**Project Plan**

***Customer****:*

*Maurice Lamme*

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### **1. Project Assignment**

#### 1.1 **Context**

Our group has been tasked with developing a product for AMAI (Afternoon Meetings on Artificial Intelligence). AMAI holds meetings on artificial intelligence at Strijp-S and has a website displaying various information regarding said meetings. The client, Maurice Lamme, has requested our group to further develop the website with a list of requirements.

#### 1.2 **Goal of the Project**

The goal of the project is to develop an application with a functioning back & front-end that automates the scheduling and event process of the website. There are two reasons for this; the first is to satisfy our client’s requirements and the second is to continue sharpening our skills as software developers by entering an environment which mirrors real world software development.

By creating this product, we save time for the company. Website caretakers will no longer need to hardcode event information as this process will be automated. Completing the client’s requirements will allow the company to spend time on more important matters.

#### 1.3 **Scope and Preconditions**

|  |  |
| --- | --- |
| **Inside Scope:** | **Outside scope:** |
| Site login | Application manual |
| Teacher login verification | Hosting the database |
| Automatic retrieval from other sources (for the agenda) |  |
| Scheduling of a presentation |  |
| Uploading PDF files |  |
| Ability for users to see schedule |  |
| Multiple user roles |  |

There are no mandatory preconditions, however, we (as a group) have decided to develop the application by using Java for the backend with Javascript & React for the frontend.

#### 1.4 **Strategy**

Our strategy for this project will be the SCRUM agile approach, meaning there we have five sprints in total. We will also have a Scrum Master, who will be responsible for planning, making sure the group is self-organized and client communication. In order to track tasks, the platform Jira will be used to plan each sprint accordingly and in an organized manner.

#### 1.5 **End Products**

1. **Front-end Deliverables:**
   * **User Authentication and Profile Management:** Secure login systems and customizable profiles for users, speakers, and admins using a React-based application.
   * **Event Scheduling Interface:** Tools for viewing, entering, and managing AI event details such as dates, topics, and participation, with features for automatic reminders and integration with external calendars.
   * **Document Sharing Platform:** A section for speakers to upload and retrieve presentation materials like PDFs, PowerPoint files, and other documents.
2. **Back-end Deliverables:**
   * **Event Management System:** A comprehensive backend logic for automating event scheduling, document storage, and speaker management, utilizing Java Spring Boot for RESTful API services.
   * **Secure Authentication System:** Backend implementation for JWT-based authentication and authorization processes to ensure data protection and manage user roles effectively.
   * **Database Management:** Robust management of user data, event details, and document storage, ensuring efficient data retrieval, search functionality, and data integrity.
3. **Documentation Deliverables:**
   * **Comprehensive Project Documentation:** Detailed project plan, technical specifications, architecture diagrams, and user guides, providing a thorough overview of the platform’s design and functionality.
   * **Testing Strategy and Reports:** Documentation covering unit, integration, and acceptance testing strategies, test cases, and outcomes to ensure the reliability and robustness of the platform.
   * **Operational and Maintenance Guides:** Instructions and protocols for system operation, troubleshooting, and routine maintenance post-deployment to assist in ongoing platform management.

### **2. Project Organization**

#### 2.1 **Stakeholders and Team Members**

*Stakeholders*:

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Abbreviation** | **Role and Function** | **Availability** |
| Lamme, Maurice | M.L. | Client | Meeting when scheduled - ideally one to two periods during each sprint.  Possible times:  Mondays: 9:00 - 12:00  Thursdays: 9:00 - 12:00 |
| Krielen, Marcus M.J.A. | M.K. | Project Tutor | Every week.  Possible times:  Mondays: 9:00 - 12:00  Thursdays: 9:00 - 12:00 |

*Team members*:

* Yordanov, Aleksandar A.D. - Scrum Master (Sprint 1)
* Popoiu, Catalin C.M. – Scrum Master (Sprint 2)
* Mamo, Uraela U. – Scrum Master (Sprint 3)
* Nikolov, Antoni A.T. – Scrum Master (Sprint 4)
* Mincheva, Elena E.M. – Scrum Master (Sprint 5)
* Yaneva, Debora D.M. – Scrum Master (Sprint 5)

*\*Note*:

It has been mutually agreed upon by all group members that the role of Scrum Master should be passed on after a sprint is finished. This is to ensure that each group member experiences the role of the position. At the point of this document revision, sprint 1 has been concluded and the following Scrum Master after Aleksandar will be Catalin.

#### 2.2 **Communication**

*Client & Project Tutor (Teacher)*:

Communication with the client will be via Microsoft Teams online, online meetings, at R10 or Strijp TQ. We are also able to email him if necessary.

With the teacher, contact will be primarily in-person during project days at R10. We can also contact him via email.

*Team Members:*

Communication will be through different platforms. Instagram for messaging and notifying, while Discord for sharing documents, meeting notes & other materials related to the project. Communication will happen on and outside project days so everyone is up to date on the project’s current situation.

### 3. **Activities and Time Plan**

#### 3.1 **Phases of the Project**

The planning of the project is going to be done by following the Agile methodology. The whole project is going to be separated into sprints, where each one is going to last 3 weeks.

To help structure our planning, we are going to use the SCRUM management framework. The team is going to have a person with the role of Scrum Master who will be responsible for communication and task management during the sprints. The usage of this methodology is going to allow the team to solve problems easier and plan accordingly for the following weeks based on the experience so far, reflection and workload.

At the end of each sprint, the team is going to have a reflection meeting where the progress on the project is going to be overlooked and discussed. This is going to be done with the idea to plan a better way of working for the next phase and to achieve our set of goals.

#### 3.2 **Time Plan and Milestones**

|  |  |  |
| --- | --- | --- |
| **Phasing** | **Start Date** | **Finish Date** |
| Sprint 1 | Week 4 | Week 6 |
| Sprint 2 | Week 7 | Week 9 |
| Sprint 3 | Week 10 | Week 12 |
| Sprint 4 | Week 13 | Week 15 |
| Sprint 5 | Week 16 | Week 18 |

*Sprint 1*:

* Create project plan
* Create project backlog
* Lay foundation for the program
* Create prototype of the design

*\*Note*:

The rest of the planning, tasks and project backlog can be found on the Jira Scrum board.

### 4. **Testing Strategy and Configuration Management**

#### 4.1 **Testing Strategy**

Project testing will be done by team members. An application called Sonarqube will also be used to speed up this process. End-to-end & integration tests will be run on the application to ensure everything is running optimally and without bugs.

#### 4.2 **Test Environment**

**Unit Testing**

• Objective: Ensure individual components function correctly in isolation.

• Activities: Develop and execute unit tests for both backend and frontend components to validate logic, functions, and classes.

• Tools & Technologies: Utilize JUnit for backend testing and React Testing Library for frontend components.

**Integration Testing**

• Objective: Verify that different modules or services work together as expected.

• Activities: Conduct integration tests to ensure that the application's modules interact correctly with each other and with external systems (e.g., databases, third-party APIs).

• Tools & Technologies: Use Spring Boot Test for backend integration testing and Cypress or Selenium for end-to-end frontend testing.

**System Testing**

• Objective: Confirm the complete and integrated software product meets specified requirements.

• Activities: Perform system testing to validate the application's overall performance, security, and functionality.

• Tools & Technologies: Employ tools like JMeter for performance testing and OWASP ZAP for security testing.

**User Acceptance Testing (UAT)**

• Objective: Ensure the software meets user needs and requirements.

• Activities: Conduct UAT with target users to validate the user experience, feature set, and usability of the application.

• Tools & Technologies: Feedback tools and manual testing based on user feedback scenarios.

#### 4.3 **Configuration Management**

The project will be using two unique GitLab repositories to track development progress and project version history.

*Project repositories*:

* Back-end: <https://git.fhict.nl/I502268/s3-group-project>
* Front-end: <https://git.fhict.nl/I502268/s3-group-project-frontend>

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### **5. Project Risks and Mitigation**

As we begin to develop the requested software product; it is a vital part of the planning process to assess and analyze potential risks that may spontaneously arise throughout the development course. Doing so keeps every group member aware of the risks, allowing proactive actions to take place to prevent them from occurring. Below, we have outlined the risks that may jeopardize the project’s success as well as solutions to prevent and mitigate their harmful impact.

|  |  |  |
| --- | --- | --- |
| **Risk** | **Prevention Activities** | **Mitigation Activities** |
| Project delays | Set-up plan for task deadlines, assignment of roles for team members and asking for help if a task is too much for one person. Communication with the teacher can also help set-up plans for what needs to be done in advance. | Prioritizing most important tasks and ensuring communication between group members to ensure deadlines are met & any future delays are mitigated. |
| Personal/Health issues | Practice good hygiene habits, maintaining distance/minimizing contact with unwell individuals. | Collaborate with team members to reallocate tasks and redistribute tasks to ensure deadlines are reached. |
| Technical Problems | Keeping software updated, make sure all team members are working on the same project version and frequent work saving. | Consult with team members or tutor to find a solution. |
| Miscommunication | Have message notifications enabled, checking communication platforms and asking questions if something is unclear. | Consult with team members or tutor to find a solution. |
| Unclear requirements | Clarify all of the client’s demands during client meetings and save them in the project backlog. | Establishing communication with the client as soon as possible to rectify project requirements. |
| Client Absence | N/A | Speak to the tutor for help in establishing communication with the client. |