ICES4HU
Project Plan

1. Introduction

The purpose of this document is to outline the steps, processes, resources and milestones to complete the ICES4HU project on time. The document highlights the deadlines, assignments, key milestones and roles of each project stakeholders. It also includes objectives and iterations integral to project success.

2. Project organization

Team Member	Role A	Role B
Muhammad Danish Aqmar Bin Rushdan	Software Project Manager	Developer
Arman Dehgani	Software Architect	Developer
Baozar Zakariyyah	Software Analyst	Developer
Mert Ali Yalçın	Software Configuration Manager	Developer
Furkan Umut Kavsara	Software Tester	Developer

2.1. Details About Team Members

Muhammad Danish Aqmar Bin Rushdan (Software Project Manager):

- Allocates resources, sets goals and decides upon the priorities of the project.
- Keeps the project team focused on the right goals.
- Provides the integrity of the team and checks the communication between the team members.
- Responsible for time management, budget allocation and cost estimates.

Arman Dehgani (Software Architect):

- Chooses high level design concepts.
- Suggests technical standards, tools and platforms for the project.
- Provides architectural blueprints for the development team and troubleshoots the code level problems quickly and efficiently.

Baozar Zakariyyah (Software Analyst):

- Conducts business research, studies the application domain, analyzes software requirements and defines project scope.
- Collaborates with the company's key stakeholders to communicate the project's vision and elicit requirements.
- Highlights clear goals and creates requirement specifications for the development team and stakeholders.

Mert Ali Yalçın (Software Configuration Manager):

- Performs the Configuration Management (CM) task which includes managing, organizing and controlling the changes done in documents, source code and any other entities in a systematic behavior.
- Primary goal is to increase the productivity of the team with a minimal number of mistakes.
- Provides configuration among stakeholders.

Furkan Umut Kavsara (Software Tester):

- Participates in design reviews and provides input on design requirements and potential issues or bugs.
- Prepares test scenarios by reviewing software requirements.
- Conducts tests to ensure the software created is fit for purpose and any errors or bugs found during testing are removed.
- Responsible for analyzing these tests and reporting the results to the design team.

2.2. Neighboring/Referencing Projects

Currently used instruction and course evaluation process for Hacettepe University is available in BILSIS system:
https://bilsis.hacettepe.edu.tr/

3. Development process and measurements

The model that we choose for this project is the Waterfall model. This model has 5 phases. Our team decided that the sequential flow of this model is the most suitable approach. The Waterfall Model contains 5 phases:

- Requirements → Product Requirements Document
- Design → Software Architecture
- Implementation → Software
- Verification
- Maintenance

We will go through each phase step by step and create the intended output. If we detect a critical mistake in any of the phases, we will come back to the previous phase. We also considered other models like Scrum and OpenUp but we believe that they are not applicable for this project. To give an example, if we would have to show a demo of our system every 3 or 5 weeks, we would choose Scrum. Since the demo will be shown in the last week, we have chosen the Waterfall model.

The table below represents the workload that we have for this project. The group members should **meet up every Monday for 4 hours.** In the meetings, each member will discuss their respective subtasks and decide upon what to do next. The schedule for that will be discussed and can be rearranged if necessary.

Tasks	**Date Range**	**Work Load (Weeks)**
Software Project Development	24.03.2023 - 02.06.2023	10
Delivery #1	10.03.2023 - 23.03.2023	2
Delivery #2	24.03.2023 - 06.04.2023	2
Test Cases Design	31.03.2023 - 21.04.2023	3
Demo + Test Cases Report	31.03.2023 - 28.04.2023	4
Delivery #3	07.04.2023 - 27.04.2023	3
Delivery #4	28.04.2023 - 18.05.2023	3
Delivery #5	19.05.2023 - 02.06.2023	2

4. Project milestones and objectives

Phase	Iteration	Primary objectives (risks and use case scenarios)	Scheduled start or milestone	Target velocity
Initiating - Planning	**I1**	**Software Vision and Project Plan** **Risk:** Incorrect project planning and poor time management. Possible misaligned task distribution. **Mitigate Risk:** To be able to execute and comply with the project plan literally and to perform the assigned tasks on time in order to not encounter any problems that might affect future tasks and slow down the project.	10/03/2023	16 hours
Planning	**I2**	**Software Requirement Documents** **Risk**: The necessary software tools are not specified correctly or insufficient for the whole project. If the project software that is going to be used throughout the project is not specified correctly, problems such as failure in completing the task efficiently/correctly and timing failure may arise that result in an unfinished project. **Mitigate Risk:** Accurate identification of all software tools required for the project beforehand. A detailed and studied documentation of these requirements can be prepare to handle this possible situations	21/03/2023	16 hours
Planning - Development	**I3**	**Architectural and List of System Test case Definitions** **Risk:** Incorrect selection of the architecture with the work done and misunderstanding of the desired test cases and not examining the necessary test cases. **Mitigate Risk:** Make sure that the architecture chosen with your teams is the most efficient and suitable for this project.	27/03/2023	48 hours

Development - Monitoring	**I4**	**Software Design and Coding** **Risk:** If the software development environment and the process is not managed properly such as the choice of programming language use, the connections between the frontend and the backend and the overall design, this may cause huge drawback for future development that affect the quality, time and the overall structure of the project that may lead to unfinished project. **Mitigate Risk:** Before starting the coding, the development environments should be thoroughly inspected with the team members to avoid any future complications, this include an efficient communication between the backend and the frontend and other members.	10/04/2023	120 hours
Verification - Validation - Testing	**I5**	**Software Test Result Report Risk:** Tests are verified based on wrong test-results. Intended functionality is tested based on wrong perception. May affect actual performance of the system's functionality. **Mitigate Risk:** Carefully planning tests, performing tests in every step of the development and increasing the number of test cases.	12/05/2023	48 hours

5. Deployment

The project will be utilizing Spring Boot framework and will be hosted on Github as a web app where users can use. Updates will be published on the same platform, as well.

The Github repository will be updated once in a week (or once in two weeks).

6. Lessons learned

It is a very helpful and important step in the software engineering process to schedule all different types of tasks, and communicate effectively with every team member so that everyone is on the same page and can take part in moving the project forward. Having effective communication with the team in the next steps is certainly going to be very helpful for everyone as it has been so far.