Here is the class project - UTA Mac Facility Reservation System. Users (students and faculty) can reserve the following facilities:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Facility** | **Name** | **Interval** | **Duration** | **Type** | **Deposit** |
| Multipurpose rooms | MR 1-4 | 1 hour | Same day | Indoor | $50 |
| 5 Indoor basketball courts | IBBC 1-5 | 1 hour | Same day | Indoor | $25 |
| 9 Volleyball courts | IVBC 1-9 | 1 hour | Same day | Indoor | $25 |
| Indoor soccer gymnasium | SCG | 2 hours | Same day | Indoor | $50 |
| 5 Racquetball courts | RBC 1-5 | 30 min | Same day | Indoor | $25 |
| 10 Badminton courts | BMC 1-10 | 30 min | Same day | Indoor | $25 |
| Table Tennis | TT1 | 30 min | Same day | Indoor | $50 |
| Conference rooms | CR 1-5 | 1 hour | Same day | Indoor | $50 |
| 2 Outdoor Volleyball Courts | OVBC 1-2 | 2 hours | 7-day | Outdoor | $100 |
| 2 Outdoor Basketball Courts | OBBC 1-2 | 2 hours | 7-day | Outdoor | $100 |

Reservations. Indoor facilities are for the current and next day only. Outdoor can be reserved within the same week. Reservation slots start at the facility opening time. The last reservation slot is the last interval before the facility closes for that day. A deposit is charged in case of damage to equipment. A user may only reserve 2 indoor facilities within the current and next day window. *A user may only reserve a total of 4 indoor and outdoor facilities.*

System Users: Admin, User, Facility Manager.

Users who have 3 no-shows are not allowed to make reservations - a report is provided to the Admin who logs into the system to revoke a user. Assume a revoked user may also be unrevoked.

Facility hours:

|  |  |  |
| --- | --- | --- |
| **Day** | **Open** | **Close** |
| Monday | 6:00:00am | 12:00:00am |
| Tuesday | 6:00:00am | 12:00:00am |
| Wednesday | 6:00:00am | 12:00:00am |
| Thursday | 6:00:00am | 12:00:00am |
| Friday | 6:00:00am | 12:00:00am |
| Saturday | 12:00:00pm | 12:00:00am |
| Sunday | 12:00:00pm | 12:00:00am |

Facility search. The search user shall be able to select from the type of facility (Multipurpose room, Indoor basketball court, Indoor volleyball court, Indoor soccer gymnasium, racquetball court, badminton court, table tennis, conference room, outdoor volleyball court, or outdoor basketball court), the date (defaults to today), the start time (defaults to now) and see a report of available facilities for that type.

Available facility report. The system shall show the availability of facilities as follows (the following is a selectable list):

1. Date
2. Time slot
3. Type of facility requested
4. Facility Name (list them in ascending numeric order)
5. Deposit

Notice that the Facility Manager may need to see additional information.

Once the user has selected a specific facility the system assigns the first available numeric facility number (e.g., CR 2). The reservation is not considered complete until it is paid for.

Three different kinds of users for the system:

1. Facility manager
   1. creates own profile
   2. views numbers of facilities available by type, date, and time
   3. views details of a specific facility
   4. views details of a specific user (including no-shows)
   5. deletes a reservation (assume no modification is allowed)
   6. report a violation on a user (broke equipment)
   7. makes a facility unavailable
   8. set no-show (sets a user to no-show)
   9. update his own profile
2. User (student, faculty, and staff)
   1. creates own profile
   2. requests reservation
   3. view my reserved facilities
   4. modify my reserved facilities
   5. cancel my reserved facilities
   6. view my no-shows and violations
   7. update profile
3. Admin
   1. creates own profile
   2. edit user profile
   3. change user roles
   4. revoke user (user still exists in system but cannot reserve a facility)
   5. un-revoke user

All users will have the standard functions like register, login, logout. Each system user must register and for simplicity selects their role during registration. Assume that a single user that has multiple roles, e.g. User and Facility manager would register twice with different user names - the only affect of this rule is that each user name is unique and may be used as a Primary key in the database. Each user registers with at least a user name, role, UTA id, and personal details, contact information, car information, parking permit information, etc.

Credit cards are accepted: Visa, MasterCard, Discover, and AMEX.

Project must use - either

1. Android Studio, Android, and MySQL/SQLite or
2. Java Web project - Eclipse, JSP/Servlets, and MySQL or SQLite

The project database will be on the student device - there will be no server development.

Testing will be through a class demonstration using a YouTube video.