SE 216 – SOFTWARE PROJECT MANAGEMENT
SOFTWARE PROCESS MODEL DOCUMENT

PROJECT NAME: DrivEco

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#	NECESSARY NEEDS FROM THE ORGANIZATIONAL PROCESS
1	The development process needs to be managed most efficiently until the project's deadline.
2	Permission must be obtained from IUE for getting registered students ID's and accessing their course schedules from the IUE student database.
3	The project should be divided into scripts to facilitate management and increase quality without increasing time and cost.
4	We will need flexible planning that will allow solving the problems identified by analyzing the students' feedback and meeting their needs quickly.
5	A strategy to accelerate the process is crucial.
6	An approach to address the needs of students based on received feedback.
7	Rapid adaptation to any changes in requirements is necessary.
8	Transparency within the team regarding the tasks undertaken by individual developers is crucial.
9	Sponsorship agreements should be established to facilitate the provision of coupons and similar privileges to users within the application.

SOFTWARE PROCESS NAME: SCRUM

SOFTWARE PROCESS DESCRIPTION

Scrum is an agile framework used for managing product development. It provides adaptable solutions for challenging issues, enabling individuals, groups, and organizations to create value. Scrum is a methodology centered on iterative development and continuous improvement, utilizing the principles of transparency, inspection, and adaptation. There are three main roles in Scrum.

1. Product Owner represents stakeholders and defines the product backlog.

2. The role of the Scrum Master is to assist the Scrum process and ensure that the team follows the Scrum standards.

3. Developers are responsible for coding and delivering the product increment.

Scrum includes events as essential components. These events are Sprint, Sprint Planning, Daily Scrum, Sprint Review, and Sprint Retrospective.

Sprint: A limited period of time (usually 2-4 weeks) during which a predetermined increment is created.

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Sprint Planning: A meeting where the team selects items from the Product Backlog to work on during the upcoming Sprint.
Daily Scrum: A quick daily gathering when team members talk about the day's plans, evaluate the progress made, and identify any obstacles.
Sprint Review: A meeting at the end of the Sprint where the team shows the completed work to stakeholders.
Sprint Retrospective: A meeting held after the Sprint Review to review the process and identify areas for improvement.
Scrum has 3 artifacts which are Product Backlog, Sprint Backlog and Increment.
Product Backlog: An ordered list of all the work that the project wants done.
Sprint Backlog: The subset of the Product Backlog chosen for a specific sprint.
Increment: The total amount of work finished in a sprint.

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SOFTWARE PROCESS MODEL

Sprint 1: Project Setup and User Authentication
Task 1: Set up project environment and version control.
Task 2: Implement user registration and login interfaces.
Task 3: Implement ID verification for user registration.
Task 4: Implement phone number verification through SMS.
Task 5: Ensure secure storage of user data.

Sprint 2: Messaging and Appointment Creation
Task 1: Implement messaging functionality between users.
Task 2: Develop appointment creation feature.
Task 3: Store appointment information securely.
Task 4: Allow users to filter appointments by time, day, and price.

Sprint 3: Location Services and Map Integration
Task 1: Implement location services for users.
Task 2: Integrate map functionality to show active appointments.
Task 3: Show routes to destination points.
Task 4: Calculate estimated arrival time and cost.

Sprint 4: Payment System and Security Enhancements
Task 1: Implement an online payment system.
Task 2: Ensure secure storage of payment details.
Task 3: Implement an algorithm for matching students with similar schedules.
Task 4: Enhance security features, such as blocking users and emergency help buttons.

Sprint 5: User Interface and Compatibility
Task 1: Design and implement user-friendly interface.
Task 2: Implement light and dark mode options.
Task 3: Ensure compatibility with Android, iOS, and web browsers.
Task 4: Optimize server response times for smooth user experience.

Sprint 6: Testing and Deployment
Task 1: Conduct thorough testing of all features.
Task 2: Fix any bugs or issues found during testing.
Task 3: Perform user acceptance testing.
Task 4: Prepare for deployment to production environment.

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REASONS TO CHOOSE THIS MODEL

The main reason for our team to choose the Scrum approach from the Agile methodology is to increase our capacity to deliver faster and more valuable products to IUE students. The Agile approach enables us to quickly adapt to changing student requirements and manage our projects more efficiently by providing flexibility. Additionally, through customer focus and continuous feedback exchange, we have the opportunity to better align our products with the expectations of our customers. The Agile approach encourages collaboration within our team and maximizes the contribution of each member. As a result, while developing higher quality products with the Agile methodology, we can seize continuous improvement opportunities that will enable us to gain a competitive advantage.