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CS 255

System Analysis and Design

Project One

Process Model Application:

Process Model Application:

To apply a process model to the DriverPass scenario, the focus would be on mapping out the steps involved in key processes such as online training for written tests and scheduling driving lessons. This includes activities like customer registration, appointment scheduling, lesson delivery, progress tracking, and test management. Utilizing tools like Business Process Model and Notation (BPMN), visual representations of these workflows can be created to illustrate task sequences, decision points, and system interactions. This approach allows stakeholders to understand how data and activities flow through the system, identifying bottlenecks and areas for optimization.

Object Model Application:

Applying an object model to the DriverPass scenario involves defining core entities such as Customer, Instructor, Appointment, Lesson, and Test, along with their attributes, behaviors, and relationships. Unified Modeling Language (UML) techniques can be used to create class diagrams and object diagrams, providing a comprehensive view of the system's architecture. Object modeling enables a deeper exploration of data structure and behavior encapsulation within individual objects, facilitating system analysis and design.

Process and Object Model Comparison:

While process modeling emphasizes the flow of activities and interactions within the system, object modeling focuses on the structure and behavior of system entities. Process

modeling offers simplicity and clarity but may oversimplify complex interactions. Object modeling provides a detailed representation but can become overly complex, especially for large-scale systems. By combining these approaches, project teams can develop a robust solution that addresses both high-level process flows and detailed object interactions.

System Background:

The DriverPass system comprises several components including Administration, Secretary, User, and Drivers. These components serve various functions such as account management, appointment scheduling, user interaction, and lesson documentation.

Goals and Objectives:

The objectives of the DriverPass system are to automate scheduling, track user statuses, and monitor drivers and cars used for lessons. These goals are achieved through functionalities such as scheduling services, online classes, and comprehensive tracking capabilities.

Functional and Non-Functional Requirements:

Functional requirements include features such as online course registration, appointment scheduling, and customized information display. Non-functional requirements encompass aspects like system reliability, usability, and performance.

User Types and Requirements:

Different user interfaces cater to specific user types, including customers, secretaries, and administrators. Each interface provides functionalities tailored to the respective user's role, such as course registration, appointment management, and system administration.

Assumptions and Limitations:

Assumptions include system availability and functionality under normal operating

conditions. Limitations involve constraints such as lack of voice activation, dependency on electricity and internet connectivity, and reliance on central bank connection for operation.