Here is the class project - a campus car rental system. Users (students and faculty) can rent cars to use for errands or pleasure.

Arlington Auto has a fleet of 9 cars as follows (only one of each kind):

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Rate** | | | **Extra Rates (/day)** | | |
| **Car Name** | **Capacity** | **Weekday** | **Weekend** | **Week** | **GPS** | **OnStar** | **SiriusXM** |
| Smart | 1 | $32.99 | $37.99 | $230.93 | $3.00 | $5.00 | $7.00 |
| Economy | 3 | $39.99 | $44.99 | $279.93 | $3.00 | $5.00 | $7.00 |
| Compact | 4 | $44.99 | $49.99 | $314.93 | $3.00 | $5.00 | $7.00 |
| Intermediate | 4 | $45.99 | $50.99 | $321.93 | $3.00 | $5.00 | $7.00 |
| Standard | 5 | $48.99 | $53.99 | $342.93 | $3.00 | $5.00 | $7.00 |
| Full Size | 6 | $52.99 | $57.99 | $370.93 | $3.00 | $5.00 | $7.00 |
| SUV | 8 | $59.99 | $64.99 | $419.93 | $3.00 | $5.00 | $7.00 |
| MiniVan | 9 | $59.99 | $64.99 | $419.93 | $3.00 | $5.00 | $7.00 |
| Ultra Sports | 2 | $199.99 | $204.99 | $1,399.93 | $5.00 | $7.00 | $9.00 |

Arlington Auto club members get a 10% discount on all rentals. Tax is 8.25%. Weekends are Sa & Su.

Partial day rentals are charged a full day. Rentals are 24-hour periods - if any portion of that 24-hour period is a weekend rate the entire day is charged weekend. For example, a Car rental that starts on Thursday at 6pm and returns on Sat 10am would be charged one Weekday rental and one Weekend day rental. A week rental is 7-days.

Arlington Auto is only open during the following hours:

|  |  |
| --- | --- |
| **Day** | **Hours** |
| M-F | 8am-8pm |
| Sa | 8am-5pm |
| Su | noon-5pm |

Check-out dates and return dates must conform to these times.

Three different kinds of users for the system:

1. Rental manager
   1. creates own profile
   2. views calendar of all cars rented
   3. views details of a specific rental
   4. views available cars for a given date/time
   5. deletes a rental
   6. update his own profile
2. User
   1. creates own profile
   2. requests rental - items, number of occupants, date, time, duration, extras
      1. The software only shows available cars that meet the minimum occupant capacities
      2. each car shows estimated prices based on selections.
   3. view my reserved rentals
   4. cancel my reserved rentals
   5. update profile
3. Admin
   1. creates own profile
   2. edit user profile
   3. change user roles
   4. revoke renter (renter still exists in system but cannot rent a car)

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 Rental manager would register twice with different ids. Each user registers with at least a user name, role, UTA id, and personal details, contact information.

This system will not deal with payment.

Project must use - Android Studio, Java and MySQL.

MySQL will be used primarily to develop a non-server DB for the Andoid (local DB only). Teams with experience on server-side software (e.g. PHP) may use a server DB, but time pressures may make this difficult. Testing will be through a class demonstration using a YouTube video.

Please indicate your team's experience in the chosen solution approach above.