SE 216 – SOFTWARE PROJECT MANAGEMENT
SOFTWARE PROCESS MODEL DOCUMENT

PROJECT NAME: UniLearn (Group 1)

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#	NECESSARY NEEDS FROM THE ORGANIZATIONAL PROCESS
1	Making cooperation agreements with universities for the use of the platform.
2	Cloud-based AZURE servers for uploading, storing and streaming asynchronous video lessons.
3	Establishing feedback channels for gathering input from stakeholders, users, and team members allows for continuous improvement of the software and development processes based on insights and suggestions received.
4	Implementing a version control system, such as Git, ensures that software code is managed, tracked, and versioned effectively, enabling collaboration among team members and facilitating code reviews.
5	The process should be agile to fix problems as quickly as possible, since there are going to be daily uploads into the system.
6	For providing performance, team should test their functionality with performance analysis tools such as AppDynamics or New Relic.
7	Using social media, influencer marketing and other marketing channels to raise awareness about the benefits of the platform.
8	Collaborating with distinguished educators to create high-quality and engaging content.
9	Establishing general community rules based on artificial intelligence and user feedback to prevent users from engaging in harassment, hate speech, or other unacceptable behavior.

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SOFTWARE PROCESS NAME: SCRUM

SOFTWARE PROCESS DESCRIPTION:

Scrum is a light-weight framework that enables people to generate value for complex problems. Scrum uses an agile approach, and it is mostly used in projects that require more flexibility during devolopment.

In this project we need teams mostly consist of:

- Developers for designing *(ex. using UML diagrams)*, implementing, maintaining the Project.
- Software Testers for any kind of testing related to program.
- Designers for GUI organization, texturing, images.

Like in most projects, we will start by distributing these developers according to their skills and creating effective scrum teams. These teams will generate a product backlog, which consists of what will be done in general according to the requirements that we specified before. Then create a sprint backlog after sprint planning. In short, teams will conduct normal scrum activities and processes.

We are planning to increase project efficiency by:

- Conducting scheduled meetings, maybe every day but in the same place at the same time. *(saving time)*
- Meetings will be conducted with university managers or any stakeholders that will use this platform. *(more communication for less confusion) (transparency)*

In general, we are planning to keep the process in track by implementing and maintaining scrum values and scrum pillars at best.

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SOFTWARE PROCESS MODEL:

Sprints plan:

Sprint 1: Platform Foundation and Security

Necessary systems will be established so that users can register and log in to the platform securely. Separate authorization levels will be determined for different user roles such as student, instructor and administrator on the platform, and different access and transaction opportunities will be provided. Users' passwords and other personal information will be stored securely and protected using encryption methods. Additionally, the courses section will require an additional pin code due to the important information it contains.

Sprint 2: Course Management and Content Creation

An interface will be designed and developed through which university administrations can easily create and manage courses. In this interface, information such as course names, descriptions, student objectives and curriculum can be added. In addition, an interface will be created where different content types such as video, audio, documents and tests can be added. In this way, instructors will be able to present course content in different formats.

Sprint 3: Community

A community section will be developed on the platform that will facilitate interaction and information sharing by allowing the creation of communities in which users can participate according to their interests. Interaction will increase and information sharing will be facilitated by adding features such as discussion forums and question-answer sections where members can exchange ideas with each other within the communities.

Sprint 4: Profile

Users will have an interface where they can edit their profile pictures, biographies and other personal information. Additionally, various customization options such as course completion badges and achievement indicators will be offered, allowing users to edit their profiles according to their own style.

Sprint 5: Advanced Reporting and Analysis

Reporting tools that analyze data such as community usage, post analytics, course completion rates, and student progress will be developed.

Sprint 6: Communication

Messaging channels will be provided where users can communicate one-on-one with other members.

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REASONS TO CHOOSE THIS MODEL:

Flexibility and Iterative Approach: The education sector is subject to constantly changing legal regulations and practices. Thanks to Scrum's flexible structure, you can ensure that your platform adapts to these changes quickly. For example, a new regulation may require changes to course content or exam format. With Scrum, you can make these changes quickly and cheaply.

Customer Focus: You can get feedback from your customers through prototypes in the early stages, without waiting for the platform to be completed. In this way, you can see how well the platform meets customer needs and make the necessary adjustments.

Team Collaboration: Scrum encourages effective collaboration within the project team. Daily stand-up meetings, regular sprint review, and retrospective meetings strengthen team communication, enable problem-solving, and encourage continuous improvement.

Risk Management: Scrum facilitates early identification of risks. Through short-term iterations (sprints), which is important in most of projects related to changing Requirements. Our project has critical functionalities or hardware requirements that can lead any user to have trouble if implemented wrong. For example course section. Scrum will enable us to solve cheaper by identifying earlier.

Motivation and Productivity: Scrum encourages team members to take responsibility and increases their motivation. Setting and tracking tasks to be completed within a specific time frame (sprint) helps team members focus on goals. Additionally, the sense of accomplishment from regularly delivering work increases team productivity and morale.