SE 216 – SOFTWARE PROJECT MANAGEMENT
SOFTWARE PROCESS MODEL DOCUMENT

PROJECT NAME: MediShare

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#	NECESSARY NEEDS FROM THE ORGANIZATIONAL PROCESS
1	**Teamwork:** The project should be developed collaboratively, with everyone aware of the tasks being undertaken.
2	**Transparency:** All project progress must be visible.
3	**Inspection:** Every step of the project needs to be reviewed.
4	**Adaptation:** Adapt to any setbacks or new requirements that may arise after the examinations.
5	**Communication:** All project members must communicate effectively and assist one another when it is necessary.
6	**Collaboration with Stakeholders:** Consultation with stakeholders is crucial during project development to ensure that all requirements are met, even those that may not be immediately apparent to the developers.
7	**Testing:** Every aspect of progress must be thoroughly tested.
8	**Evolution:** The process should allow us to incorporate new features based on user feedback and requests after the product is completed.
9	**Transition:** Process should be suitable a seamless transition from existing systems to the system in our project.
#	UNNECESSARY NEEDS FROM THE ORGANIZATIONAL PROCESS

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SOFTWARE PROCESS NAME: Agile (Scrum)
SOFTWARE PROCESS DESCRIPTION:
Stakeholders using MediShare, such as patients, doctors, companies, etc., will be consulted to determine the requirements for the initial product backlog. Product owners and stakeholders may not anticipate all requirements. After the sprint backlog is created, the targets in this backlog will be completed within a certain period of time. Begin development by working on the selected backlog items, focusing on delivering working increments of functionality within each sprint. Regularly review progress and adapt plans as needed, based on feedback and changing requirements. At the end of each sprint, hold a sprint review meeting to demonstrate the completed work to stakeholders and gather feedback. Use this feedback to validate assumptions, make adjustments and refine priorities for future sprints. Conduct a sprint retrospective meeting to reflect on what went well during the sprint, what could be improved, and any actionable insights or lessons learned. Use this information to make continuous improvements to the development process. Seek regular feedback from users, stakeholders, and domain experts throughout the development process to validate assumptions, identify opportunities for improvement, and ensure that the product meets the needs of its intended users.
SOFTWARE PROCESS MODEL:

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Product Backlog: The task list will be organised by the product owner in consultation with the stakeholder.

Sprint Planning: During sprint planning, the team will select the task or tasks that can be completed within a specific time frame from the product backlog. The team will then plan the duration of each task. The tasks will be distributed based on what needs to be accomplished during the sprint.

Sprint 1: Simple UI and application design (2 Weeks)

Sprint 2: Database design, implementation (6 Weeks)

Sprint 3: User authentication and authorization, (3 Weeks)

Sprint 4: Prescription management, Medication description and reminder (6 Weeks)

Sprint 5: Live support (4 Weeks)

Sprint 6: Monitoring system (3 Weeks)

Sprint 7: Usability testing and optimization (3 Weeks)

Sprint Backlog: A to-do list will be created for the sprint. Possible sprint backlog items for **Sprint 1 and Sprint 2:**

1. Design user interface for login, prescription, medications page.

2. Gather medication data from existing system.

3. Design database schema for storing medication information.

4. Populate database with medication details and integrate with application.

Sprint 3:

1. Implement backend logic for user authentication.

2. Develop access control system.

Sprint 4:

1. Implement functionality to record prescriptions in the system.

2. Develop backend logic for scheduling and sending reminders.

3. Test and refine reminder system for accuracy and reliability.

Sprint 5:

1. Define requirements for monitoring and auditing features.

2. Develop monitoring system to track prescribed medications.

3. Implement auditing capabilities and establish reporting mechanisms for compliance

monitoring.

Sprint 6:

1. Gather user feedback and prioritize usability enhancements.

2. Implement interface improvements based on user feedback.

3. Conduct usability testing to validate changes and make further refinements.

Daily Scrum: Daily meetings will be held at 8.30 and 17.35. progress and any challenges encountered during the day. This will ensure that everyone is aware of all aspects of the project.

Sprint Review: At the end of each sprint, the project team and stakeholders analyse the increment. This will be especially crucial for the test cases, as stakeholders may identify new requirements and missing test cases that developers may have overlooked.

Sprint Retrospective: After each sprint, the team will discuss how to improve the process for the next sprint.

REASONS TO CHOOSE THIS MODEL:

Flexibility: As the pharmaceutical and healthcare sectors are unpredictable, new requirements may arise. Additionally, new diseases, medicines, and laws may necessitate changes in practice, requiring us to adapt.

Manageability: The system has a high number of requirements and stakeholders, which increases the workload. However, dividing the workload into smaller parts and constantly examining and reviewing with the development team it can make it more manageable. This could be accomplished with a detailed plan, but it would not allow for adaptation to the uncertainty of the healthcare industry.

Transparency: As progress is visible to both developers and stakeholders, this helps to avoid potential misconceptions if people who are familiar with this field view the work, as developers are not familiar with it. Additionally, increased workload visibility allows for better workload management.

Testability: Given the unpredictable nature of the health and pharmaceutical sector, collaborating with stakeholders can provide additional information on extreme cases. This information can help prepare for testing scenarios that developers may not have considered.

Enhanced Quality: By cooperating with stakeholders and adapting as necessary, we can create a more reliable, useful, and complete application for users without relying on excessive documentation and negotiation. Because new information on the drugs and users will be continuously added to the application and updated, along with the use of a live support system, it is crucial that the application be dependable and sustainable.

Detecting Mistakes: As each aspect of the project will be worked on together, the same code can be reviewed by different people. This allows errors to be detected more effectively and project members to cover each other's mistakes. This is a major reason why we selected this model, as the work that will be done on this project is extremely complex and crucial to human health.