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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. These options are illustrated in Figure 1, as well as the options for system administrators.

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.



Figure 1: Use Diagram of Room Reservation System

Use Case Scenarios:

Name: Reserve a Room

Actors: User

Goals: Reserve a room

Preconditions: User is registered on the system and logged in and the room is open to be reserved

Summary: The user reserves the room for specified time period if it has not been already

Related Use Cases: Overlapping Time Error – This occurs if the room is already reserved at the specified time.

Steps:

Actor's Actions	System Responses
1. User selects "Reserve room"	
2. User selects a room	
3. User selects a date	
4. User selects a time	
5. Submit request	
	6. Verify room availability at specified time
	7. Confirm or reject reservation

Postconditions: Room is reserved at specified time

Name: Add New Room

Actors: Administrator

Goals: Add a new room to the system to be reservable.

Preconditions: There must be at least one building in the system and the person adding the room must be logged in with admin rights.

Summary: Adds a new reservable room to a building in the system.

Related Use Cases: Add Building – Rooms must be added to existing buildings.

Steps:

Actor's Actions	System Responses
1. User selects "Add New Room"	
2. User specifies room information, such as the number and the building it resides in	
3. User submits add request	
	4. Room is added to reservation system, request is confirmed

Postconditions: The new room is now able to be reserved within the system.

Name: Cancel Reservation

Actors: User

Goals: To cancel a room reservation created by the user

Preconditions: Reservation exists, User is allowed to cancel reservation

Summary: Existing reservation is canceled and is now available for new reservations

Related Use Cases: Reserving Room

Steps:

Actor's Actions	System Responses
1. Select 'Cancel Reservation'	2. List reservations
3. Choose desired reservation to cancel	5. Room is removed from reservation system, cancellation is confirmed
4. Submit cancel request	

Postconditions: Reservation is removed from the system