UserInformation

 Represents the basic information of a user Has the username, password, firstname, lastname, score, QRCode 	• QRCode
Comment	
 Represents the comment by user to a QRCode Has the date, author, content of the comment 	

QRCode

Represents the scannable code	UserInformation
Has the comment, location, score relating to the code	Comment
	MyCryptographyController
	Game

Game

Represents basic information of a game session

UserScoreGameSession

Represents the basic information of a user in a single game session	CalculateScoreController

${\bf Custom List Ranking Controller}$

• Custom adapter for showing all the ranking of the players based on total score RankingAcitivity UserScoreGameSession • UserInformation

CustomListviewAllCommentController

• Custom adapter for showing all the comment of a QR Code

ViewAllCommentActivity

CustomListViewAllQRCodeController

• Custom adapter for showing all the QR codes of the user

ViewAllQRCodeActivity

CalculateScoreController

• Calculate the score from the QRCode

QRCode

MyBitmapController		
Resize the photo		
MyCryptographyController		
 Hash the input into a string Encrypt/decrypt the string 		
MyFireStoreUploadController		
	QRCodeComment	
MyPermissionController		

CustomListChooseGameController

Custom array adapter for the list view in ChooseGameActivity

• Manage interaction for asking the permission

• Game

Manage getting the device's unique ID

MainActivity

- Represents the main activity of the app
- Interface for user to log in/sign up

- MyCryptographyController
- SignupActivity
- UserInformation
- PlayerMenuActivity
- DeviceUniqueIDController
- Game

PlayerMenuActivity

- Interface showing the main menu for the app, with five buttons represent five major features of the app.
- SearchQRCodeActivity
- RankingActivity
- SearchUsernameActivity
- MyProfileActivity
- ViewAllQRCodeActiviy
- SearchQRCodeActivity
- SearchUsernameActivity
- MyBitMapController
- MyCryptographyController
- CalculateScoreController
- Game

RankingAcitivity

Showing the ranking of the player by their total score	PlayerMenuActivity
	CustomListRankingController
	MyFireStoreUploadControlelr
	UserInformation
	PlayerProfileActivity
	Game

SearchQRCodeActivity

Interface for player to search for QRCode from the map	PlayerMenuActivity
	MyPermissionController
	QRCode
	UserInformation
	QRCodeInfoActivity
	Game

SearchUsernameActivity

Interface for player to search for other player	PlayerMenuActivity
	UserInformation
	UserProfileActivity
	• Game

SignupActivity

Interface for player to sign up for the app	MainActivity
	MyFireStoreUploadController
	MyCryptographyController
	UserInformation
	PlayerMenuActivity
	Game

ChangeProfileActivity

Interface for player wanting to change the profile	MyProfileActivity
	MyFireStoreUploadController
	MyCryptographyController
	Game
	MainActivity

EstimateMyRankingActivity

 Interface showing the estimate ranking of the player in terms of Max score, Min score, Total score, the number of QR Code 	 MyProfileActivity UserInformation CalculateScoreController Game UserScoreGameSession

MyProfileActivity

- Interface showing the information of the player
 Showing option if player wants to change the profile or generate the QRCode
- EstimateMyRankingActivity
- ChangeProfileActivity
- PlayerMenuActivity
- QRCode
- UserInformation
- Game

CheckSameQRCodeActivity

• Interface to see the list of other players if they have the same QRCode

- QRCodeInfoActivity MyCryptography
- QRCode
- QRCode
- UserInformation
- Game

MapQRCodeActivity

• Displays the location of the QR Code on a map

- QRCode
- QRCodeInfoActivity
- Game

${\bf QRCodeInfoActivity}$

- Interface showing the information of the QRCode
- Interface for viewing the Photo of the QRCode (If there is)

- CheckSameQRCodeActivity
- ViewAllCommentActivity
- MapQRCodeActivity
- MyPermissionController
- MyBitmapController
- QRcode
- Game

UserProfileActivity

Interface showing the profile of the user

- UserInformation
- MyFireStoreUploadController
- ViewAllQRCodeActivity
- RankingActivity
- SearchUsernameActivity
- Game

ViewAllCommentActivity

• Interface showing all the comment of the QRCode

- CustomListviewAllCommentController
- MyFireStoreUploadController
- Comment
- QRCode
- Game

UserStatisticsActivity

Showing the statistics of the QRCode that player scanned	ViewAllQRCodeActivity
	UserInformation
	QRCode
	Game

ViewAllQRCodeActivity

Displays all the QRCode that player scanned	UserStatisticActivity
	 PlayerMenuActivity
	 CustomListViewAllQRCodeController
	MyFireStoreUploadController
	• QRCode
	UserInformation
	 QRCodeInfoActivity
	• Game

ChooseGameActivity

Allows user to choose game session or create a new one	Game
	MyFireStoreUploadController
	CustomListChooseGameController