

Room Reservation System

At many universities faculty and students are allowed to reserve rooms for classes, events, and studying. However, this process is relatively slow when a form must be submitted to an individual that is responsible for coordinating these reservations. If the room is unavailable at the desired time, then the person or organization reserving the room must resubmit a request. An automated system is needed to ease the procedure for the users and save on time and cost of scheduling campus events.

With access to the system, a user may make a reservation for a 'reservable' room at a desired time interval. Should this conflict with another reservation, the user will be allowed to modify the request. The user will be allowed to cancel any reservation that he or she has previously made. The user may also view current reservations.

System administrators are able to add and remove buildings. Within the buildings, the administrators may add and remove rooms. They are also responsible for registering all users and have the option to ban and unban users that may be misusing the system.

System classes:

User:

- A user has username, email address, and password. The user class can make a reservation and subsequently cancel it, as well as view the schedule for a building.

Administrator:

- An administrator has the same functionalities and attributes as a user. Additionally, the administrator can add/remove a room or building, add/remove users, ban/unban users, and cancel any reservation.

Room:

- A room can be reserved by a user. Room is part of the Building and contains the room number and has a set number of seats. A room can also be checked to see if it is available.

Building:

- A building is a collection of rooms associated with the building. It also contains an address. Rooms can be added to and removed from the building, and there is functionality to show all of the pending reservations for all of the rooms in the building.

Reservation:

- A reservation is made by a specific user for a specific room. The class is linked to this user and this room, and contains the start and ending dates and times for the reservation. This information is referenced when checking to see if a room is available at a specific time.

Address:

- The address class contains separate attributes for all of the parts that compose a full address so they can be more easily accessed individually.

Class Diagram:

