

# Teamify System Design - CRC Cards

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## 1 View Layer

| <b>Class:</b> LoginView   |                          |
|---|--------------------------|
| Responsibilities  | Collaborators            |
| Capture user credentials and trigger <b>onLoginSubmit()</b> or <b>onRegisterSubmit()</b> to initiate authentication | AuthenticationController |
| Display authentication status, success messages, or error feedback to the user interface                            |                          |

Table 1: CRC Card for LoginView

| <b>Class:</b> PartySearchView  |                       |
|--|-----------------------|
| Responsibilities   | Collaborators         |
| Invoke <b>onFilterChange()</b> when users update search parameters (Rank, Mode, Region)    | MatchmakingController |
| Use <b>renderLobbyList(data)</b> to dynamically display active parties returned by the API |                       |
| Provide interface triggers for users to request joining or leaving a specific party        |                       |

Table 2: CRC Card for PartySearchView

## 2 Controller Layer

| <b>Class:</b> AuthenticationController  |                      |
|---|----------------------|
| <b>Responsibilities</b>   | <b>Collaborators</b> |
| Act as the entry point for login/registration data via <b>handleLogin()</b> and <b>handleRegister()</b> | <b>UserModel</b>     |
| Enforce security by verifying credentials through <b>validatePasswordStrength()</b>                     | <b>LoginView</b>     |
| Coordinate account lifecycle by invoking <b>UserModel.createUser()</b> or <b>findUserByEmail()</b>      |                      |
| Return authentication status or session tokens directly to the <b>LoginView</b>                         |                      |

Table 3: CRC Card for AuthenticationController

| <b>Class:</b> MatchmakingController   |                                 |
|---|---------------------------------|
| <b>Responsibilities</b>   | <b>Collaborators</b>            |
| Execute <b>searchLobbies()</b> based on criteria (Rank, Mode, Region) from <b>PartySearchView</b> | <b>PartyModel</b>               |
| Coordinate data flow between <b>PartyModel</b> and <b>AuthenticationMiddleware</b>                | <b>AuthenticationMiddleware</b> |
| Invoke <b>joinLobby()</b> or <b>leaveLobby()</b> to modify party states in the database           | <b>PartySearchView</b>          |

Table 4: CRC Card for MatchmakingController

### 3 Model Layer

| Class: UserModel   |               |
|--|---------------|
| Responsibilities   | Collaborators |
| Use <b>findUserByEmail()</b> or <b>createUser()</b> to interact with the SQL storage | SQLDatabase   |
| Apply <b>hashPassword()</b> to sensitive data before storage to ensure user security |               |
| Maintain user-specific state and "My Games" lists for account personalization        |               |

Table 5: CRC Card for UserModel

| Class: PartyModel   |               |
|---|---------------|
| Responsibilities  | Collaborators |
| Run <b>getFilteredParties()</b> to pull active lobbies from the database based on search criteria | SQLDatabase   |
| Execute <b>updatePartyMembership()</b> to record player joins, kicks, or leaves in the database   |               |

Table 6: CRC Card for PartyModel