#### 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
- UserInformation

#### QRCode

- Represents the scannable code
- Has the comment, location, score relating to the code

- UserInformation
- Comment
- MyCryptographyController

### CustomListRankingController

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

RankingAcitivity

#### 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

photo

MyCryptographyController

- Hash the input into a string
   Encrypt/decrypt the string
- Encrypt/decrypt the string

MyFireStoreUploadController		
<ul> <li>Upload the data to the FireStore database</li> <li>Manage the database</li> </ul>	<ul><li>QRCode</li><li>Comment</li></ul>	
MyPermissionController		
Manage interaction for asking the permission		
MainActivity		
Represents the main activity of the app	MyCryptographyController	

• Interface for user to log in/sign up

SignupActivity

UserInformation

PlayerMenuActivity

### 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

## RankingAcitivity

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Showing the ranking of the player by their total score	<ul> <li>PlayerMenuActivity</li> <li>CustomListRankingController</li> <li>MyFireStoreUploadControlelr</li> <li>UserInformation</li> <li>PlayerProfileActivity</li> </ul>
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### SearchQRCodeActivity

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

SearchUsernameActivity	
Interface for player to search for other player	PlayerMenuActivity
	UserInformation
	UserProfileActivity

Signup <i>F</i>	Activity
Interface for player to sign up for the app	<ul> <li>MainActivity</li> <li>MyFireStoreUploadController</li> <li>MyCryptographyController</li> <li>UserInformation</li> <li>PlayerMenuActivity</li> </ul>

ChangeProfileActivity	y
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Interface for player wanting to change the profile
 MyProfileActivity
 MyFireStoreUploadController
 MyCryptographyController

#### 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

### 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

#### CheckSameQRCodeActivity

<ul> <li>Interface to see the list of other players if they have the same QRCode</li> <li>QRCodeInfoActivity</li> <li>MyCryptography</li> <li>QRCode</li> </ul>		
• QRCode	Interface to see the list of other players if they have the same QRCode	<ul> <li>QRCodeInfoActivity</li> </ul>
	•	<ul> <li>MyCryptography</li> </ul>
	•	• QRCode
• UserInformation	•	UserInformation

## MapQRCodeActivity

Displays the location of the QR Code on a map
 QRCode
 QRCodeInfoActivity

## 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

### UserProfileActivity

Interface showing the profile of the user	UserInformation
	<ul> <li>MyFireStoreUploadController</li> </ul>
	<ul> <li>ViewAllQRCodeActivity</li> </ul>
	RankingActivity
	SearchUsernameActivity

ViewAllCommentActivity	
	<ul><li>CustomListviewAllCommentController</li><li>MyFireStoreUploadController</li><li>Comment</li><li>QRCode</li></ul>

UserStatisticsActivity	
• Showing the statistics of the QRCode that player scanned	<ul><li>ViewAllQRCodeActivity</li><li>UserInformation</li><li>QRCode</li></ul>

### ViewAllQRCodeActivity

Displays all the QRCode that player scanned	UserStatisticActivity
	<ul> <li>PlayerMenuActivity</li> </ul>
	<ul> <li>CustomListViewAllQRCodeController</li> </ul>
	<ul> <li>MyFireStoreUploadController</li> </ul>
	• QRCode
	UserInformation
	QRCodeInfoActivity