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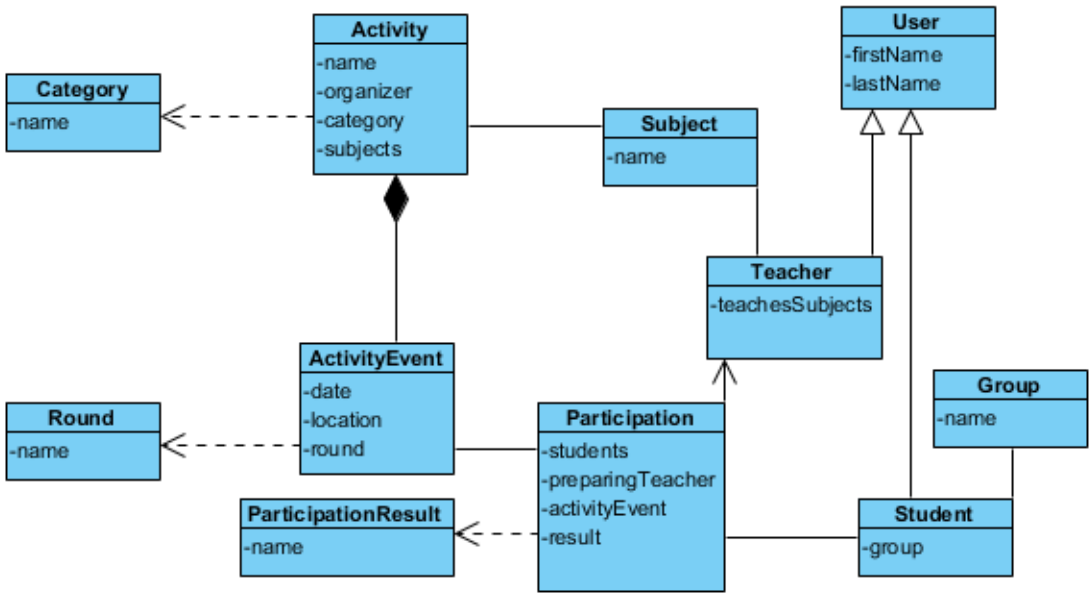
30431

Student performance tracker
Analysis and Design Document

I. Elaboration – Iteration 1.1

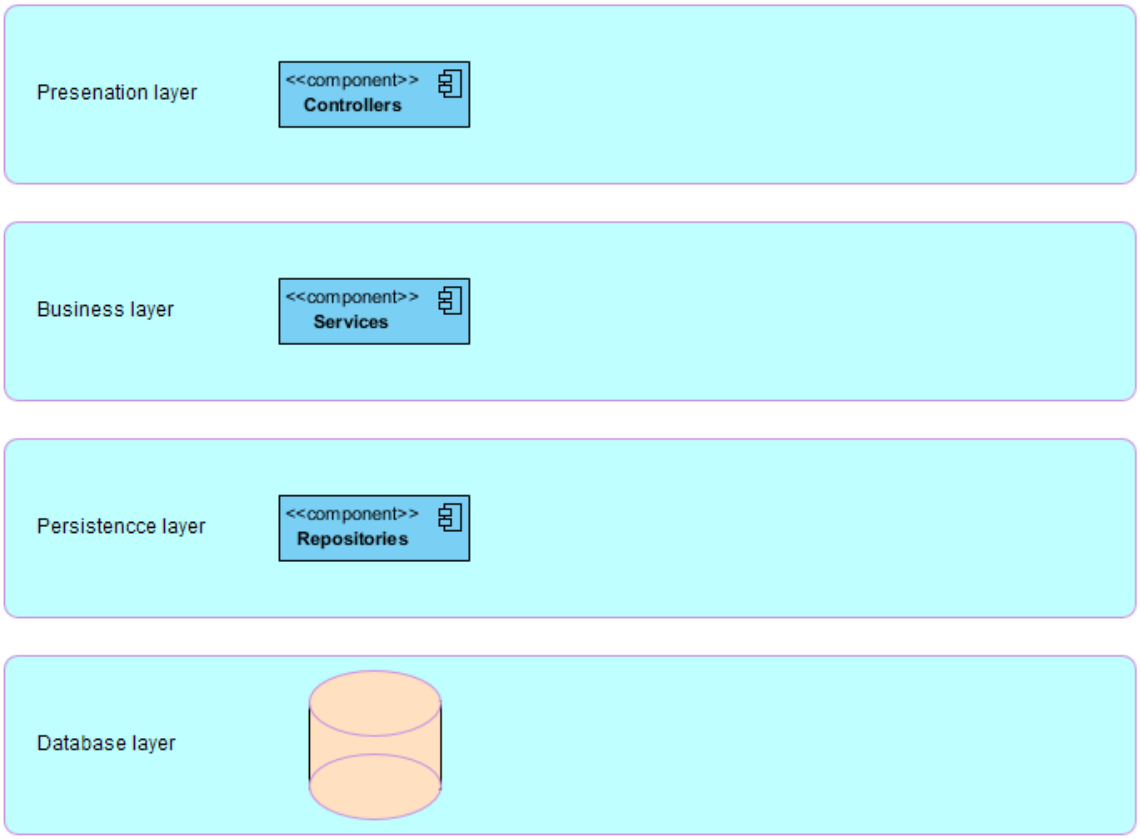
1. Domain Model

The system records student participations in contests and activities. Each contest has a name, an organizer and belongs to a given category and can be about some subjects. A contest has one or more rounds, each round has location, a date when it took place. Students participate (individually or in teams) in one or more rounds of a contest, where they obtain results, students may be prepared for the round by a teacher.
Participations earn students and teachers points, depending on the category, the round and the placement (result).

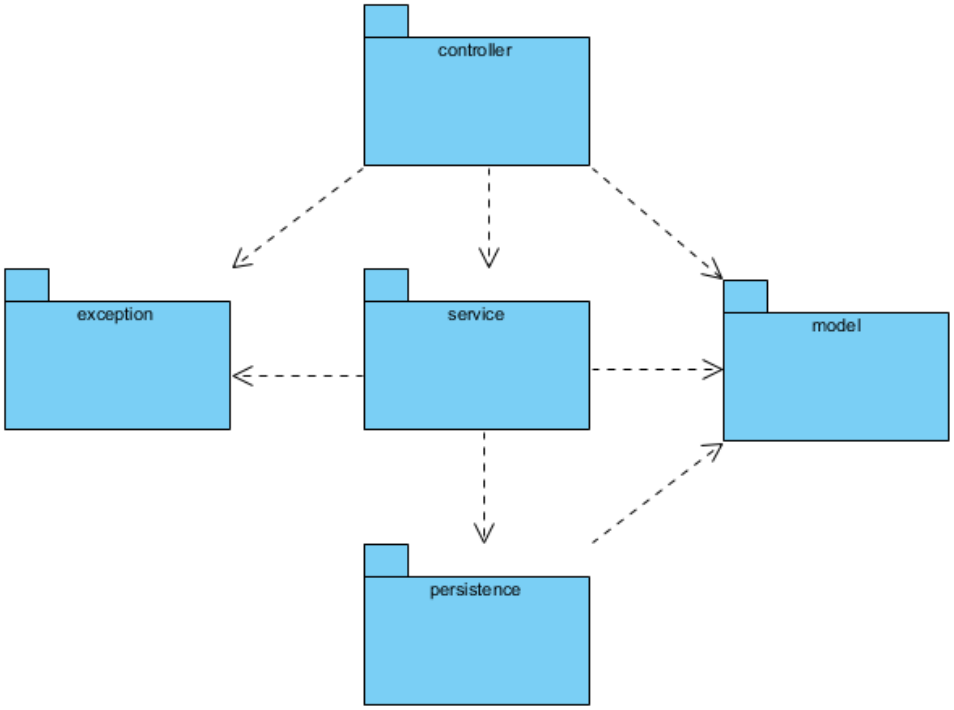


2. Architectural Design

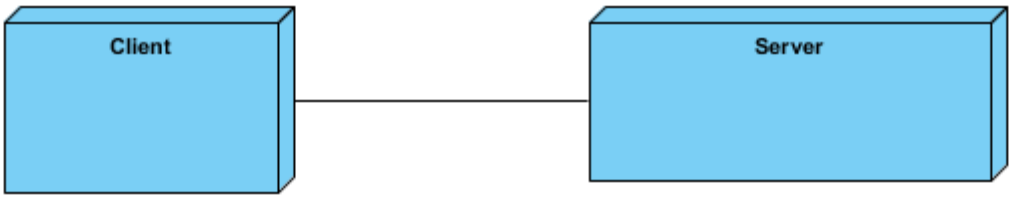
2.1 Conceptual Architecture



2.2 Package Design



2.3 Component and Deployment Diagrams



II. Elaboration – Iteration 1.2

1. Design Model

1.1 Dynamic Behavior

[Create the interaction diagrams (1 sequence, 1 communication diagrams) for 2 relevant scenarios]

1.2 Class Design

[Create the UML class diagram; apply GoF patterns and motivate your choice]

2. Data Model

[Create the data model for the system.]

3. Test Strategy

[Present the used testing methods and the associated test case scenarios.]

III. Elaboration – Iteration 2

1. Architectural Design Refinement

[Refine the architectural design: conceptual architecture, package design (consider package design principles), component and deployment diagrams. Motivate the changes that have been made.]

2. Design Model Refinement

[Refine the UML class diagram by applying class design principles and GRASP; motivate your choices. Deliver the updated class diagrams.]

IV. Construction and Transition

1. System Testing

[Describe how you applied integration testing and present the associated test case scenarios.]

2. Future improvements

[Present future improvements for the system]