristo Ganchev | Initiation of the project description | Early development |
| 2.0 | 25th September 2023 | Hristo Ganchev | “Timeplan and milestones” and “Risk and Mitigation” sections updated | 25% Complete |
| 3.0 | 25th October 2023 | Hristo Ganchev | “Timeplan and milestones”, “Scope and preconditions”, “Test environment and required resources” and “End products” sections updated | 50% Complete |
| 4.0 | 1st December 2023 | Hristo Ganchev | “Timeplan and milestones” and “Risk and Mitigation” sections updated | 70% Complete |
| 5.0 | 20th December 2023 | Hristo Ganchev | “Timeplan and milestones” and “Scope and preconditions” sections updated | 90% Complete |
| 6.0 | 19th January 2024 | Hristo Ganchev | “Project organisation” and “Test environment and required resources” sections updated | 100% Complete |

**Distribution**

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| **Version** | **Date** | **Receivers** |
| 1.0 | 22nd September 2023 | Rabeling, Bart B.T. |
| 2.0 | 13th October 2023 | [Schriek, Erik H.J.D. van der](https://fhict.instructure.com/courses/13327/users/66) |
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| 6.0 | 19th January 2024 | [Schriek, Erik H.J.D. van der](https://fhict.instructure.com/courses/13327/users/66) |

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# Project assignment

## Context

The focus of the project is to create a software application for purchasing concert tickets. There will be a manager side, administrator side and a user (buyer) side.

## Problem

The main problem is that usually, the user would need to buy tickets from separate venue websites, having all of their tickets in different places and making it more difficult for themselves. They will need to create a lot of accounts, having the chance they will lose access to one of them or forget which ticket is on which account.

## Goal of the project

The idea of this project is to create a platform where the user has an easy access to many concerts they can attend. They have all of their order history and ticket purchases in one place. This quickly eliminates the problem of having to go to different venue websites in order to purchase tickets for different concerts. The application will provide the ticketholders with an easy interface and convenient user experience.

## Scope and preconditions

|  |  |
| --- | --- |
| **Inside scope:** | **Outside scope:** |
| 1 Ability to obtain concert tickets | 1. Ability to buy artist merchandise |
| 2 All of the tickets will be stored in one place | 1. Ability to buy venue memberships |
| 3 Administrators will be able to see all of the ticket purchases made from all users and manage concerts (add /update) | 1. Ability for artists to add their concerts to the website |
| 4 Ability to filter concerts by genres, cities or artists | 4 Ability to pay with real money for the tickets |
| 5 Ability for the admin to update a concert | 5 Ability to obtain VIP tickets |
| 6 Ability for the user to receive notifications in case of any change in a concert they have purchased tickets for | 6 User cannot refund or resell their ticket |
| 7 Managers can add and delete administrator accounts | 7 Ability to buy more than 4 tickets per order |

## Strategy

The agile methodology will be used in the project implementation. Since the project is divided into six sprints, feedback will be asked for and received constantly, and the feedback will then be applied into the project in order to make it as perfect as possible and satisfy the stakeholders.

## End products



# Project organisation

## Stakeholders and team members

The stakeholders of the project are the teachers and the project team consists of one person: Hristo Ganchev. The stakeholders are the ones who put the requirements and act as clients to the project.

## Communication

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Abbreviation** | **Role and functions** | **Availability** |
| Bart Rabeling | Rabeling, Bart B.T. | This stakeholder will be revealing the technical part of the project (frontend, backend), as well as documentation (project plan, design document, C4 diagram) | Monday and Wednesday: 9:00 – 12:00  Outside of the scope above, they can be contacted via email or Microsoft Teams. |
| Erik van der Schriek | [Schriek, Erik H.J.D. van der](https://fhict.instructure.com/courses/13327/users/66) | This stakeholder will also be revealing the technical part of the project, as well as documentation | Wednesday and Friday: 13:00 –  16:00  Outside of the scope above, they can be contacted via email or Microsoft Teams. |
| Senne de Ruiter | [Ruiter, Senne S.M. de](https://fhict.instructure.com/courses/13327/users/23837) | The stakeholder will be looking into the product backlog, user stories, and acceptance criteria for the project. | Monday: 13:00 – 16:00  Friday: 9:00 – 12:00  Outside of the scope above, they can be contacted via email or Microsoft Teams. |

The communication with stakeholders can be made either face-to-face or via Microsoft Teams. It should be established at least once a week in order to receive feedback, reflect on it, apply it in the software solution and repeat until finalization.

# Activities and time plan

## Phases of the project

The first phase of the project is the planning. First, the idea should be discussed with the teachers, and whether it is satisfactory enough to initiate development. Next is the beginning of the project. Every idea is turned into a bullet point and then thought on whether to be added to the project or not. Every three weeks, evaluation is made, whether the project development is on track or not. After five evaluations the finished version of the project must be presented.

## Time plan and milestones

The project is divided into six sprints of three weeks. In the end of each sprint, the current version of the project must be presented and evaluated by the stakeholders (the teachers).

The provided start dates and end dates below are estimated. The real dates will be provided in later development of the project.

|  |  |  |  |
| --- | --- | --- | --- |
| **Phasing** | **Effort** | **Start date** | **Finish date** |
| 1. Log in/Registration | High | 14.10.2023 | 16.10.2023 |
| 1. Ticket purchasing system | High | 10.11.2023 | 13.11.2023 |
| 1. Authentication and authorization | Very high | 15.11.2023 | 28.11.2023 |
| 1. Ticket overview | Medium | 29.11.2023 | 30.11.2023 |
| 1. Admin functionality | High | 01.12.2023 | 04.12.2023 |
| 1. Notification system | High | 11.12.2023 | 14.12.2023 |
| 1. Filtering system | Medium | 15.12.2023 | 17.12.2023 |
| 1. Overview for previous concerts | Medium | 03.01.2024 | 05.01.2024 |

# Testing strategy and configuration management

## Testing strategy

Mainly, the testing will be conducted with unit tests. As for endpoints, they will be tested using controller tests. The testing will ensure that the code is working as intended for optimal user experience. In order to stay away from incorrect or dummy data in the main repository, a mock repository will be included in the testing of the code and the logic so that the main repository is not affected in any way.

End-to-end testing and User Acceptance testing will also be considered to test different components of the application.

Moreover, Mockito will be used to create mock objects and not affect the primary database. The focus will be on testing the functionality of the business logic and avoid testing the functionality of the database.

## Test environment and required resources

During implementation, a CI/CD environment will be used in order to test any published builds in the Git repository. This will ensure that no flawed methods and functions have been missed and left unfixed and will improve quality of the application. In case of a method not working properly, the developer will be notified through GitLab and email. A SonarQube pipeline will also be integrated, explaining parts of code that should be rewritten, which will lead to maximum efficiency of the platform. SonarQube also gives insight on what percentage of the code has been tested from Unit and Controller tests.

## Configuration management

For configuration management and version management, we will be using two separate GitLab repositories: one for the frontend application, and one for the backend application. Links will be provided to the stakeholders so that they have access to the latest or earlier versions of the product at all times. This will also ensure that in case of breaking the application, an earlier version will be available and less progress will be lost.

# Risk and mitigation

## Risk and mitigation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Risk** | **Impart** | **Probability** | **Prevention activities** | **Mitigation activities** |
| 1. The project may get deleted or lost | Huge | Low | Every project version will be available to download from GitLab | In case of the project getting lost, it can be downloaded again from GitLab |
| 1. Code may be lost or deleted | Huge | Medium | Every project version will be available to download from GitLab | In case of code getting lost, it can be downloaded again from GitLab |
| 1. The application may crash or restart, leading to loss of work | Huge | High | The project will constantly be saved in order to not lose work | In case the application crashes, the file will already be saved and no major changes will be lost |
| 1. The developer may experience a burnout | Huge | Medium | The developer will have a perfect balance between working time and rest | The developer will improve their focus in order to complete work efficiently and have more time to “cool down” |
| 1. Miscommunication may occur between the developer and the stakeholders | Huge | Medium | All of the stakeholders’ requirements will be written down | The requirements will be noted down in a short span of time after a discussion is made in order to not forget important details, features, or ideas |
| 1. The stakeholders may be absent when needed | Medium | Medium | Feedback from the stakeholders will be asked for constantly so that project development is not slowed down in case of stakeholders’ absence | Stakeholders can be contacted via email or Teams |
| 1. The developer may stumble upon a very difficult bug to fix | High | High | The developer will ask for assistance and look through online resources in order to fix the said bugs. | The developer can create a separate branch from the one where a bug has occurred so that they can continue working on other features. |