

VIDEO CONFERENCING BACKEND MODEL DESIGN FOR TAURIA VIDEO SERVER

Object oriented modeling using UML Class Diagram to depict the relationship of various entities, to illustrate the application level representation of the video conferencing backend. And Also the Entity Relationship Diagram of the database model.

The Class Diagrams

There are two class diagrams which are similar with slight modifications based on the requirements stated in the brief.

1. The first class diagram provides an overview of the video conferencing which covers the basic features: Users, Guests, Teams and Conference Rooms. It illustrates the associations of the classes using UML notations.
2. The second class diagram is based on the change in requirements: allow cross region meetings and maximize participant hours of the total conference time. In order to achieve the two objectives, a Region Class is introduced to categorize users based on their region; also a configuration property is added to the ConferenceRoom class which determines whether to allow cross region meeting in the room. Another class is also added which is the RoomParticipant that manage participants and keeps track of their joinTime and leaveTeam, to enable the system calculate the total conference time based on the sum of individual call duration.

Figure 1: First Class Diagram

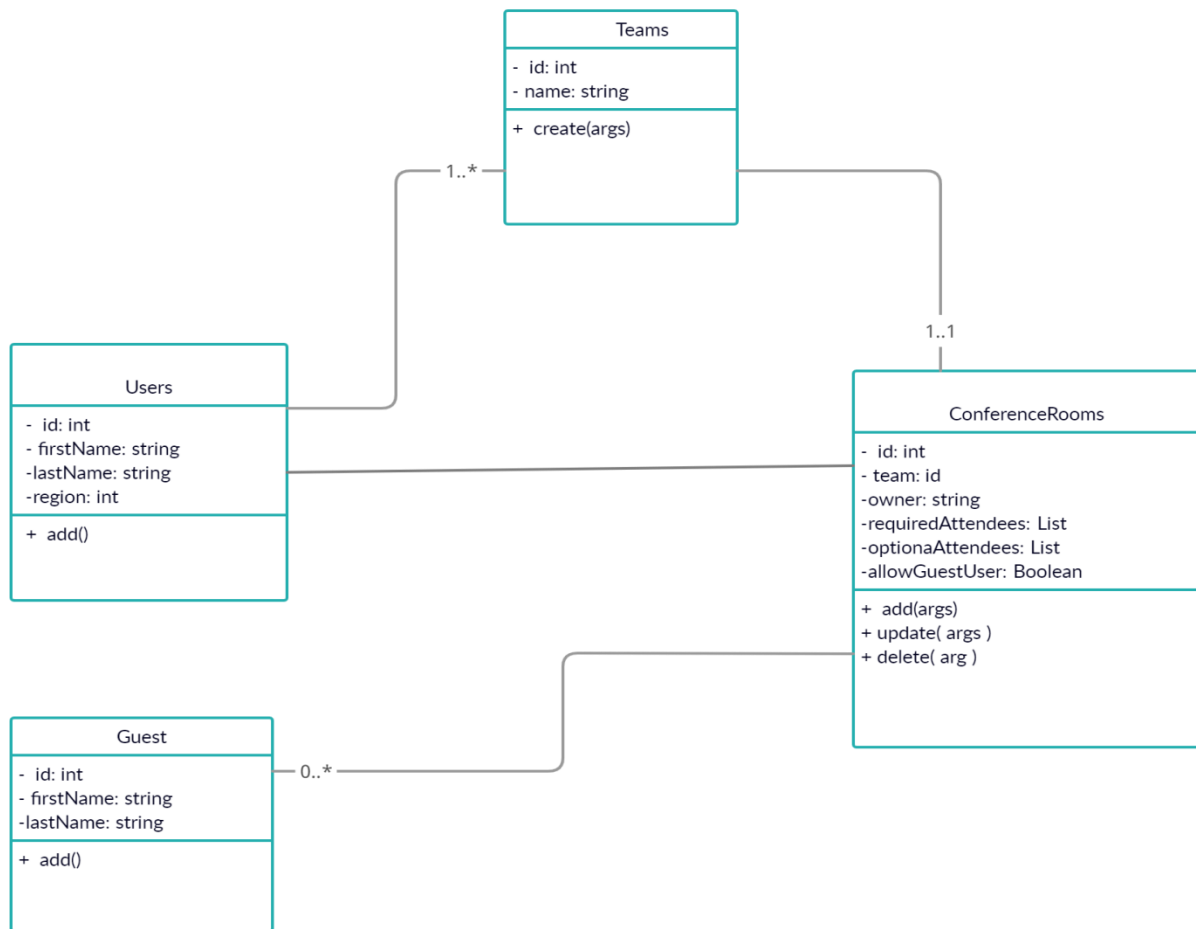
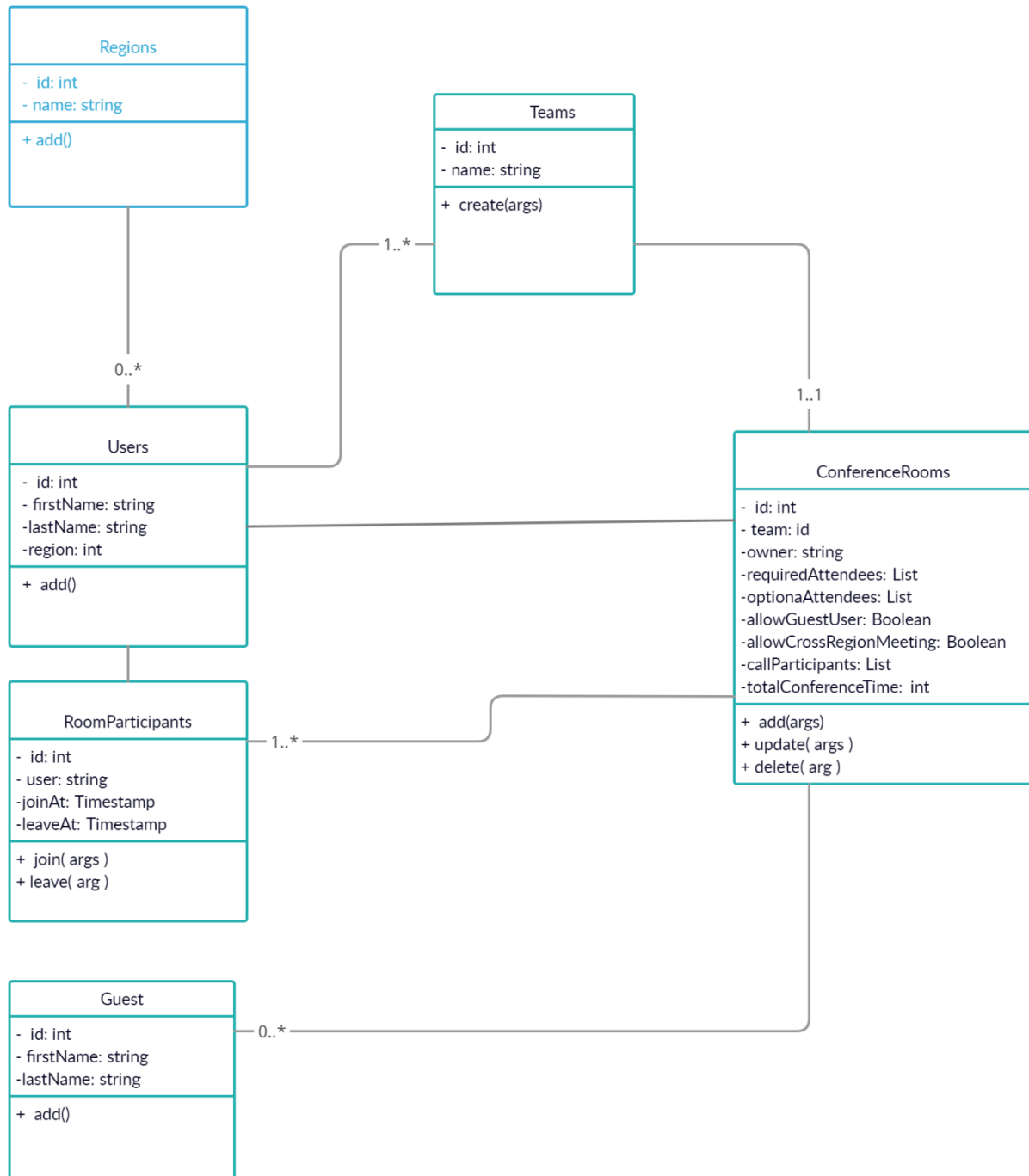


Figure 2: The Second Class Diagram



The Database E/R Diagram

The database level representation of the video conference backend shares some similarities with the class diagram above but also illustrates cardinality of the various entities based on relational model. The database design has mapped the relationship between the Users and Teams thus creates a dependant entity (UserTeamDetails) to resolve the **Many-to-Many** relationship between the Users and Teams.

Figure 3: The Database E/R Diagram

