

Subject to change

Logger	
- Maintain log of notifications - Maintain DBProxy log	- Notifier - DBProxy

Notifier (publisher subscriber / observer pattern)	
- Store subscribers - Add subscribers - Remove subscribers - Notify subscribers with Message - Log to Logger	- Logger - Message

Message	
- Store notification data <ul style="list-style-type: none">- Content- Date- Organizer	- Notifier

DBProxy (proxy pattern)	
- Authenticate requests - Route requests to corresponding firebase databases - Log requests to Logger - Optional: cache common queries	- EventDB - UserDB - OrganizerDB - AdminDB - Logger - Optional: decouple into AuthenticationService

EventDB	
- Store events - Add events - Read events - Update events - Delete events	- DBProxy - Event

Event	
<ul style="list-style-type: none"> - Store event data <ul style="list-style-type: none"> - Name - Description - Time - Place - Poster - Organizer - Entrants - Attendees 	<ul style="list-style-type: none"> - EventsDB

UserDB	
<ul style="list-style-type: none"> - Store user profiles - Update profile information - Delete profiles - Fetch user history 	<ul style="list-style-type: none"> - DBProxy - User

User	
<ul style="list-style-type: none"> - Store personal info (name, email, phone) - Join/leave waiting lists - Accept or decline invitations - View event history - Manage notification preferences 	<ul style="list-style-type: none"> - UserDB - Event - Notifier

OrganizerDB	
<ul style="list-style-type: none"> - Store organizer accounts - Retrieve organizer events 	<ul style="list-style-type: none"> - DBProxy - Organizer

Organizer	
<ul style="list-style-type: none"> - Create and manage events 	<ul style="list-style-type: none"> - OrganizerDB

- | | |
|--|---|
| <ul style="list-style-type: none"> - Upload/update event posters - Enable/disable geolocation requirement - Trigger lottery draw - View entrants and attendees - Send notifications - Export final attendee list | <ul style="list-style-type: none"> - Event - Notifier |
|--|---|

AdminDB

- | | |
|--|--|
| <ul style="list-style-type: none"> - Store admin accounts | <ul style="list-style-type: none"> - DBProxy - Admin |
|--|--|

Admin

- | | |
|---|--|
| <ul style="list-style-type: none"> - Remove events - Remove users and organizers - Remove uploaded images - Browse events, profiles, images - Review notification logs | <ul style="list-style-type: none"> - AdminDB - Logger - EventDB - UserDB |
|---|--|

MainActivity

- | | |
|---|--|
| <ul style="list-style-type: none"> - Handle navigation between fragments | <ul style="list-style-type: none"> - SingInFragment - HomeFragment - ProfileFragment - SettingsFragment - EventCreationFragment - EventDetailsFragment - NotificationsFragment - MapFragment - QRScanFragment - AdminDashboardFragment |
|---|--|

SingInFragment

- | | |
|--|--|
| <ul style="list-style-type: none"> - Render UI on state change - Pass user input to SignInController | <ul style="list-style-type: none"> - MainActivity - SignInController |
|--|--|

SignInController

- | | |
|---|---|
| <ul style="list-style-type: none"> - Handle state - Authenticate user - Interact with database - Optional: single-sign on with Google account | <ul style="list-style-type: none"> - SignInFragment - DBProxy - User - Organizer - Admin |
|---|---|

HomeFragment

- | | |
|--|--|
| <ul style="list-style-type: none"> - Display event listings - Support filters (interest, availability) | <ul style="list-style-type: none"> - MainActivity - HomeController |
|--|--|

HomeController

- | | |
|--|--|
| <ul style="list-style-type: none"> - Fetch events - Apply filters - Update UI state | <ul style="list-style-type: none"> - HomeFragment |
|--|--|

ProfileFragment

- | | |
|---|---|
| <ul style="list-style-type: none"> - Display and edit user profile - Show event history | <ul style="list-style-type: none"> - MainActivity - ProfileController |
|---|---|

ProfileController

- | | |
|--|---|
| <ul style="list-style-type: none"> - Load/update user profile - Delete profile | <ul style="list-style-type: none"> - ProfileController |
|--|---|

SettingsFragment

-	- MainActivity - SettingsController
---	--

SettingsController	
-	- SettingsFragment

EventCreationFragment	
- Collect event details - Upload poster - Submit event creation	- MainActivity - EventCreationController

EventCreationController	
- Create Event - Store event in DB	- EventCreationFragment

EventDetailsFragment	
- Display event details - Allow waiting list registration	- MainActivity - EventDetailsController

EventDetailsController	
- Load event details - Handle join/leave waiting list	- EventDetailsFragment

NotificationsFragment	
- Display notifications - Mark notifications as read	- MainActivity - NotificationsController

NotificationsController

-	- NotificationsFragment
---	-------------------------

MapFragment	
-	- MainActivity - MapController

MapController	
- Display entrant join locations	- MapFragment

QRScanFragment	
- Fetch geolocation data - Provide map markers	- MainActivity - QRScanController

QRScanController	
- Scan QR codes - Navigate to event details	- QRScanFragment

AdminDashboardFragment	
-	- MainActivity - AdminDashboardController

AdminDashboardController	
- Display admin tools	- AdminDashboardFragment