ToGather

# Introduction

In this document of project plan, project team is briefly introduced, management and technical practices that will be used are explained, project iteration and milestone schedule is shared, and deployment strategy is explained. In the last part, lessons learned in each iteration are shared.

# Project organization

All team members are going to fulfill different responsibilities during project development. Team members will work cross-functionally as an agile team. Also, members have some priority tasks with respect to their profession and work background. These priorities are given below between parentheses for each member.

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| **Team Member** | **Role** | **Responsibilities** |
| Baran ÖZDEN | Any Role (Primary: Developer) | Primary:   * Deciding on frameworks that fit the solution. * Implementing backend and frontend applications. * Designing the user interface. * Unit-testing of the components of the solution. * Integrating the components that are part of the solution.   Also, he will contribute to other roles’ responsibilities such as Architect, Tester. |
| Batuhan ŞENYÜZLÜ | Any Role (Primary: Project Manager) | Primary:   * Planning the project process and progress. * Tracking and assigning tasks. * Identifying risks and controlling mitigating strategies. * Developing and integrating database architecture. * Communicating with team members and stakeholders.   Also, he will contribute to other roles’ responsibilities such as Analyst, Architect. |
| Ebru KÜLTÜR BAŞARAN | Any Role (Primary: Architect) | Primary:   * Deciding on frameworks that fit the solution. * Researching and implementing infrastructure components. * Deploying applications and components. * Developing and integrating database architecture.   Also, she will contribute to other roles’ responsibilities such as Developer, Analyst. |
| İpek ÇOBANOĞLU | Any Role (Primary: Analyst) | Primary:   * Being a bridge between stakeholders and the project team. * Identifying the problem and dividing it into manageable pieces. * Ensuring all members are on the same page. * Defining requirements and setting priorities for them. * Testing overall system to check whether the solution fits the requirements.   Also, she will contribute to other roles’ responsibilities such as Project Manager, Tester. |

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| **Communication Channels** | **Applicability** |
| Microsoft Teams Video Conference App. | Applicable for all members |
| Whatsapp Messaging App. | Applicable for all members |
| Trello (Assigning Tasks) | Applicable for all members |
| GitHub Repository | Applicable for all members |

Communication Options: Microsoft Teams

# Project practices and measurements

Iterative incremental development practice will be used in this project. Development will start once the most essential key requirements are defined, and a fully functional and tested product will be the output of each iteration.

In more detail, continuous development-testing-deployment methodology will be used. Development will start as soon as requirements are defined. Unit-testing will be handled concurrently with development. After succeeding in unit-tests different software components will be integrated and system tests start. After succeeding in system tests, the final product of the related development cycle will be deployed as soon as possible to make it available to customers instantly.

The first release of the project will consist of one inception, two elaboration and one construction phase. Process will be tracked through the planned and done work items in each iteration, the work items will be tracked on Trello for ease of monitoring and managing tasks. At the end of each iteration, quality team evaluation and advisor’s feedback will be given. Later iterations will be planned according to the feedback.

# Project milestones and objectives

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| **Iteration** | **Primary objectives** (risks and use case scenarios) | **Scheduled start or milestone** | **Target velocity** |
| I1-Inception Phase | 1. Mitigate Risk 1 and Risk 5 2. Create brief documentation for primary use cases 3. Write Use Case 5.1 (Create a Task) in fully dressed form 4. Write Use Case 5.6 (Set User Profile) in fully dressed form | 24.10.2023-04.11.2023 | 11 days |
| I2-Elaboration Phase | 1. Mitigate Risk 1 and Risk 5 2. Develop Use Case 5.1 (Create a Task), Scenarios 5.2, 5.3, 5.4, 5.5, 5.6 3. Develop Use Case 5.6 (Set User Profile), Scenarios 5.1, 5.2, 5.3 4. Write Use Case 5.2 (Update the Task) in fully dressed form 5. Develop Use Case 5.2 (Update the Task), Scenarios 5.1, 5.2 6. Write Use Case 5.3 (Remove the Task) in fully dressed form 7. Develop Use Case 5.3 (Remove the Task) | 07.11.2023-25.11.2023 | 18 days |
| I3- Elaboration Phase | 1. Mitigate Risk 1 and Risk 5 2. Mitigate Risk 2 3. Write Use Case 5.4 (Handle Friendship Request) in fully dressed form 4. Develop Use Case 5.4 (Handle Friendship Request), Scenario 5.1 5. Write Use Case 5.5 (Review Existing Task) in fully dressed form 6. Develop Use Case 5.5 (Review Existing Task), Scenarios 5.1, 5.2 7. Write Use Case 5.7 (Add Friend) in fully dressed form 8. Develop Use Case 5.7 (Add Friend), Scenario 5.1 9. Write Use Case 5.8 (Remove Friend) in fully dressed form 10. Write Use Case 5.13 (View Calendar) in fully dressed form 11. Write Use Case 5.10 (Create Community) in fully dressed form, Scenarios 5.1, 5.2 12. Write Use Case 5.11 (Update Community) in fully dressed form, Scenarios 5.1, 5.2 | 28.11.2023-16.12.2023 | 18 days |
| I4-Construction Phase | 1. Develop Use Case 5.8 (Remove Friend), 2. Develop Use Case 5.10 (Create Community), Scenarios 5.1, 5.2 3. Develop Use Case 5. 11 (Update Community), Scenarios 5.1, 5.2 | 19.12.2023-02.01.2024 | 14 days |
| I5-Transition Phase | 1. Demo of the first release final product 2. Putting system into operation. | 02.01.2024-09.01.2024 | 7 days |

Table 1: First Release

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| **Iteration** | **Primary objectives** (risks and use case scenarios) | **Scheduled start or milestone** | **Target velocity** |
| I1- Elaboration Phase | 1. Mitigate Risk 1 and Risk 5 2. Develop Use Case 5.1 (Create a Task), Scenario 5.1 3. Develop Use Case 5.13 (View Calendar), Scenarios to be decided 4. Mitigate Risk 3 | 09.01.2024- 23.01. 2024 | 14 days |
| I2- Elaboration Phase | 1. Mitigate Risk 1 and Risk 5 2. Write Use Case 5.9 (Invite a Person) in fully dressed form 3. Develop Use Case 5.9 (Invite a Person), Scenarios to be decided 4. Write Use Case 5.12 (Sync the Calendars) in fully dressed form 5. Develop Use Case 5.12 (Sync the Calendars), Scenarios to be decided | 25.01.2024- 06.02.2024 | 12 days |
| I3-Elaboration Phase | 1. Mitigate Risk 1 and Risk 5 2. Write Use Case 5.14 (Discover New Events) in fully dressed form 3. Develop Use Case 5.14 (Discover New Events), Scenarios to be decided 4. Write Use Case 5.15 (View Event Recommendations) in fully dressed form 5. Develop Use Case 5.15 (View Event Recommendations), Scenarios to be decided 6. Write Use Case 5.16 (Integrate Own Calendar with Third Party Calendars) in fully dressed form | 08.02.2024- 22.02.2024 | 14 days |
| I4-Construction Phase | 1. Mitigate Risk 1 and Risk 5 2. Mitigate Risk 4 3. Develop Use Case 5.16 (Integrate Own Calendar with Third Party Calendars), Scenarios to be decided | 26.02.2024-03.03.2024 | 6 days |
| I5-Transition Phase | 1. Demo of the second release final product 2. Putting system into operation. | 03.03.2024-04.03.2024 | 1 day |

Table 2: Second Release

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| **Iteration** | **Primary objectives** (risks and use case scenarios) | **Scheduled start or milestone** | **Target velocity** |
| I1-Elaboration Phase | 1. Mitigate Risk 1 and Risk 5 2. Write Use Case 5.17 (Manage Notifications) in fully dressed form 3. Develop Use Case 5.17 (Manage Notifications), Scenarios to be decided | 04.03.2024-08.03.2024 | 4 days |
| I2-Elaboration Phase | 1. Mitigate Risk 1 and Risk 5 2. Write Use Case 5.18 (Provide Feedback) in fully dressed form 3. Develop Use Case 5.18 (Provide Feedback), Scenarios to be decided 4. Write Use Case 5.19 (View User Manual) in fully dressed form | 11.03.2024-15.03.2024 | 4 days |
| I3-Elaboration Phase | 1. Mitigate Risk 1 and Risk 5 2. Develop Use Case 5.19 (View User Manual), Scenarios to be decided | 18.03.2024-22.03.2024 | 4 days |
| I4-Construction Phase | 1. Make comprehensive beta test 2. Fix bugs 3. Launch the final product | 23.03.2024-01.04.2024 | 9 days |

Table 3: Third Release

# Deployment

Our deployment strategy is based on agile methodology. The components of the application will be hosted by cloud services to ensure high availability and low initial investment. Our choice of cloud service providers will be based on the frameworks that will be used and providers’ integration capabilities with these frameworks. For development purposes, PaaS or IaaS services will be received according to use cases. The components like backend, frontend, and databases should work separately. Therefore, each component could be developed as a microservice and be deployed to different cloud hosted containers.

We will embrace a continuous development-testing-deployment methodology. Development will start as soon as requirements are defined. Unit-testing will be handled concurrently with development. After succeeding in tests, the final product of the related development cycle will be deployed as soon as possible to make it available to customers instantly. Customer feedback will be collected, and later development and deployment cycles will be planned based on customer feedback.

# Lessons learned

After iteration 1, we learnt that a good project development approach should be based on use cases. After reviews, we extended our use cases and gather our ideas with respect to them. They will be our guidelines through project.

After iteration 2, we learnt the importance of the Architecture Notebook, since it plays a significant role in making architectural design decisions based on requirements. Also, we learnt that UML diagrams are a good way to create a system design, since they make it more clear by visualizing the system. Lastly, we learnt that time management plays a vital role in an agile project management system, in terms of satisfying the customer needs by showing a working product at the end of each iteration.

After iteration 3, we learnt the importance of UML diagrams to better explain system architecture, interactions and working principle of the system. Also, we realized the role of using appropriate design patterns for making an efficient and robust design.

After iteration 4, we learnt the importance of iterative incremental approach. Since we couldn’t implement frontend features on time, we postponed it to the second release. Iterative incremental approach helped us to move forward to develop our application and detect problems in every iteration.

Revision Table

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| --- | --- | --- |
| **Revision** | **Description** | **Date** |
| 1.0 | First revision | 26/10/2023 |
| 1.1 | Changes applied according to ToGather\_REVIEW document. | 11/11/2023 |
| 1.2 | Changes applied according to advisor’s feedback. (Transition phase is added to first release) | 24/11/2023 |
| 1.3 | Changes applied according to ToGather\_Review document. | 30/11/2023 |
| 1.4 | -Lessons learned and transition phases are updated, according to advisor’s Iteration 2 Work Products Feedback.  -In Release 1 - Iteration 3, 5.4 Create Subtask use case is discarded.  - In Release 1 - Iteration 3, 5.4 Handle Friendship Request use case is added.  -In Section 4, Release 1 Table, Iteration 2 and 3 develop use case scenarios are updated. | 08/12/2023 |
| 1.5 | -View Calendar use case is postponed to the 2nd release.  -Lessons learned is updated. | 02/01/2024 |