**Project Plan**

***Online Learning Management System (LMS)***

**A blue logo with a shark head

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| --- |
| **Date : 09-08-2023** |
| **Version : 0.2** |
| **State : Draft** |
| **Author : Sumaya Gabr** |

#### Version history

|  |  |  |  |  |
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| **Version** | **Date** | **Author(s)** | **Changes** | **State** |
| 0.1 | 08-09-2023 | Sumaya | Initial Version | Draft |
| 0.2 | 19-9-2023 | Sumaya | Complete version | Ready for sprint 1 submission |
|  |  |  |  |  |

**Distribution**

|  |  |  |
| --- | --- | --- |
| **Version** | **Date** | **Receivers** |
| 0.1 | 08-09-2023 | *Timo Hermans*  *Frank Coenen* |
| 0.2 | 19-9-2023 | *Timo Hermans*  *Frank Coenen* |

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# Project assignment

## Context

*In the rapidly evolving path of education, the demand for effective online learning platforms continues to grow. Existing Learning Management Systems (LMS) have provided valuable tools for remote education, but they often fall short in delivering a truly personalized and engaging learning experience. This project, undertaken by Sumaya Gabr, a student at Fontys University, aims to address this persistent challenge.*

## Goal of the project

*The primary goal of this project is to develop an innovative Online Learning Management System (LMS) that not only facilitates remote learning but also prioritizes user engagement and customization. This LMS will offer a tailored solution to the challenges faced by educational institutions, teachers, and students in delivering and experiencing online education. By emphasizing a personalized and engaging learning experience, this project seeks to bridge the gap left by existing LMS solutions and provide a more effective platform for modern education.*

## Scope and preconditions

|  |  |
| --- | --- |
| **Inside scope:** | **Outside scope:** |
| 1. User authentication | 1. In-depth integration with third-party services (e.g., payment gateways). |
| 1. Course management | 1. User manual |
| 1. Student enrollment | 1. Recorded lectures |
| 1. Discussion forum |  |
| 1. Assignment management |  |

***Preconditions:***

* *Utilize Spring for the backend.*
* *Use React or a similar framework for the frontend.*
* *Use MySQl for databases*

## Strategy

*The project will follow an Agile development approach, with work organized into six sprints, and after each there’s a feedback session planned. This approach allows for flexibility and iterative development, ensuring that features are delivered incrementally.*

## Research questions and methodology

Main Research Question:

How can the implementation of an online learning management system enhance the quality of remote education?

Sub-Questions:

1. What specific features and functionalities should an online learning management system include to facilitate effective remote education?
2. How can user interface design principles be applied to create an intuitive and user-friendly online learning platform?

*Methodology:*

* *Agile development with six sprints.*
* *Regular consultation with project supervisor for guidance and feedback.*
* *Continuous research and adaptation as needed.*

## End products

Git link:

<https://git.fhict.nl/I499796/lms-individual-track.git>

A diagram of a company

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# Project organisation

## Stakeholders and team members

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Abbreviation** | **Role and functions** | **Availability** |
| *Sumaya Gabr* | *Sumaya* | *Project Developer* | *3-4 days a week* |
| *Timo Hermans* | *Timo* | *Project Supervisor/Tutor* | *1 day per week* |
| *Frank Coenen* | *Frank* | *Project Supervisor/ Tutor* | *2 days per week* |

## Communication

*Regular meetings will be held with the project supervisors to discuss progress and address any issues. Communication will primarily take place through email and scheduled meetings.*

# Activities and time plan

## Phases of the project

Backlog and user stories:

<https://trello.com/b/qVoHfPD4/backlog>

Sprint 1: Project Initiation and Preliminary Planning (BE)

* Project initialization
* Problem analysis
* Initial design

Sprint 2: Detailed Design and Initial Implementation (FE)

* Continue with the design
* Implementation

Sprint 3: Implementation Refinement and Testing Kickoff

* Implementation
* Testing
* Documentation

Sprint 4:

* Create test cases for core features
* Execute testing
* Document test results

Sprint 5:

* Research and Design Advanced Features
* Implement Advanced Features
* Update Documentation

Sprint 6: Final Testing, Bug Fixing, and Deployment Preparation

* Final Testing and Bug Fixing
* Documentation Review and Finalization
* Deployment Preparation

# Testing strategy and configuration management

## 

## Testing strategy

*The testing strategy will include unit testing, (integration testing, and End-to-end testing). Unit tests will aim for >80% code coverage.*

## Test environment and required resources

*A Development, Testing, Acceptance, Production (DTAP) environment will be set up. CI/CD will be utilized.*

## Configuration management

*Version control will be managed using Git, with a branching strategy for development. Change requests and problem reports will be tracked and addressed as they arise. ­*[*https://git.fhict.nl/I499796/lms-individual-track.git*](https://git.fhict.nl/I499796/lms-individual-track.git)

# Finances and risk

## Project budget

*No specific project budget is required, as this is an educational project within the university's framework. The university provides necessary resources and tools for development.*

## Risk and mitigation

|  |  |  |
| --- | --- | --- |
| **Risk** | **Prevention activities** | **Mitigation activities** |
| 1. Delay in project due to technical challenges | Continuous research and adaptation | Adjust project schedule as needed |
| 1. Changes in project scope | Regular communication with supervisor | Document scope changes and their impact |
| 1. Resource unavailability (Supervisors/Tutors) | Regular communication and resource planning | Identify alternatives or adjust project timeline if needed |