

## LoginController

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Match current device ID with a device ID of a user account ID in the database</li> <li>• Load user data</li> <li>• Instantiate a user account associated with that device ID as the genesis ID if its a new device ID and add that to the database.</li> <li>• Redirect to correct next activity.</li> </ul> | <ul style="list-style-type: none"> <li>• User</li> <li>• LoginQRCodeMaker</li> </ul> |
|---|--|

## LoginQRCodeMaker

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Make a unique QR code of the user's account ID so the user can log in from another device</li> </ul> | <ul style="list-style-type: none"> <li>• User</li> </ul> |
|---|--|

## QR Code

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Represent QR code</li> <li>• Have associated comments</li> <li>• Have a location Boolean</li> <li>• If location Boolean is true, then have a geo location; else no</li> </ul> | <ul style="list-style-type: none"> <li>• User</li> <li>• Comments</li> <li>• Map ?</li> <li>• QRCodeController</li> <li>• DatabaseController</li> </ul> |
|--|---|

## QRCodeController

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Display score</li> <li>• Display comments</li> <li>• Facilitate adding comments</li> <li>• Display list of users who have this QR code</li> </ul> | <ul style="list-style-type: none"> <li>• QRCode</li> <li>• User</li> </ul> |
|--|--|

## QRCodeHasher

- Calculate a SHA-256 hash of a QR Code
- Calculate Score
- Identify if this is an user profile code, load profile code, or just a regular QR code.

- QRCode
- QRCodeController

## Comment

- Represent a comment by a user

- QRCode
- User
- DatabaseController

## Owner

- Special log in authorization
- See entire database
- Delete bad QR codes
- Delete big images
- Delete players

- QR Code
- User
- DatabaseController ?

## User

- Take pictures of QR codes
- View their QR codes by date and score
- View their total score/total # of QR codes
- Delete their QR codes
- Take pictures of location
- Record geo location of QR code
- View map
- View other player's profiles via Leaderboard
- Generate QR code for logging in and for others to see game status

- QRCode
- DatabaseController
- Comment
- Leaderboard

## LeaderboardController

- Represent leaderboard
- Facilitate search for player
- Show estimates of a player's ranking compared to others.
- Click into a player to see player profile

- User