

University of Puerto Rico, Mayagüez Campus

CIIC4060 – Introduction to Database Systems

Fall 2021

Term Project – Backend System for Google Calendar-Style Service

Phase I – Conceptual Design

Date: October 12, 2021

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Description of relations and entities:

User:

- userID: primary key, integer value that differentiates users.
- firstName: varchar value, first name of the user, used for descriptive purposes.
- lastName: varchar value, last name of the user, used for descriptive purposes.
- email: varchar value, email address of the user, used for login.
- password: varchar value, password decided by user, used for login.
- roleID: int value, foreign key used to relate the user to his role (student, staff, etc.)

UserUnavailability:

- userUnavailabilityID: primary key, int value, used to differentiate different busy schedule of users.
- userID: int value, foreign key used to relate user to the UserUnavailability schedule.
- startDateTime: timestamp value, gives the starting time and date when the user is unavailable.
- endDateTime: timestamp value, gives the ending time and date when the user is unavailable.

UserRole:

- userID: primary key, int value, used to differentiate the different roles available.
- userName: varchar value, used to type the role (student, professor, staff, etc.) of the user.

Reservation:

- reservationID: primary key, int value, used to differentiate reservations done.
- hostID: int value, foreign key with the user id of the user that created the reservation.
- roomID: int value, foreign key to from the room that is going to be used in the space.
- startDateTime: timestamp value, gives the starting time and date when the reservation starts.
- endDateTime: timestamp value, gives the ending time and date when the reservation ends.

Invitation:

- invitationID: primary key, int value, used to differentiate the invitations made.
- inviteeID: int value, foreign key from the user that was invited to the reservation.
- reservationID: int value, foreign key from the reservation that the invitation is sending out.

Room:

- roomID: primary key, int value, used to differentiate rooms.
- roomNumber: int value, gives the room number used to identify that room.
- roomCapacity: int value, gives the maximum number of invitees that can be in a reservation in that room.
- buildingID: int value, foreign key that relates the room to the building its located in.
- typeID: int value, foreign key that relates the room to its type of room (lab, study, etc.)

RoomType:

-roomTypeID: primary key, int value, used to differentiate the different types of room types.

-roomTypeName: varchar value, gives the type of room (lab, study room, etc.)

Building:

-buildingID: primary key, int value, used to differentiate the buildings around college.

-buildingName: varchar value, used to identify the buildings around college (Stefani, Lucchetti, etc.)

RoomUnavailability:

-roomUnavailabilityID: primary key, int value, used to differentiate the different times when the room is not available.

-roomID: foreign key, int value, used to relate the classroom to its hours when its not available.

-startDateTime: timestamp value, gives the starting time and date when classroom is not available.

-endDateTime: timestamp value, gives the ending time and date when the classroom is not available.