



TEI of Crete
Technological Educational Institute of Crete

EventMate

Software Engineering & Big-data modeling,
Plan-Driven and Agile Programming

TEI Crete, Winter semester 2018/2019

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1. System specification

1.1. Introduction

For human beings, it is natural to socialize and interact with each other. Technology has become more and more important in the social aspects of life. Nowadays people prefer to spend more time on portable devices. Social networking has moved to mobile platforms, which are accessible anywhere and anytime.

The objective of our work is to develop a social application for organizing events any type. As events can be considered birthday parties, new year eve, weddings, baby showers etc.

As we want to make this application more general for any kind of events, we have decided to call it by name “EventMate”. The main goal of the application is to provide tasks management (create, assign, close) and also to create a communication channel among event owners and guests. The application is going to content gamification elements such as a scoreboard and badges.

1.2. Description

The following chapter explains major features. In order to use the application it is necessary to create a user's account or log in via existing social accounts. In our application, there are various user roles such as owners, assignees, guests. As we mentioned earlier, the main goal is to provide task management for an event. For all practical purposes, it means that user can create a task with corresponding attributes such as name, deadline, and persons to be assigned to it. All these fields are saved and continuously maintained. During the whole event, gamification principles are applied which help users to feel that they are a part of the game. When the event has finished, event summary is provided to particular users.

List of roles

Event owner – it is considered as a user that has created an event. Event creation gives this user all permissions to manage event such as edit, delete, lock, start and close.

Task owner – it is a event guest that has created a task. As its owner has a right to edit, delete, start (in case of time limit task), assign points to assignees and close task. Task owner can also assign his own task to himself.

Assignee – it is a type of user that has been assigned to a particular task. He has a right to upload his answers and view results of others.

Guest – it is a regular user that has been invited to an event. He hasn't created any task yet or assigned to any task. He can view event detail with its tasks.

1.3. Requirements

This section describes requirements for EventMate application.

1.3.1. Requirements list

In this section there are listed all functional and also non-functional requirements.

1.3.1.1. Functional requirements

- User registration
- User registration via Facebook / Google account
- User login
- Create events
- Create events from template
- List events
- Filter events
- Modify events
- Delete events
- Change event state
- Create tasks
- List tasks
- Modify tasks
- Change task state
- Submit task results
- Edit task photo
- Assign points for accomplished tasks
- Create reports
- Share reports
- Send private messages
- Send group messages
- Show user profile
- Change their own settings
- Setup notifications

1.3.1.2. Non-functional requirements

- Supported Android version 6 – 8
- Supported Web version by all browsers
- Responsible Android frontend
- Responsible Web frontend
- Android app available in portrait mode
- General usable REST API
- Secured REST API
- Android app capable of working in offline mode
- Ownership permission policy
- Maximum response time of 2 seconds
- Multiplatform backend support
- Log rotation ability
- Account password encryption
- Multilanguage support

1.3.2. Requirements diagram

[Attachment 1](#) presents requirements diagram.

1.4. Mindmap

Created mindmap for this application can be found in Appendix 2.

1.5. Use Case

The following sections describes use case diagram with two actors. The principal use cases are described in detail. Particularly speaking about creating a new event, adding a new task and generating event summary.

1.5.1. Use case diagram

1.5.2. Use case details

Figure 1 - Add task user case detail

Conditions

⊖ Preconditions:

- [Register](#)
- [Log in](#)
- [User has permission to add task to specific event \(user is event owner or guest\)](#)
- [User has chosen specific event](#)

⊖ Post-conditions:

- [View event detail](#)

Flow of events

1. ♀ [User](#) clicks on "Add task" button
2. **SYSTEM** displays "New task" screen
3. ♀ [User](#) fills required fields (Task name, Description, ● [Add assignees](#), ● [Add points](#))
4. (optional) ♀ [User](#) performs ● [Set time limit](#), ● [Specify location](#)
5. ♀ [User](#) clicks on "Save task" button
- ⊖ 6. **while** Form contains errors
 - 6.1. **SYSTEM** Displays error message (form isn't valid)**end while**
7. **SYSTEM** displays "Task detail" screen

TODO prehodit

Figure 2 - Create event use case detail

Conditions

⊖ Preconditions:

- [Register](#)
- [Log in](#)

⊖ Post-conditions:

- [View event detail](#)

Flow of events

1. ♀ [User](#) clicks on "Add event" button
2. **SYSTEM** displays "New event" screen
3. ♀ [User](#) fills required fields (Event name, Date)
4. (optional) ♀ [User](#) performs ● [Invite guests](#)
5. ♀ [User](#) clicks on "Save event" button
6. **while** Form contains errors
 - 6.1. **SYSTEM** Displays error message (form isn't valid)**end while**
7. **SYSTEM** displays "Event detail" screen

Figure 3 - Generate event summary use case detail

Conditions









⊖ Preconditions:

Event is finished by owner

⊖ Post-conditions:

Event summary is generated

Flow of events

1.  Owner clicks on "Generate event summary" button
2. **SYSTEM** displays "Generate options" screen
- ⊖ 3.  User chooses options
 - 3.1.  User selects theme
 - 3.2.  User selects tasks
 - 3.3.  User selects achieved score
 - 3.4.  User selects guests
4.  User clicks on "Generate" button
5. **SYSTEM** generates report
6. **SYSTEM** displays screen for  Send summary

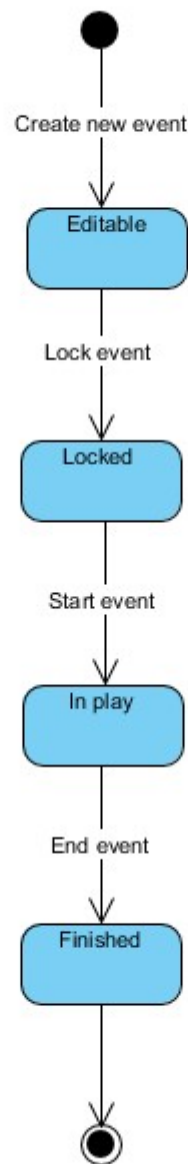
1.6. State machine diagram

The aim of this section is to clarify possible states of events and tasks using state machine diagram.

Firstly, event states will be presented. Any event can exist in four states. After its creation it is considered as 'editable' state. During this phase any user can add a new task to this event. Later on, the event owner has a right to lock his event to prevent guests from adding new tasks. Afterwards, the event owner is entitled to trigger his own event. The state is known as 'in play'. The event can changed its state to 'finished' when the owner close it or assign points for all tasks.

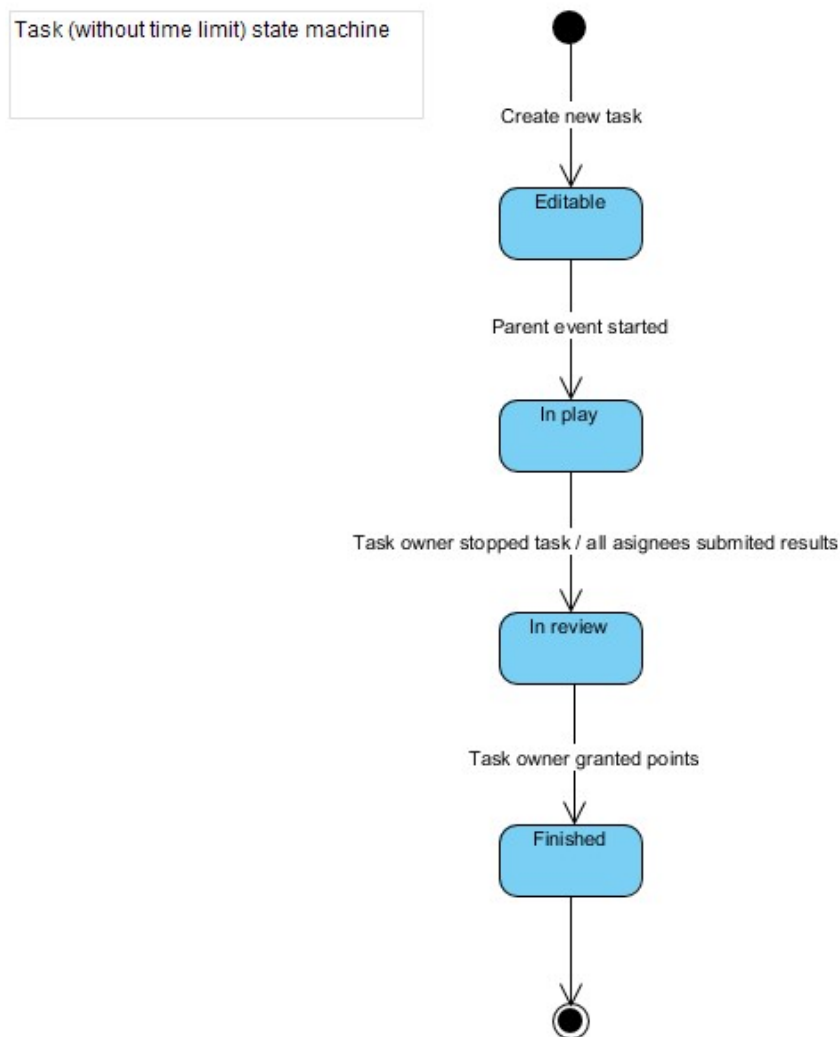
Figure 4 - Event state diagram

Event state diagram



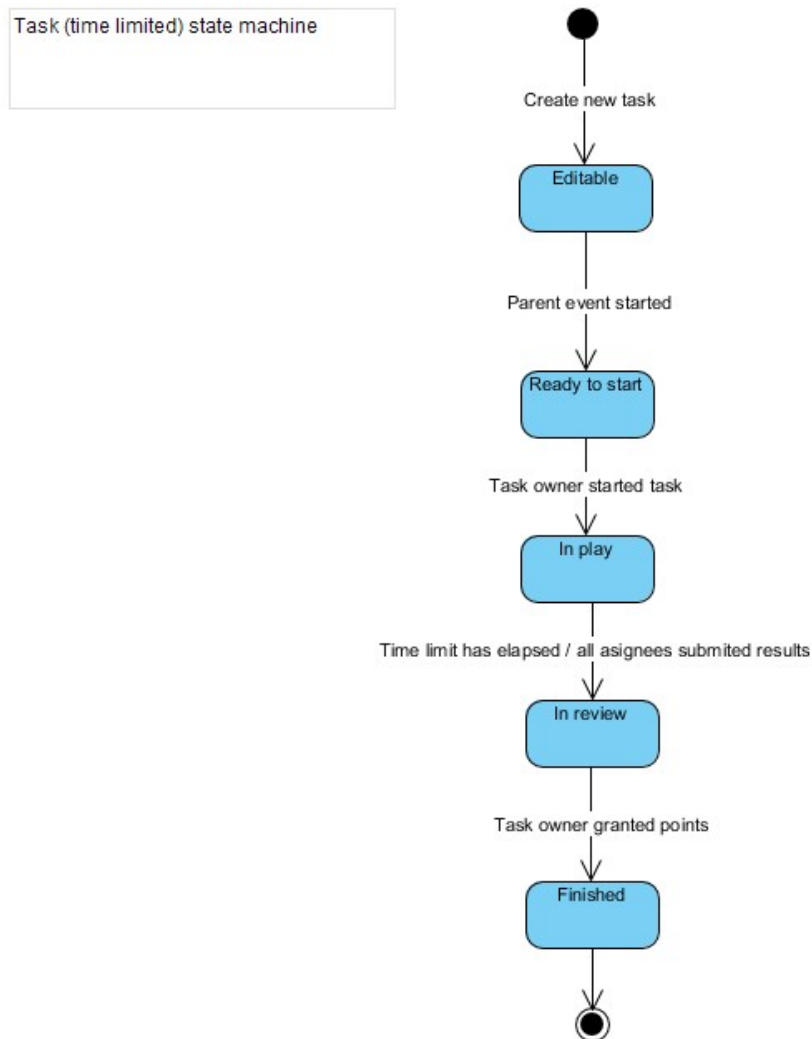
The application supports two types of tasks. Particularly speaking about tasks without defining time to finish and tasks with specified time limit. After its creation a task becomes editable. When its parent event has been triggered, the task passes to a new state 'In play' which supports result submission for assigned users. After submission of results or stopping the task by its owner, the task becomes only readable known as 'In review' state. Transition to last state requires granting points to assignees done by the task owner.

Figure 5 - Task state diagram



As Fig. 6 shown tasks with defined time limit contain one state more named 'Ready to start'. Transition to next state requires activation by its owner.

Figure 6 - Task (time limited) state diagram



1.7. Mockups

asda

1.7.1. Event owner (Android)

asd

1.7.2. Event owner (web)

asd

1.7.3. Event assignee

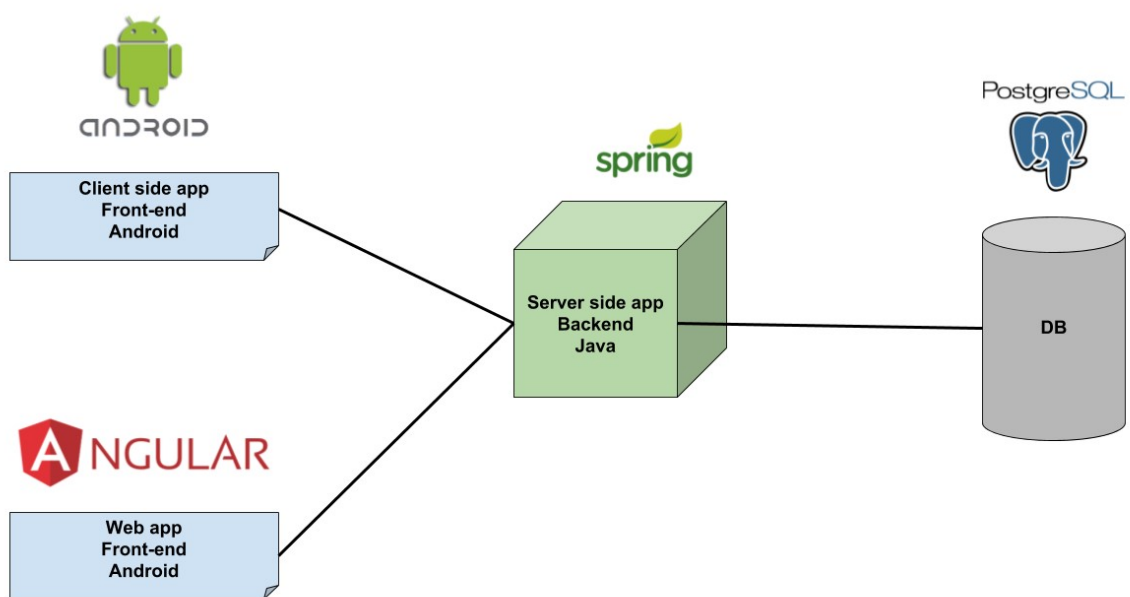
asd

2. Architecture design

Architecture style is based on **client-server**. The project consists of two client side parts and server side with a database.

2.1. Component diagram

2.2. Architecture diagram



Server side

Purpose of server-side application is to provide API, user authentication and persistence to the client side. The asynchronous notification system will be also provided by the server side.

Technology stack (early version)

- Java
- Spring Framework
- PostgreSQL

Client side

Client side - Android

First type of client-side is going to be implemented as a native mobile application for platform Android. There will be a huge emphasis on UX (User experience) and also on gamification techniques. Android application is going to adhere MVVM architecture that allows separating the user interface logic and the business logic.

Technology stack

- Kotlin
- LiveData
- Library Retrofit for API calls
- Dagger for dependency injection

Client side – Web

Another type of client-side is going to be implemented as a web application based on Angular framework.

Technology stack

- Angular 6 framework

TODO:

Chapter 1 – system specification (diagrams..)

Description, requirements list + diagram, textual description, use case diagram, mockups, short description,

Chapter 2 (Architecture design (title))

- Component diagram
- Architecture diagram

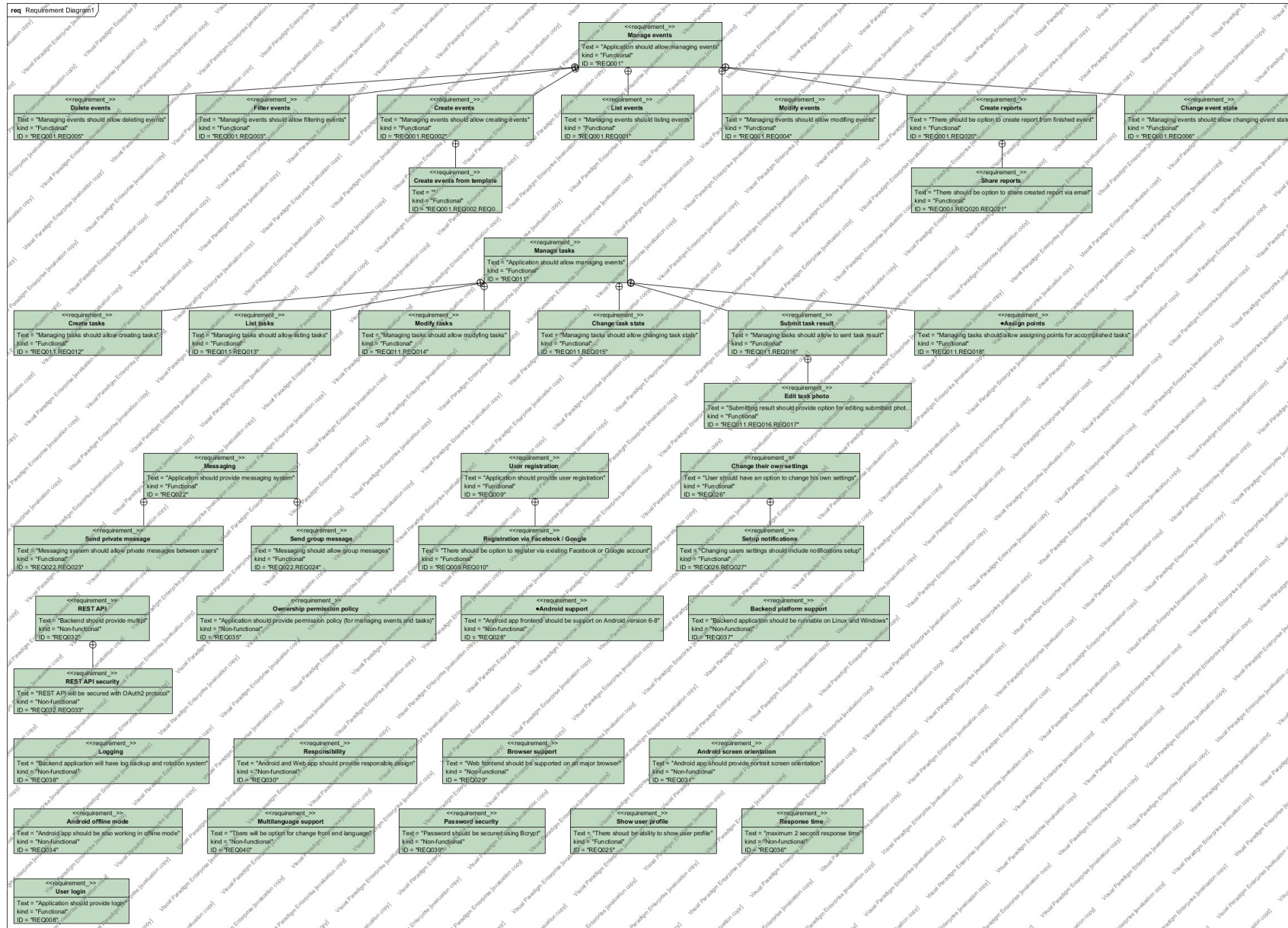
Presentace

1. Slide – mockup

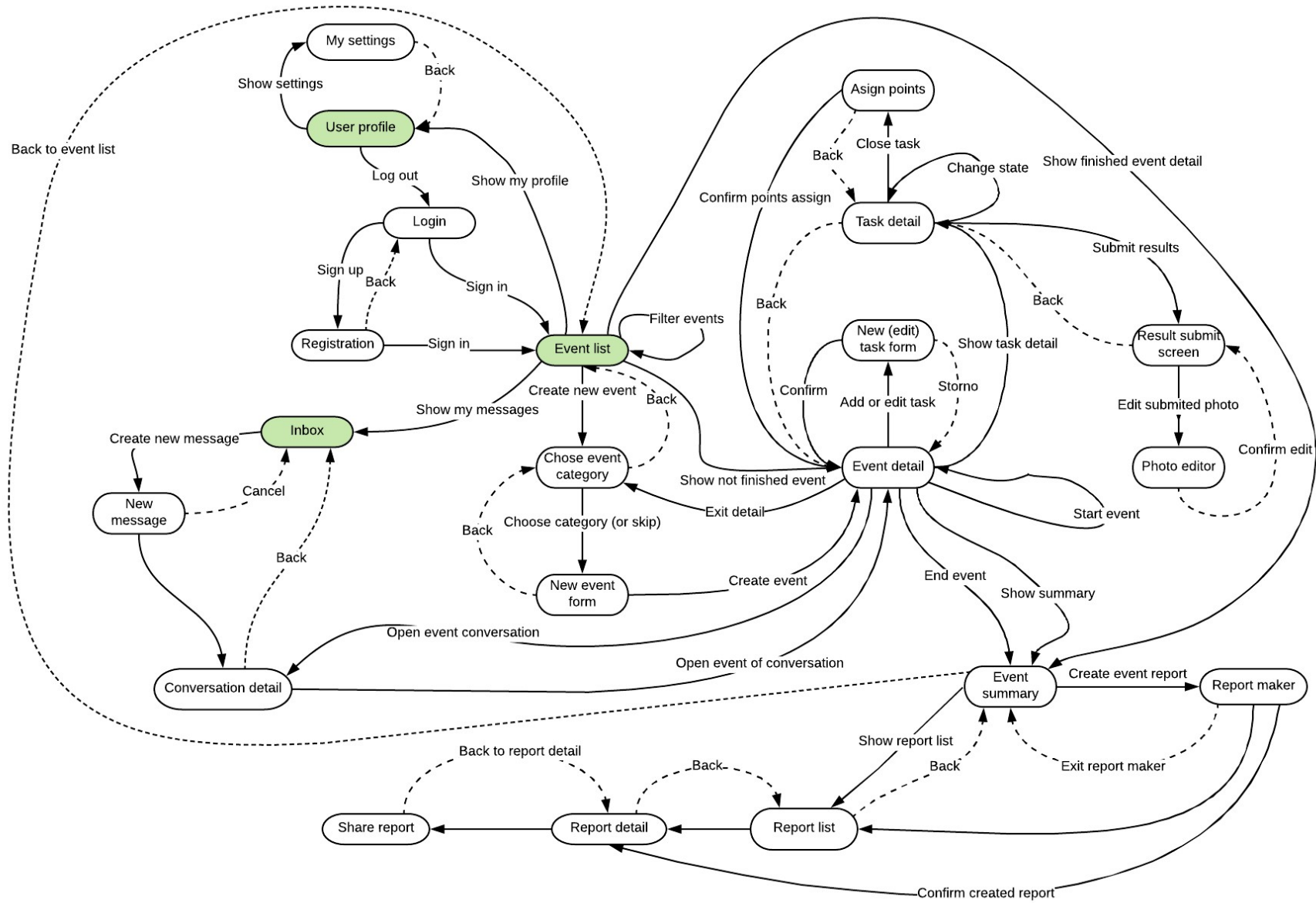
2. Slide – req. diagram
3. Slide – use case diagram

3. Appendices

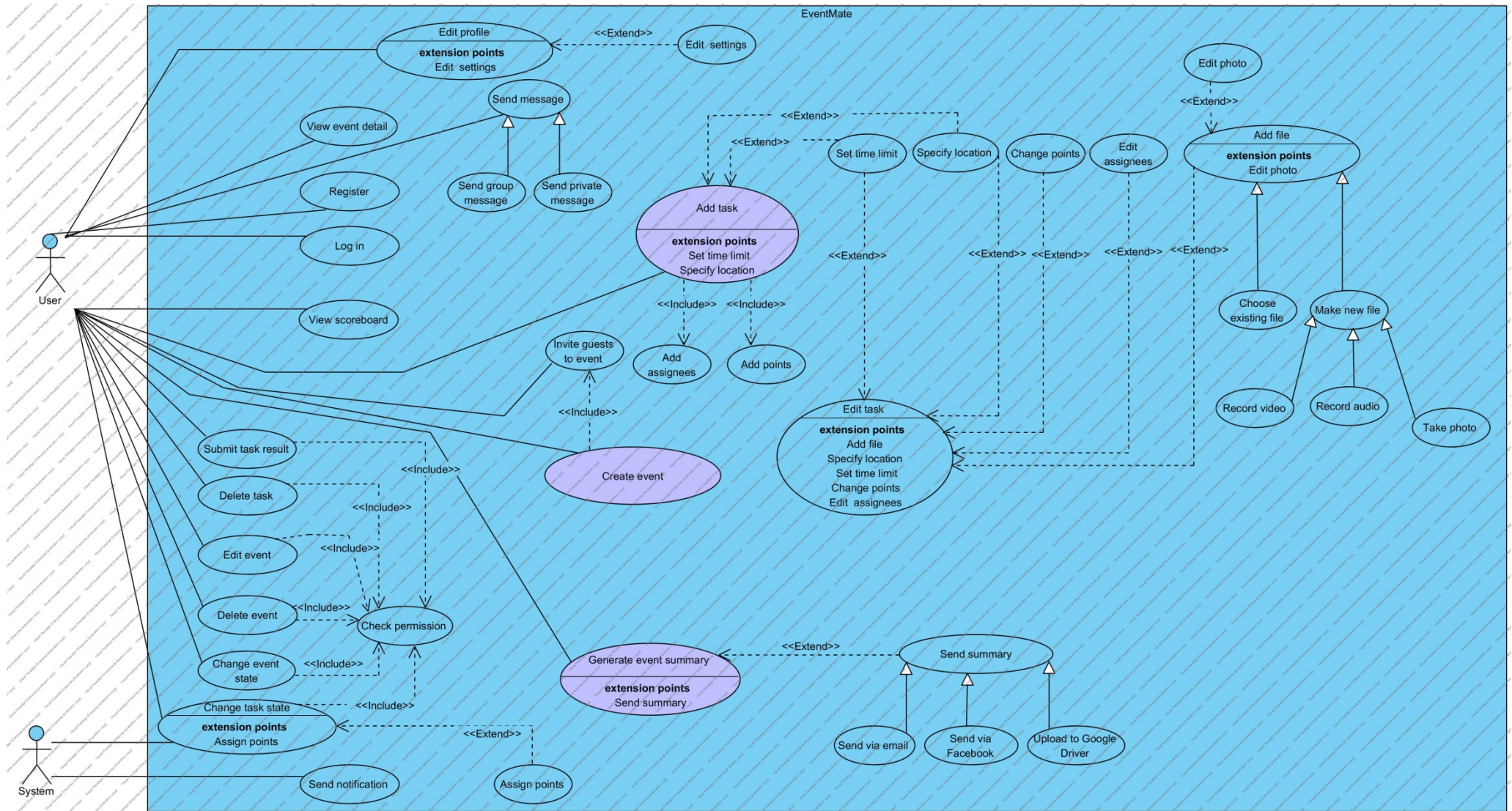
Attachment 1 – Requirements diagram



Attachment 2 – Mindmap



Attachment 3 – Use case diagram



Attachment 4 – Mockups: Event owner role (Android)



HAPPY TO SEE YOU AGAIN



Email

Your email

Password

Your password



LOGIN

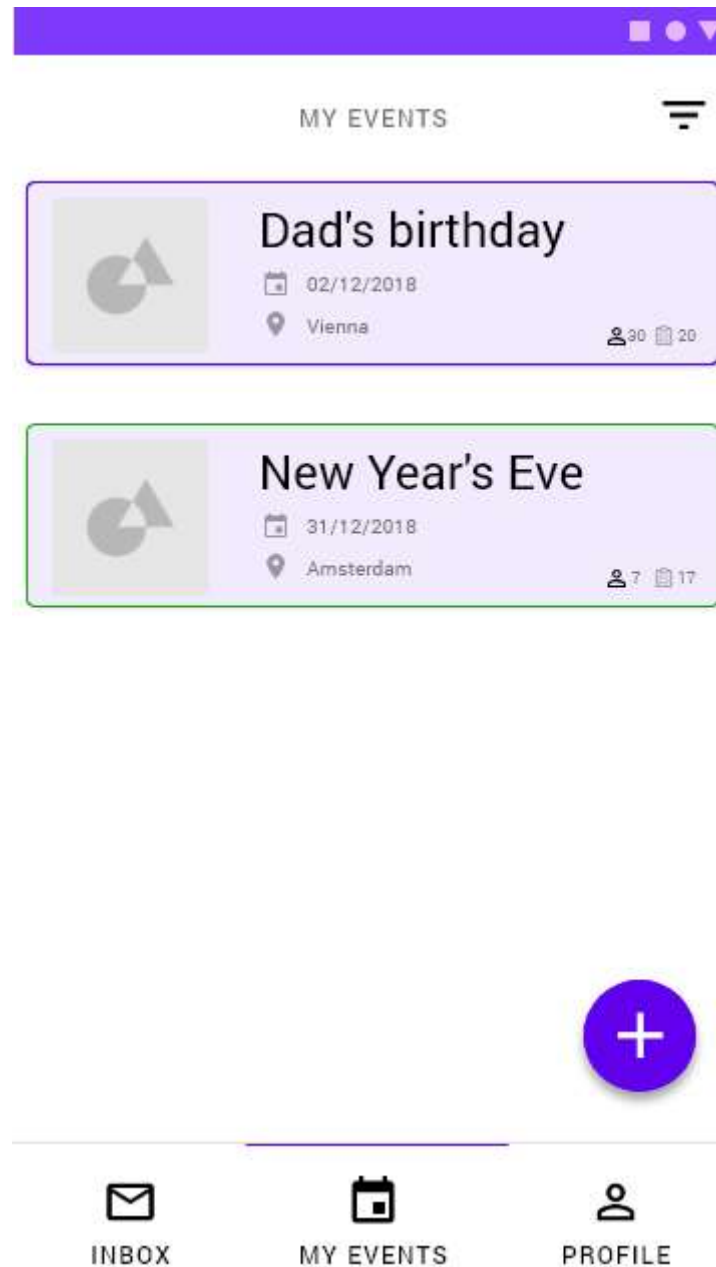
No account yet? [Create one](#)
[Forgotten password?](#)

OR

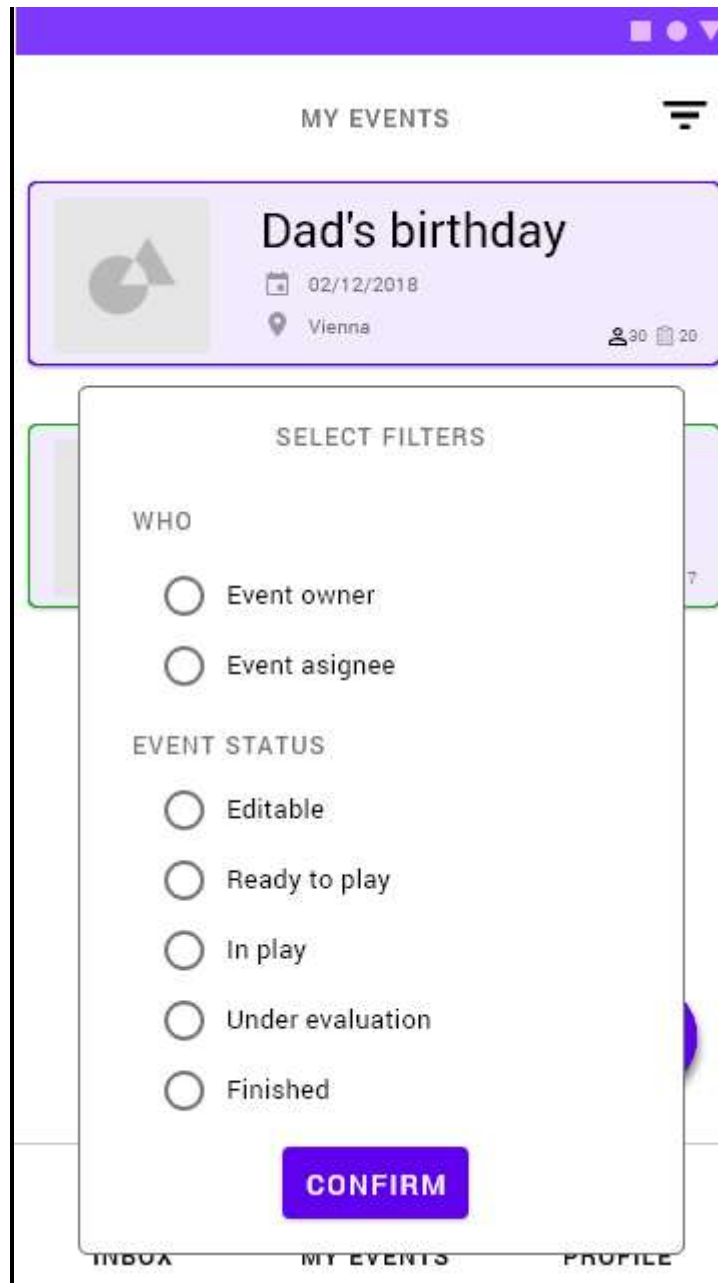
FACEBOOK

GOOGLE

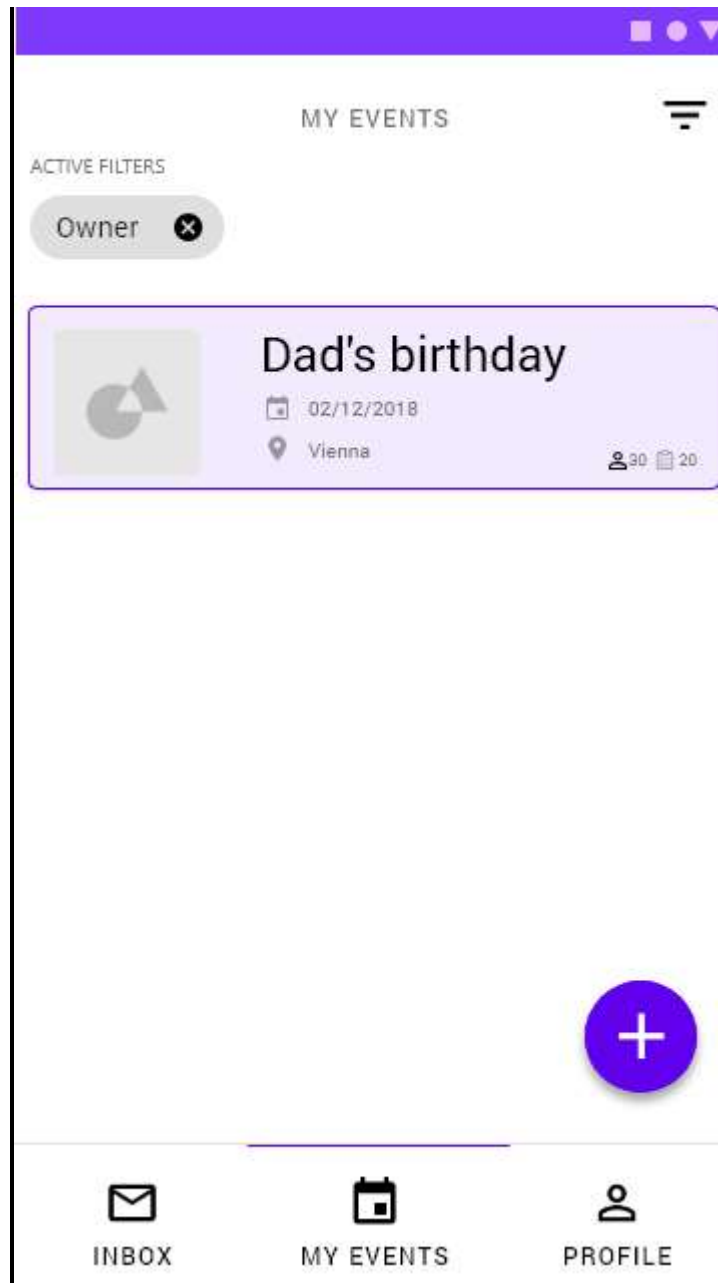
Attachment Fig 1 - Login



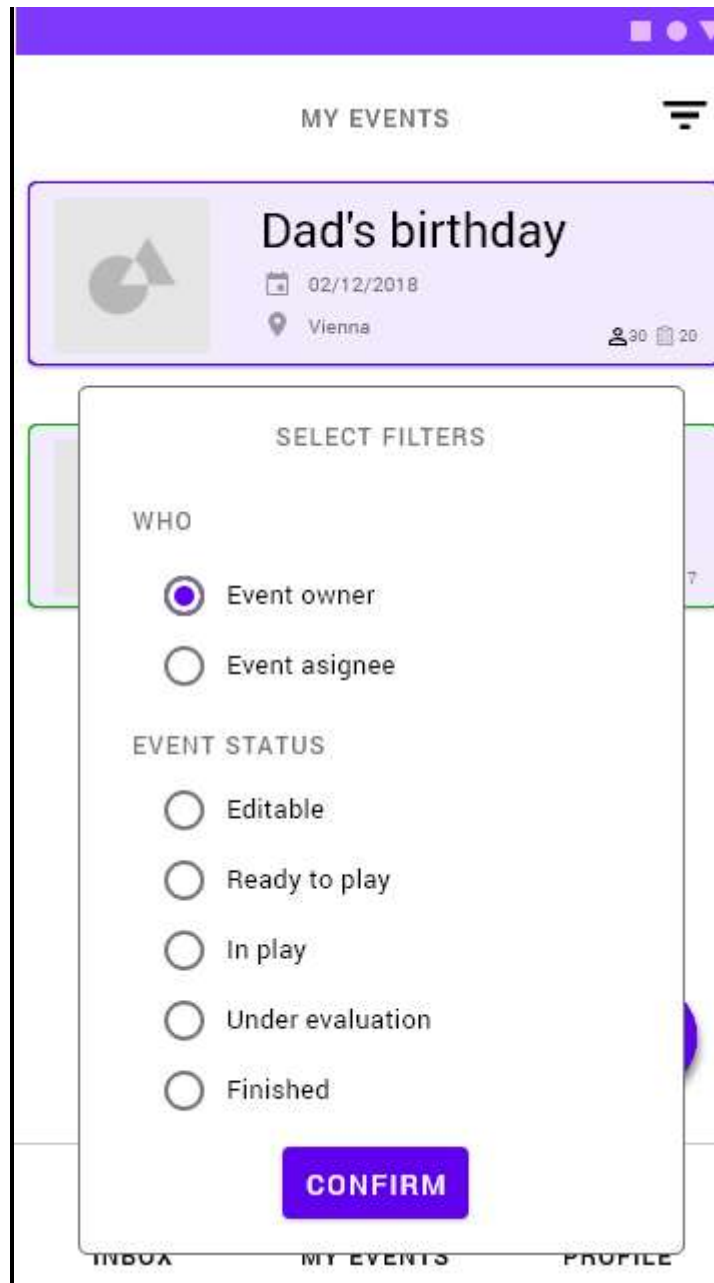
Attachment Fig 2 - Event list



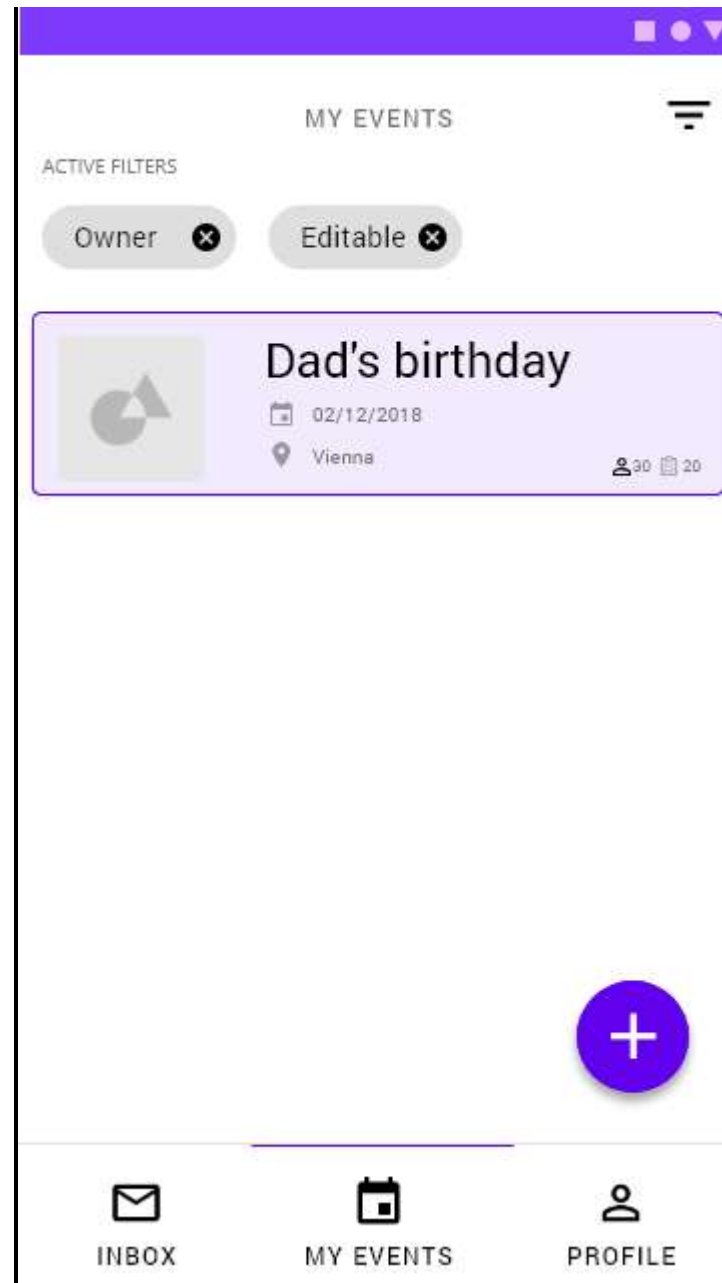
Attachment Fig 3 - Event list (filter dialog)



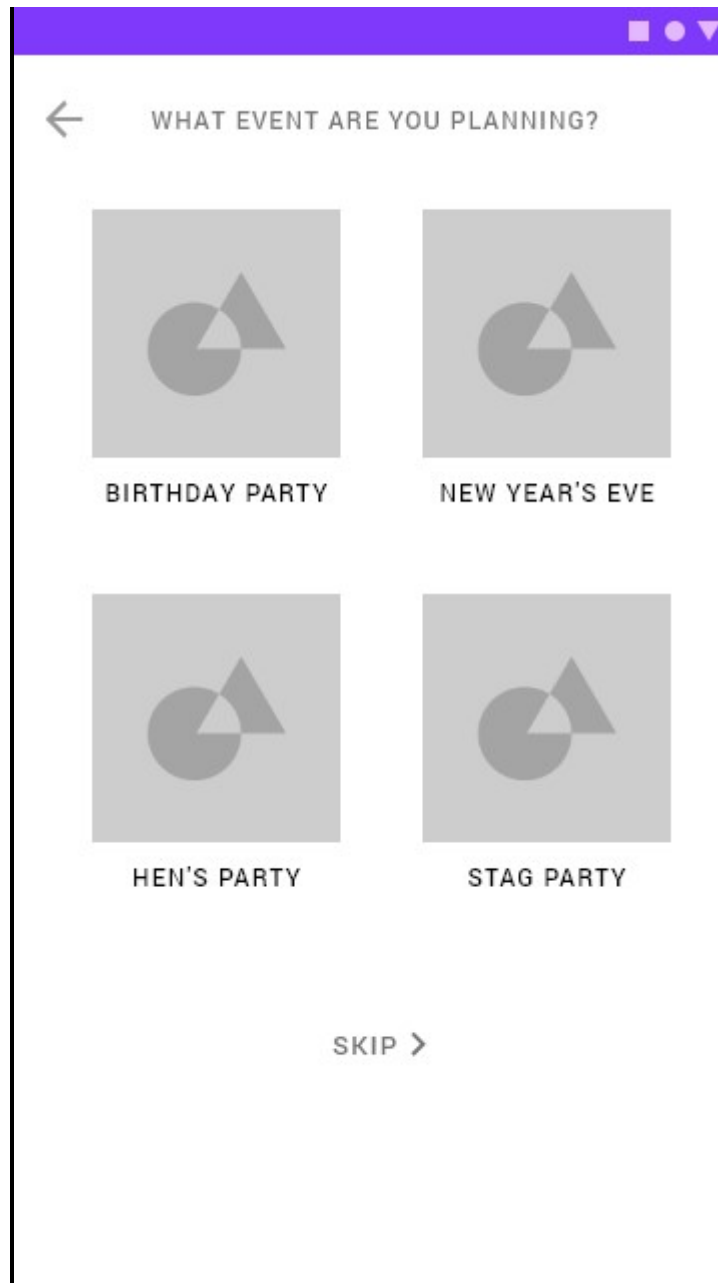
Attachment Fig 4 - Event list (active owner filter)



Attachment Fig 5 - event list (filter dialog 2)




Attachment Fig 6 - Event list (2 filters active)



Attachment Fig 7 - New event template

←

GIVE US MORE INFORMATION




Event name

Tim's stag party

*Required

Date


Select date

*Required

Place

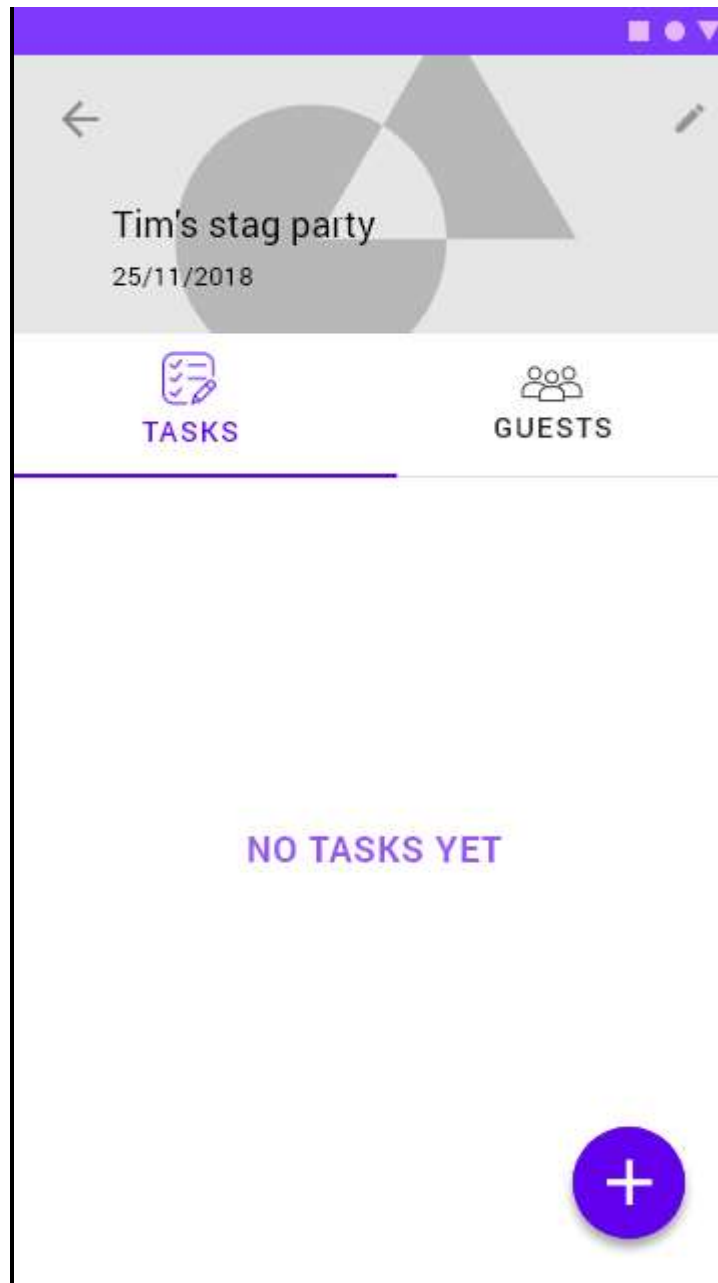
Brno

Guests

 John Smith

SAVE

Attachment Fig 8 - New event form



Attachment Fig 9 - Event detail (no task)

←

WHAT'S THIS TASK ABOUT?

Task name

Rakia shots

*Required

Points

5

*Required

Assignees

John Smith

*Required

Description

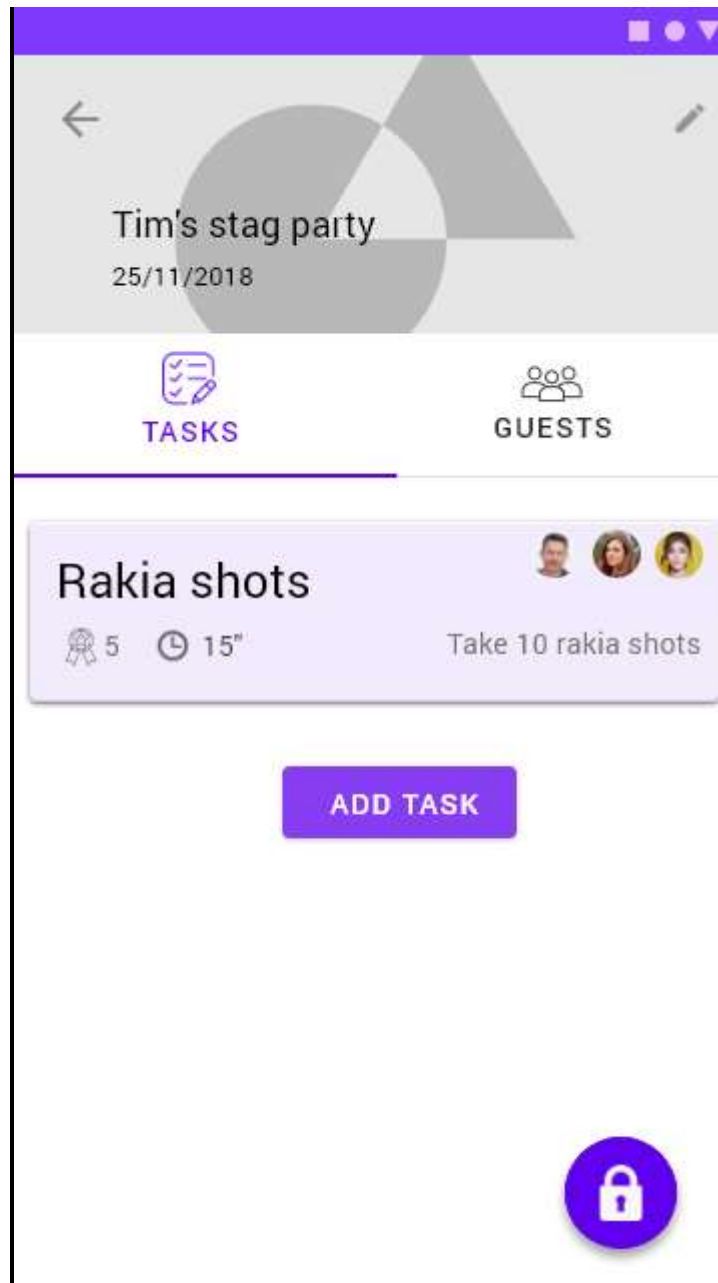
Take 10 rakia shots

Location

Brno

SAVE


Attachment Fig 10 - New task form



Attachment Fig 11 - Event detail (one task)

←

GIVE US MORE INFORMATION




Event name

Tim's stag party

*Required

Date


Select date

*Required

Place

Brno


Guests

 John Smith

SAVE

Attachment Fig 12 - New event edit

Rakia shots



Task is ready to play

Description

Take 10 rakia shots

Time limit

15"


Location

Brno


Points

5


Asignees




BILL THOMAS



EWA MATSON

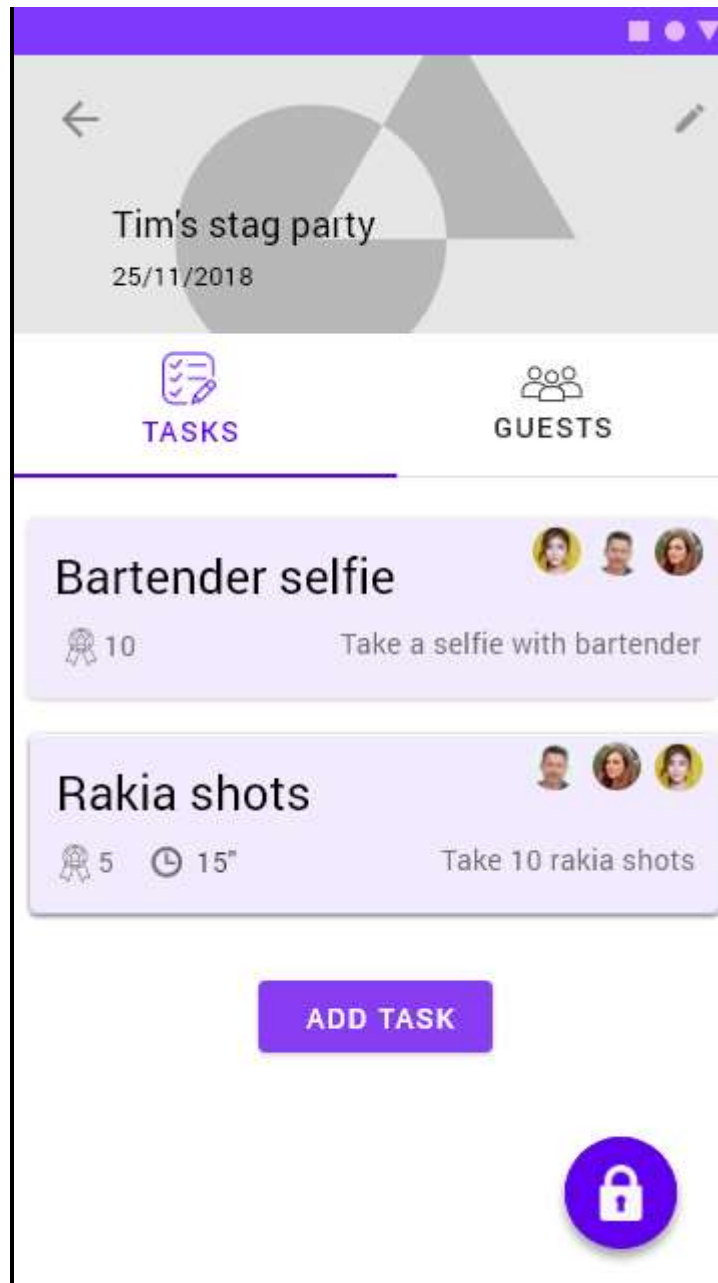


CLAUDIE MU



ROBERT SOBER

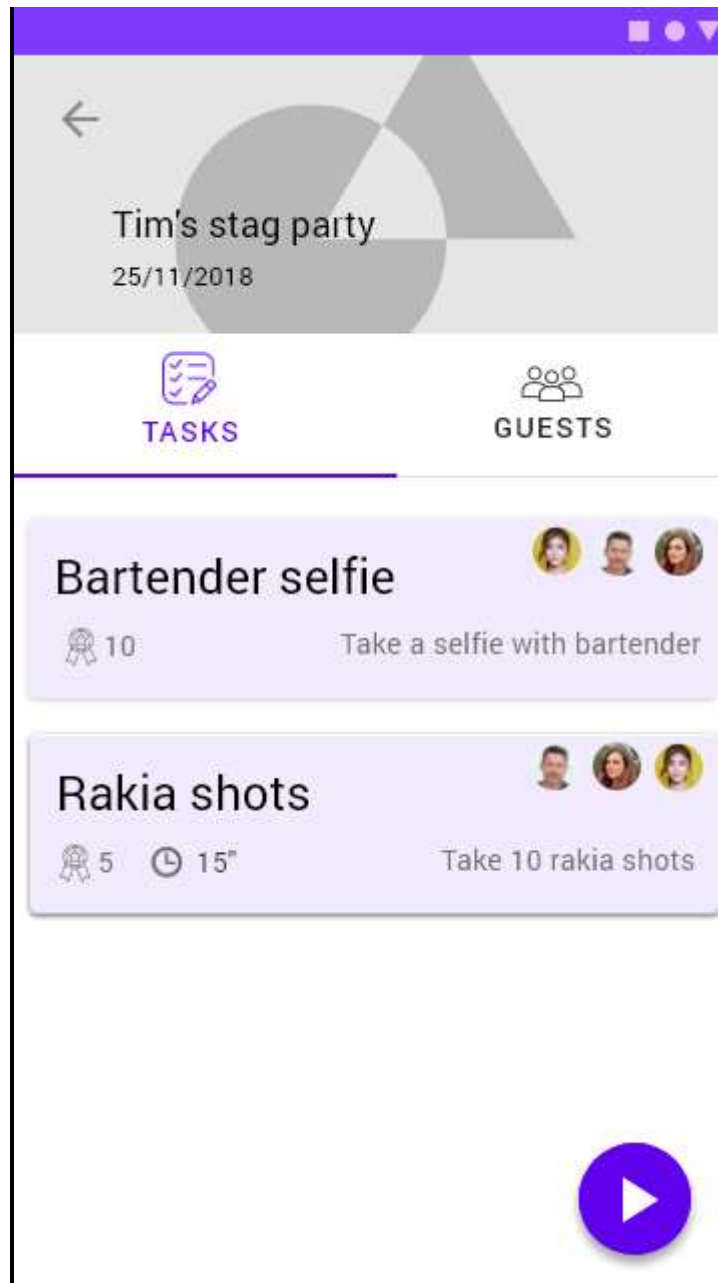
Attachment Fig 13 - Task detail



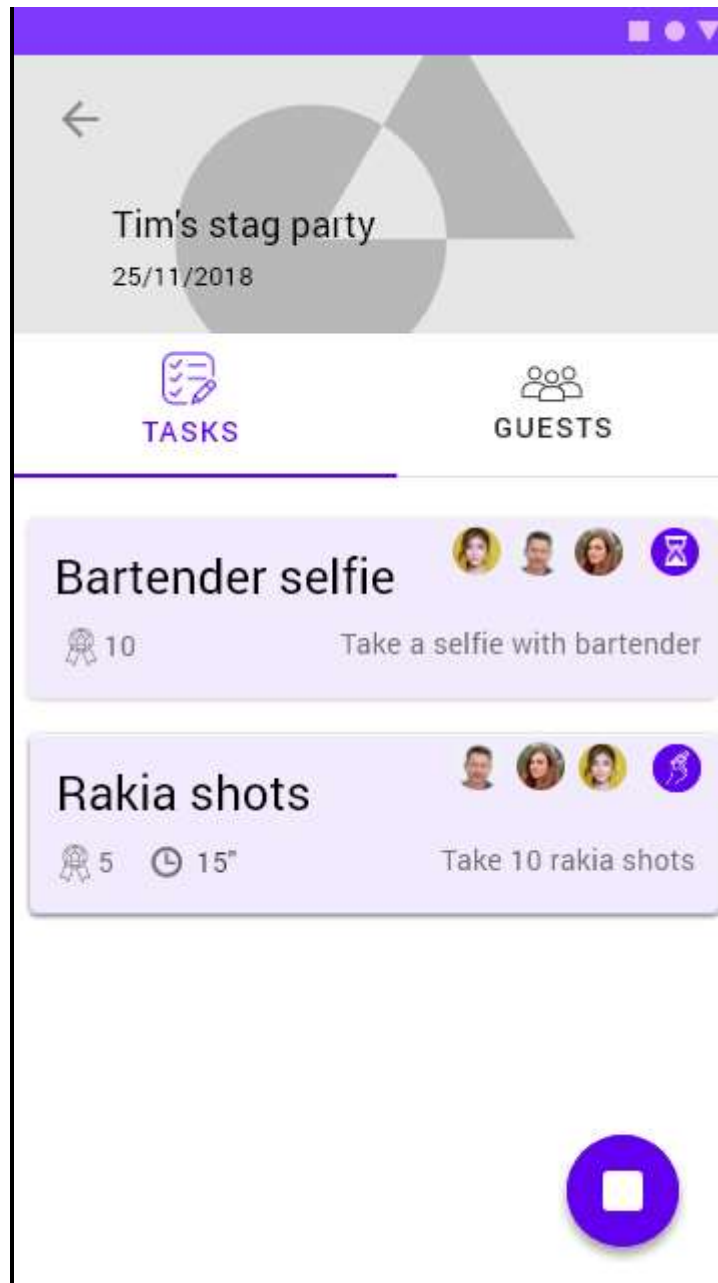
Attachment Fig 14 - Event detail (edit mode)



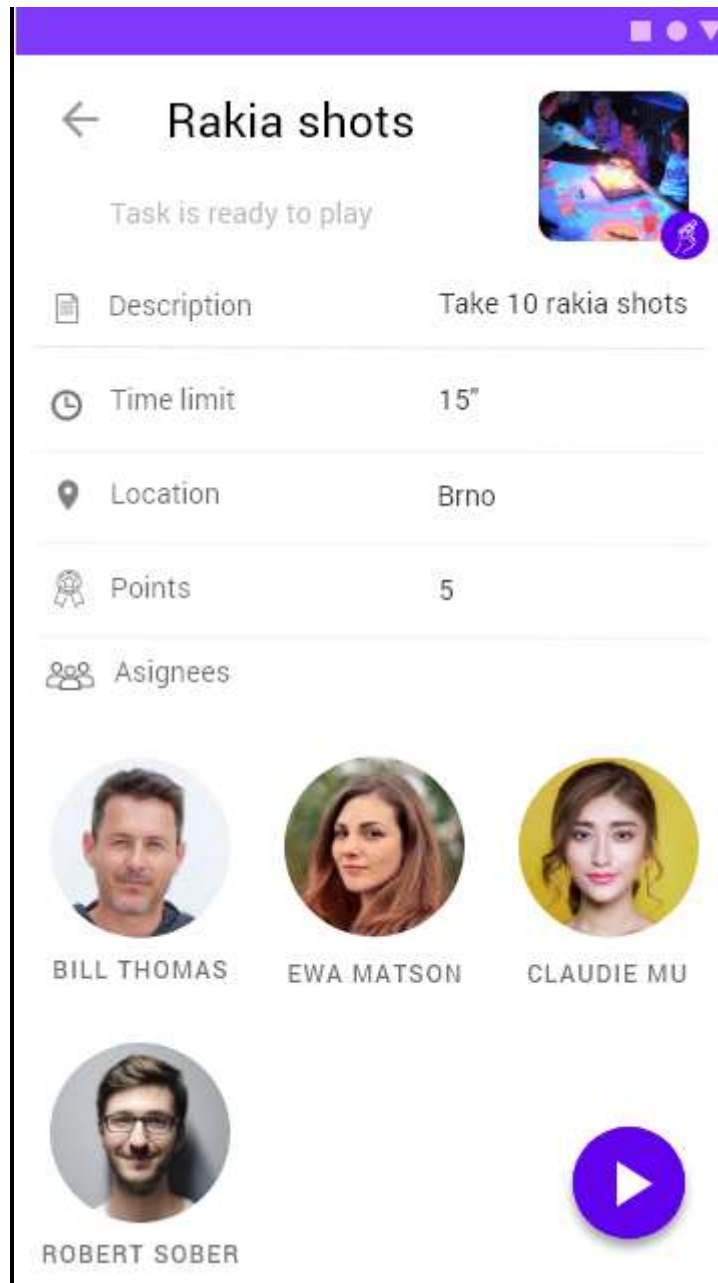
Attachment Fig 15 - Notification (event start)



Attachment Fig 16 - Event detail (locked state)



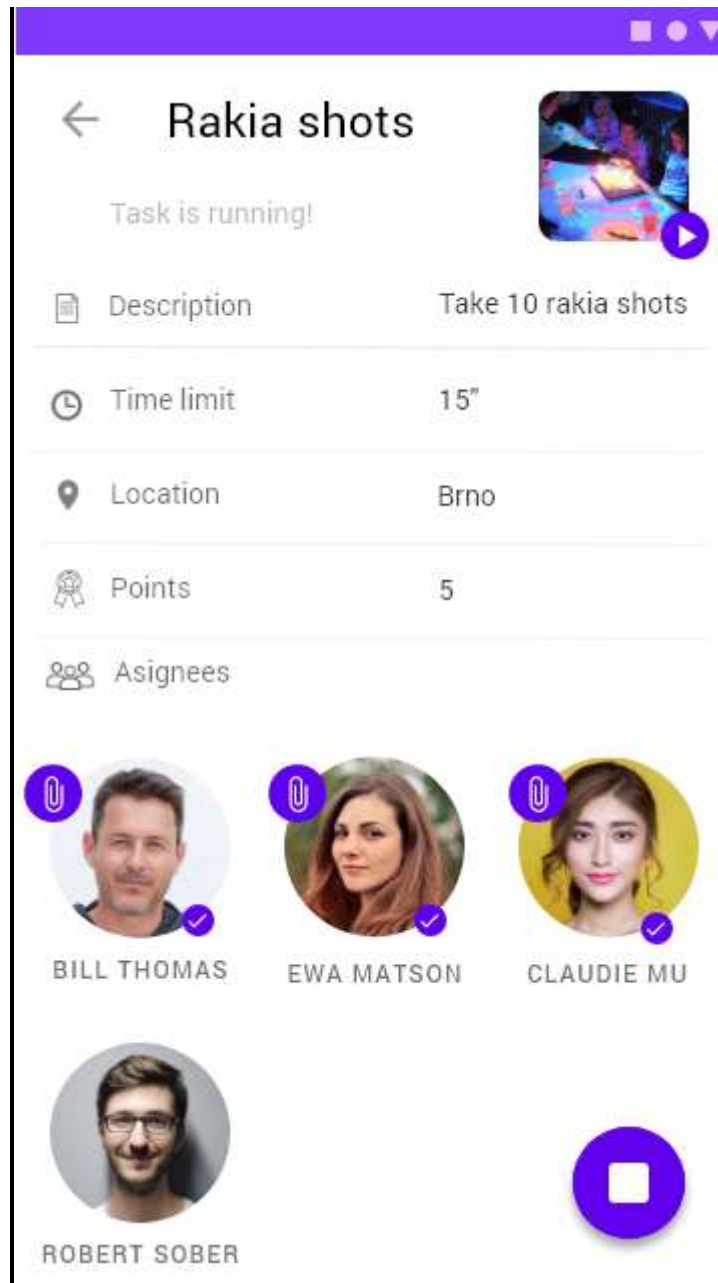
Attachment Fig 17 - Event detail (played state)



Attachment Fig 18 - task detail (before play)




Attachment Fig 19 - Widget (task in play)




Attachment Fig 20 - Task detail (in play)

←


Rakia shots






Maximum 5 points each


It's time to assign some points






BILL THOMAS


5






EWA MATSON


2






CLAUDIE MU

2



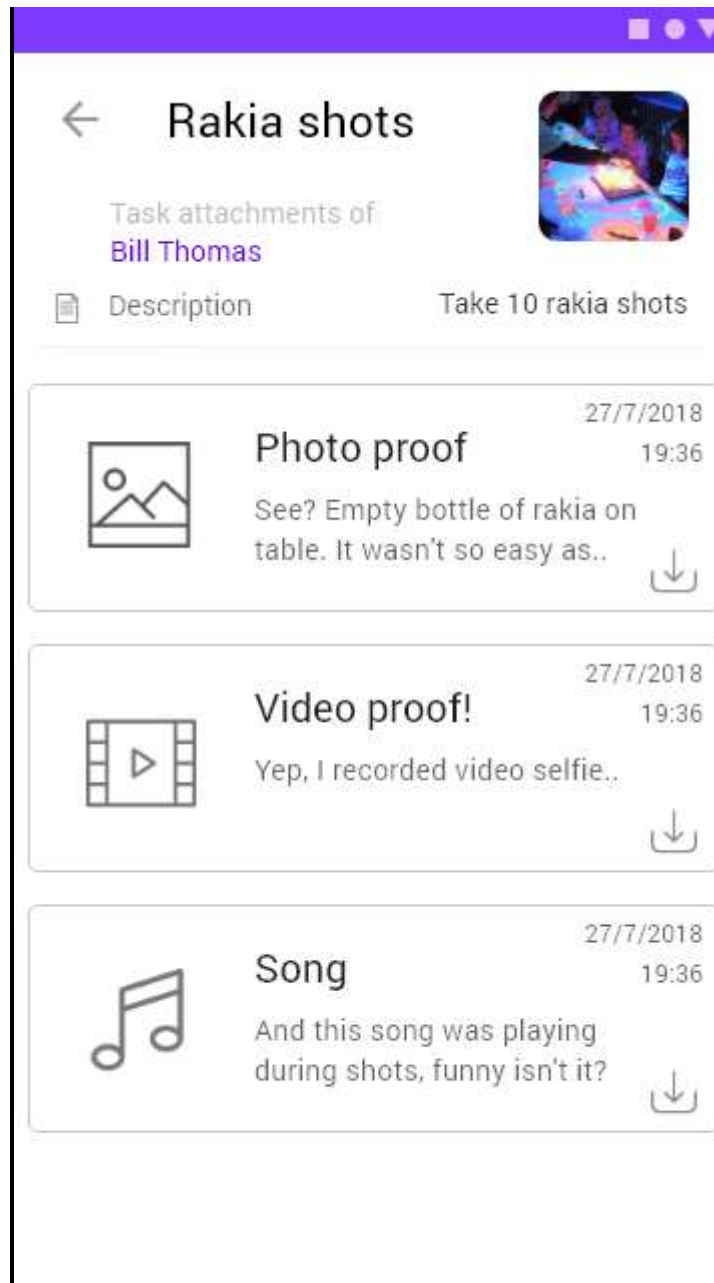
ROBERT SOBER

0




Attachment Fig 21 - Assign point for task

25



Attachment Fig 22 - Assigned attachments


← Rakia shots



Task is done!


Description	Take 10 rakia shots
Time limit	15"
Location	Brno
Points	5

Asignees




5

BILL THOMAS




2

EWA MATSON



2

CLAUDIE MU

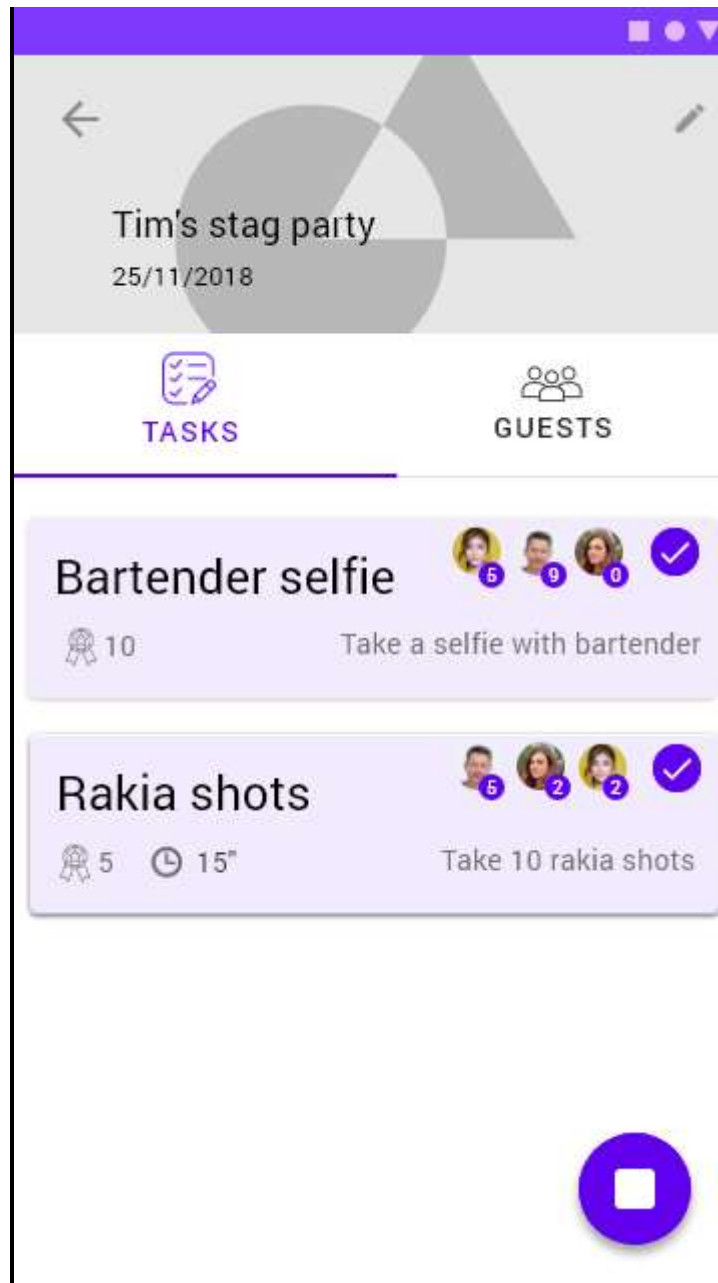


0

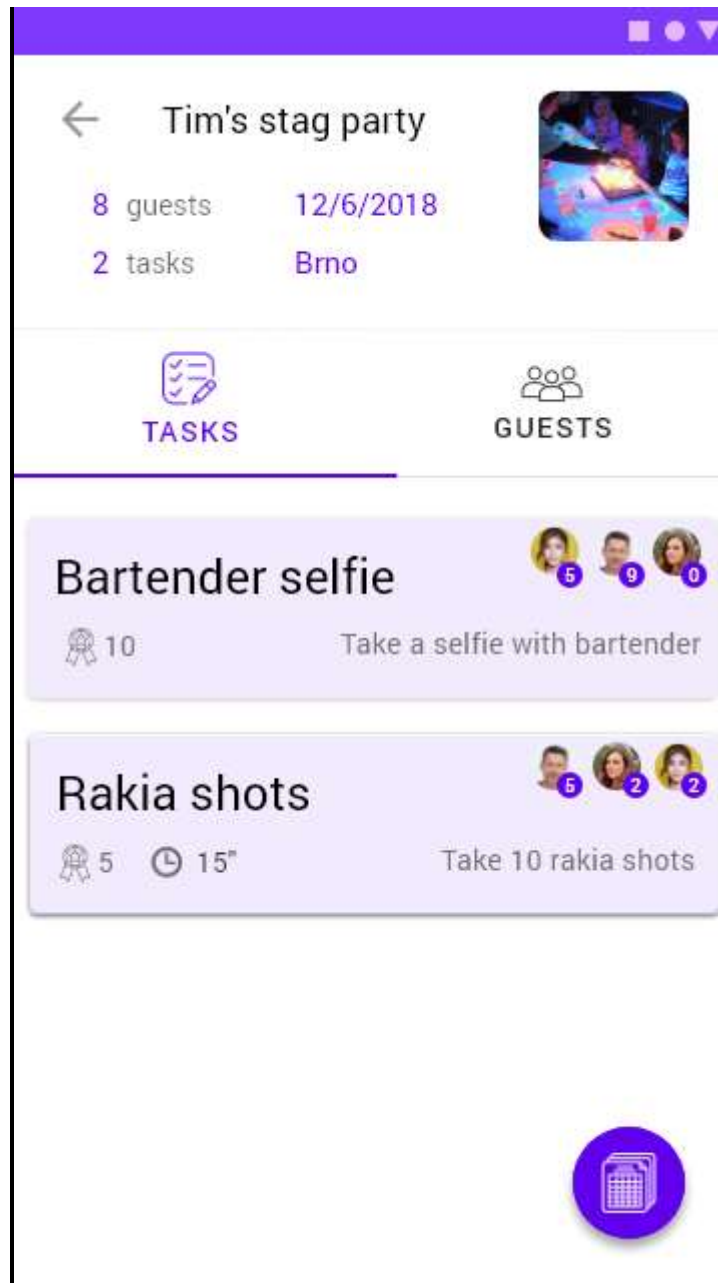
ROBERT SOBER

Attachment Fig 23 Task detail (finished task)

27



Attachment Fig 24 - Event detail (all task done)



Attachment Fig 25 - Event summary



Attachment Fig 26 - Report list (empty)

←

HOW SHOULD YOUR REPORT LOOK LIKE?

Name

Type in report name

Comment

Your comment

CATEGORY

☒ Full summary

☐ Certificate

DISPLAY OPTIONS

Show event information

Display guests

Event photo and category (stamp)

☐

☐

☐

TASKS

Include tasks

☐

Attachment Fig 27 - Report maker (full summary)

HOW SHOULD YOUR REPORT LOOK LIKE?

Name

Type in report name

WHAT INFORMATION WOULD YOU LIKE TO INCLUDE?

☐ Event name

☐ Event place

☐ Event owner

☐ Report creator

☐ Report created date

CONFIRM

Show created date and by person

Event photo and category

Attachment Fig 28 - Report maker (event information dialog)

←

HOW SHOULD YOUR REPORT LOOK LIKE?

Name

Type in report name

Comment

Your comment

CATEGORY

☒ Full summary

☐ Certificate

DISPLAY OPTIONS

Show event information

☒

Display guests

☐

Event photo and category (stamp)

☐

TASKS

Include tasks

☐

GENERATE

Attachment Fig 29 - Report maker (full summary 2)

←

HOW SHOULD YOUR REPORT LOOK LIKE?

Name

Type in report name

WHO WILL BE IN YOUR REPORT?

Search

Bill Thomas

✓

Ewa Watson

✓

Claudie Mu

✓

Robert Sober

✓

CONFIRM

Event photo and category

GENERATE

Attachment Fig 30 - Report maker (attendes dialog)

←

HOW SHOULD YOUR REPORT LOOK LIKE?

Name

Type in report name

Comment

Your comment

CATEGORY

☒ Full summary

☐ Certificate

DISPLAY OPTIONS

Show event information

☒

Display guests

☒

Event photo and category (stamp)

☐

TASKS

Include tasks

☐

GENERATE

Attachment Fig 31 - Report maker (full summary 3)


HOW SHOULD YOUR REPORT LOOK LIKE?


Name

[Type in report name]

WHICH TASKS WOULD YOU LIKE TO INCLUDE?

Search

 Bartender selfie ☒

 Rakia shots ☒

CONFIRM

DISPLAY OPTIONS

Show event information ☒

Display guests ☒

Event photo and category (stamp) ☐

TASKS

Include tasks ☐

GENERATE

Attachment Fig 32 - Report maker (task dialog)

←

HOW SHOULD YOUR REPORT LOOK LIKE?

Name

Type in report name

Comment

Your comment

CATEGORY

☒ Full summary

☐ Certificate

DISPLAY OPTIONS

Show event information

☒

Display guests

☒

Event photo and category (stamp)

☐

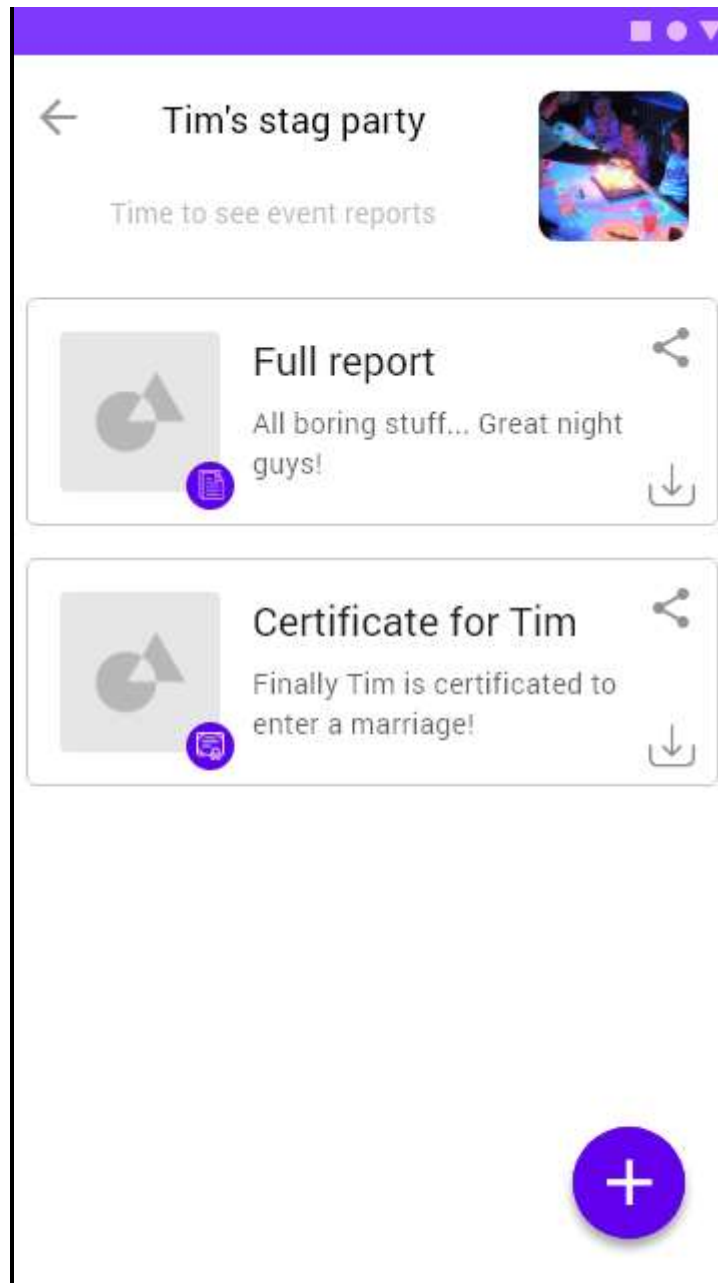
TASKS

Include tasks

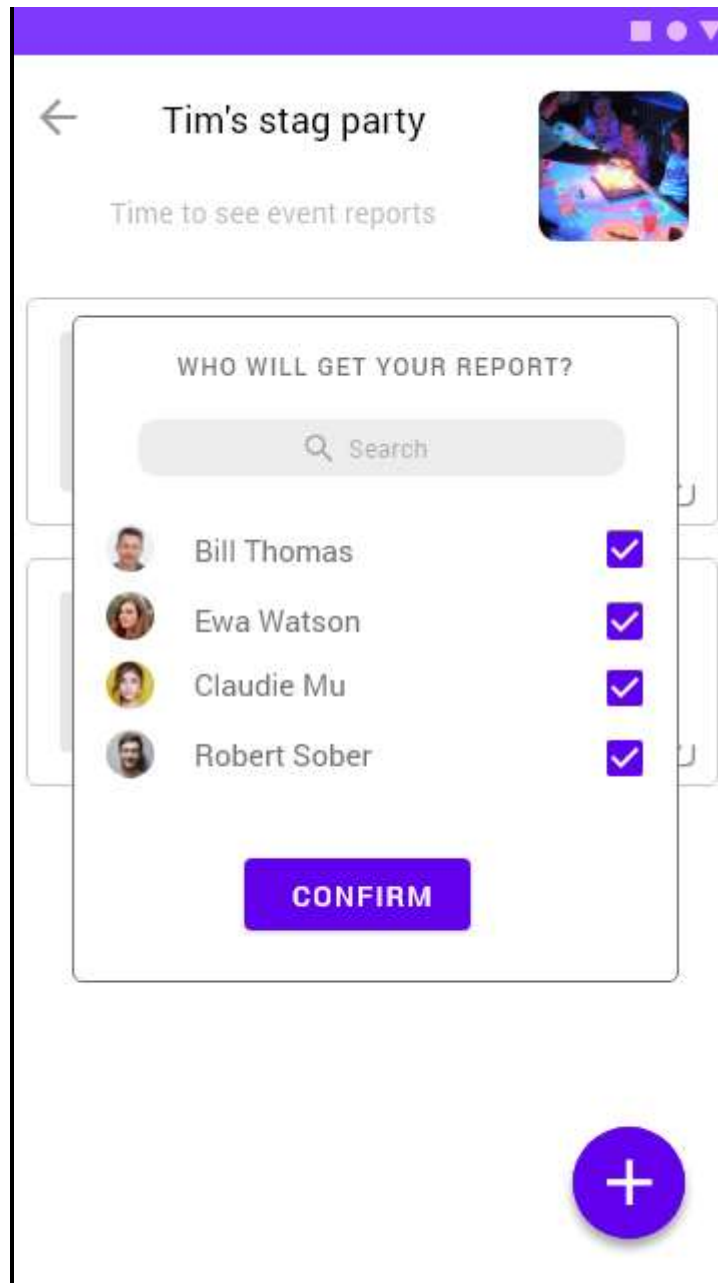
☒

GENERATE

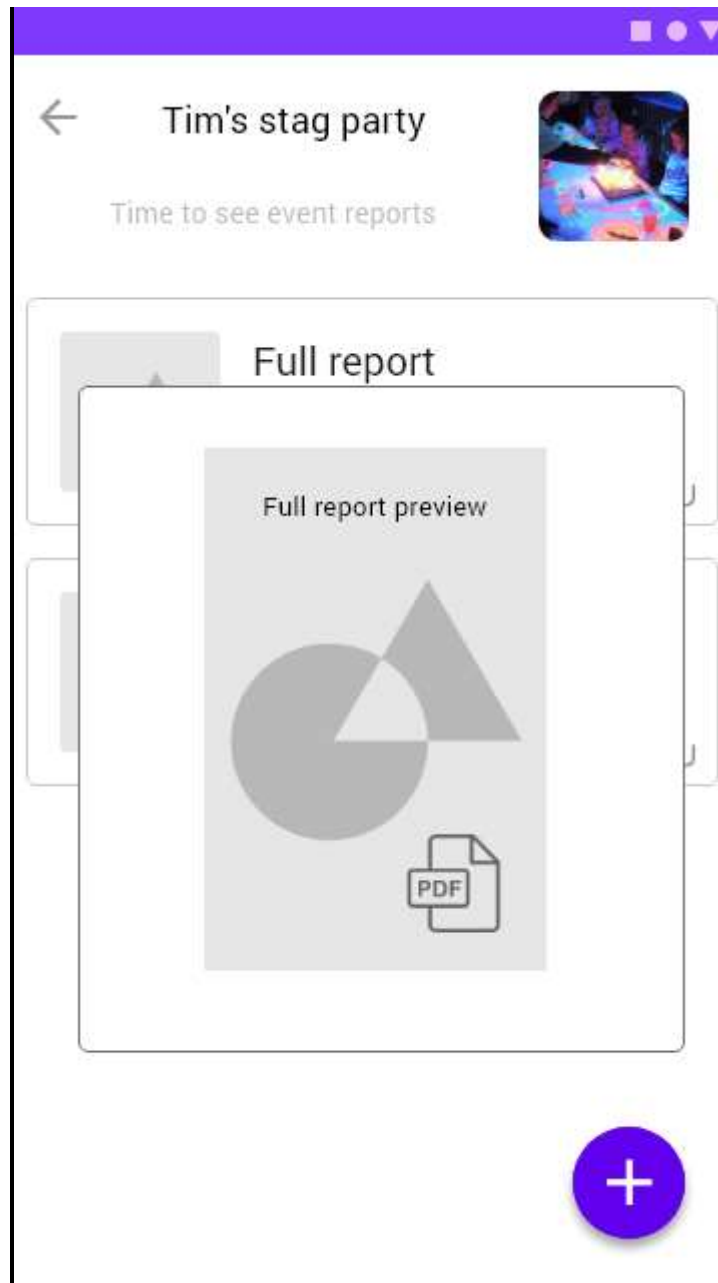
Attachment Fig 33 - Report maker (full summary 4)



Attachment Fig 34 - Report list (with items)





Attachment Fig 35 - Sharing repors





Attachment Fig 36 - Report preview

Attachment 4 – Mockups: Event owner role (Web)

 INBOX



 MY EVENTS










BILL THOMAS


Event list


ACTIVE FILTERS

Owner  Editable 



	Event name	 Date	 Place 	 Guests	 Tasks
	Dad's birthday	20/7/2018	Brno	15	8
	New Year's Eve	20/1/2019	Heraklion	50	15

Create new event






Event name 
Tim's stag party

*Required

Date 
Select date 


*Required


Place 
Brno


Guests 
 John Smith


SAVE

Attachment Fig 37 - Web event list


 INBOX

 MY EVENTS



BILL THOMAS

← Dad's birthday



25/11/2018

Brno









Task list


Guest list

ACTIVE FILTERS

In play

Ready to start

	Task name	Points	Place	Assignees	Time limit	Description
	Rakia shots	15	Brno	  	15"	Take 10 ra...
	Bartender selfie	10	Brno	  	-	Take a sel...



Create new task

Task name

*Required

Points


*Required

Assignees

*Required


Description


Location





SAVE

Attachment Fig 38 - Web event detail

 INBOX


 MY EVENTS



BILL THOMAS

←

Dad's birthday



25/11/2018

Brno









Task list


Guest list

ACTIVE FILTERS

In play

Ready to start

	Task name	Points	Place	Assignees	Time limit	Description
	Rakia shots	15	Brno	  	15"	Take 10 ra...
	Bartender selfie	10	Brno	  	-	Take a sel...



←

Edit task

Task name

Rakia shots


*Required

Points

5

*Required

Assignees

 John Smith


*Required

Description

Take 10 rakia shots

Location

Brno



SAVE

Attachment Fig 39 - Web event detail - task detail

INBOX
 MY EVENTS

BILL THOMAS

←

Dad's birthday

25/11/2018

Brno

Task list

Guest list

ACTIVE FILTERS

In play

Ready to start

	Task name	Points	Place	Assignees	Time limit	Description
	Rakia shots	15	Brno		15"	Take 10 ra...
	Bartender selfie	10	Brno			Take a sel...

Rakia shots

Task is ready to play

Description

Take 10 rakia shots

Time limit

15"

Location

Brno

Points

5

Assignees

BILL THOMAS

EWA MATSON


CLAUDIE MU

ROBERT SOBER

Attachment Fig 40 - Web event detail - task detail (in play)

Attachment 5 – Mockups: Event assignee role (Android)

GIVE US INFORMATION ABOUT YOU



Name

Type in your name

*Required

Email

claudie.email.com

*Incorrect email

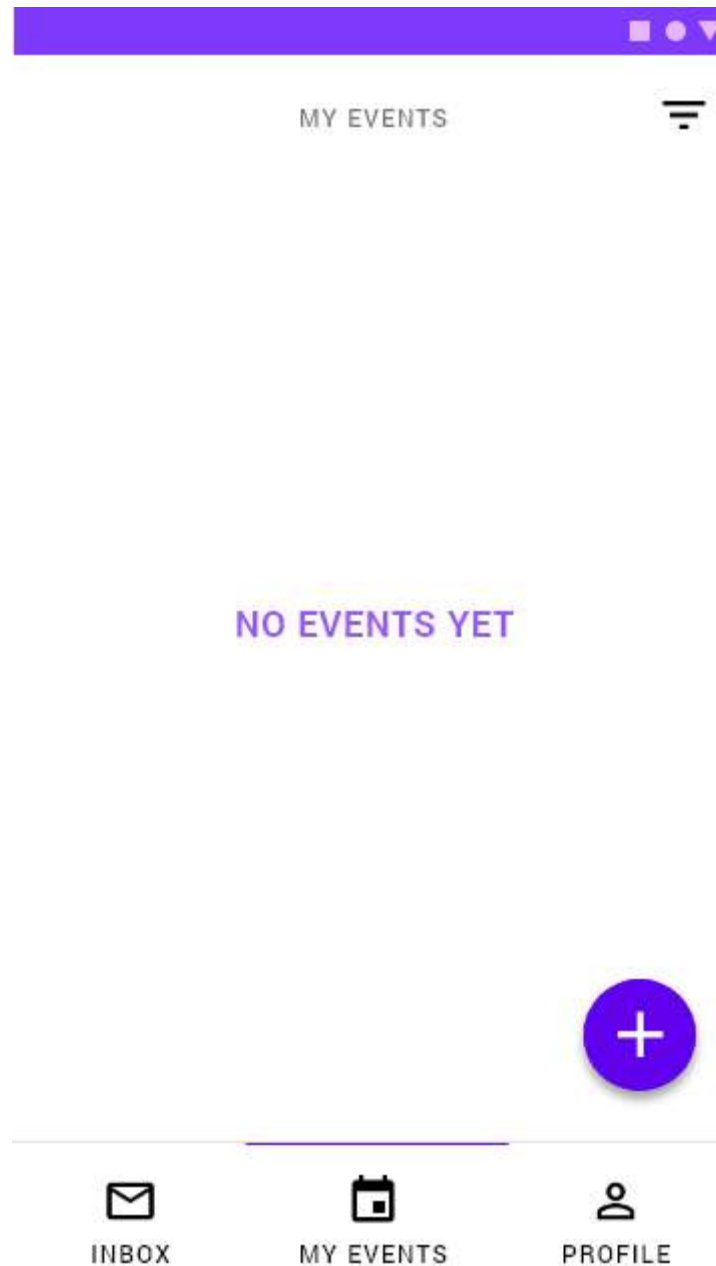
Password

Type in your password

Password

Type in your password again

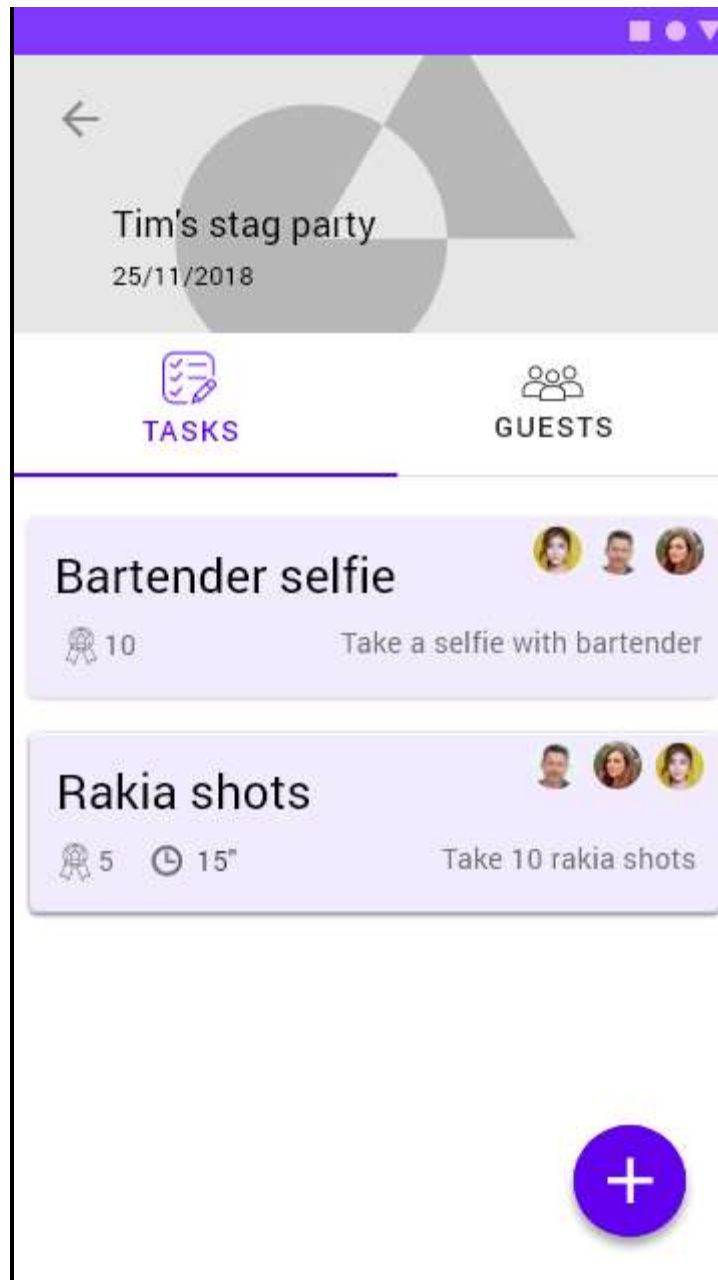
Attachment Fig 41 - Registration



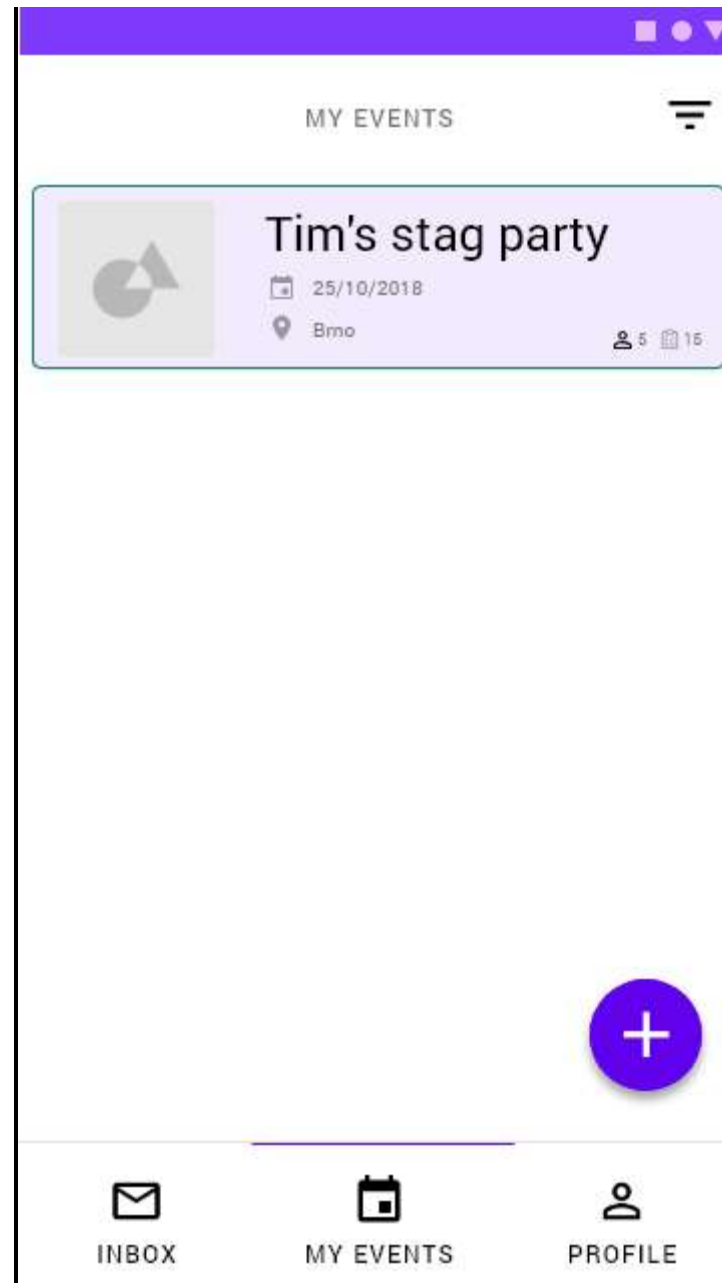
Attachment Fig 42 - Event list (empty)



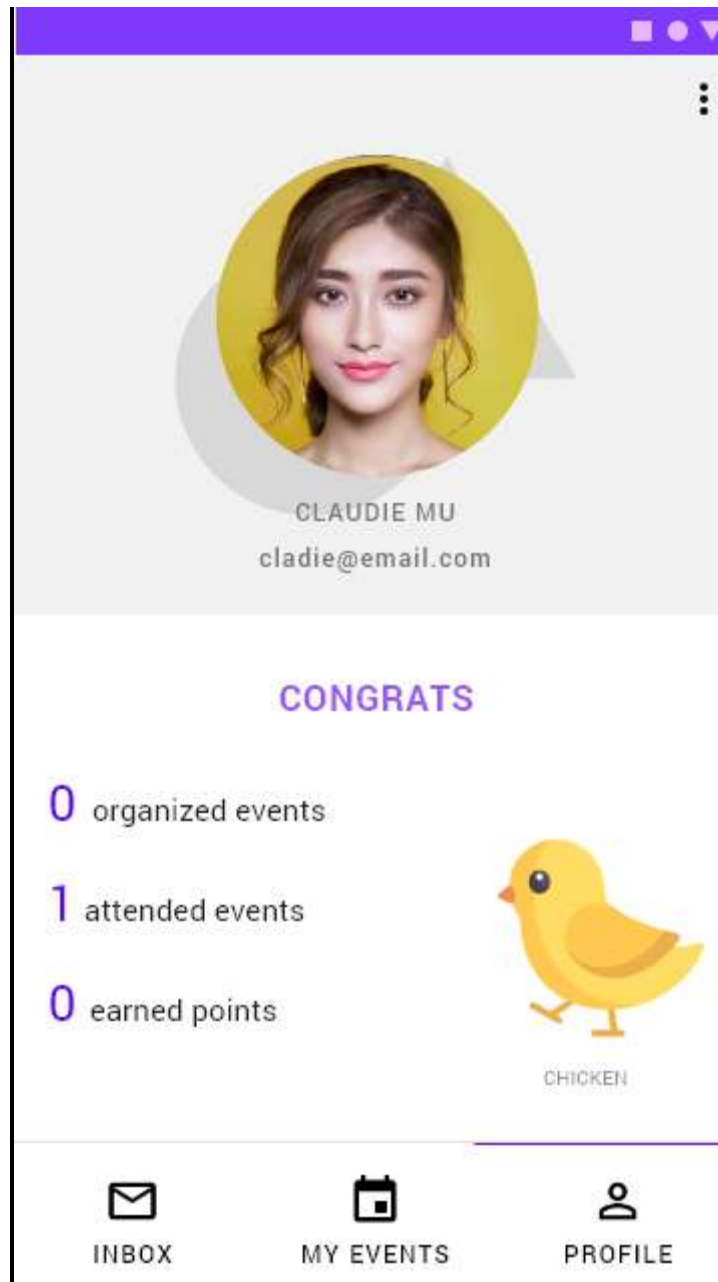
Attachment Fig 43 - Event notification



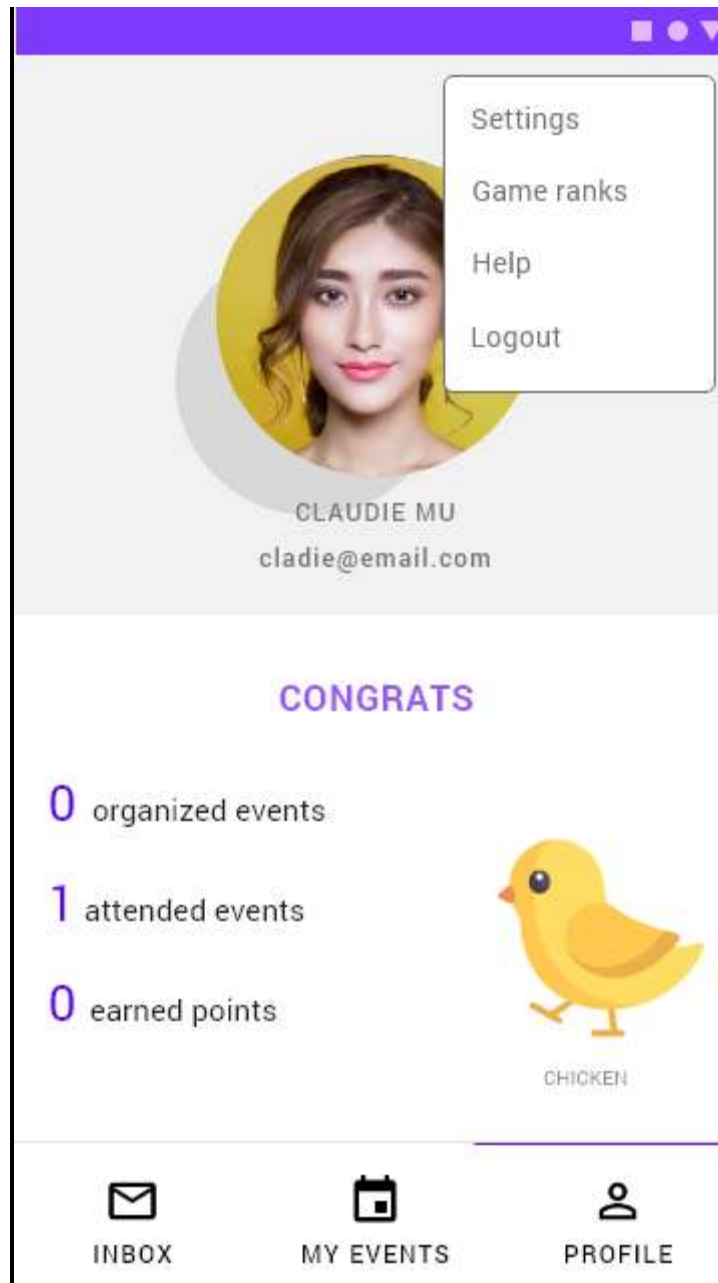
Attachment Fig 44 - Event detail (edit mode)



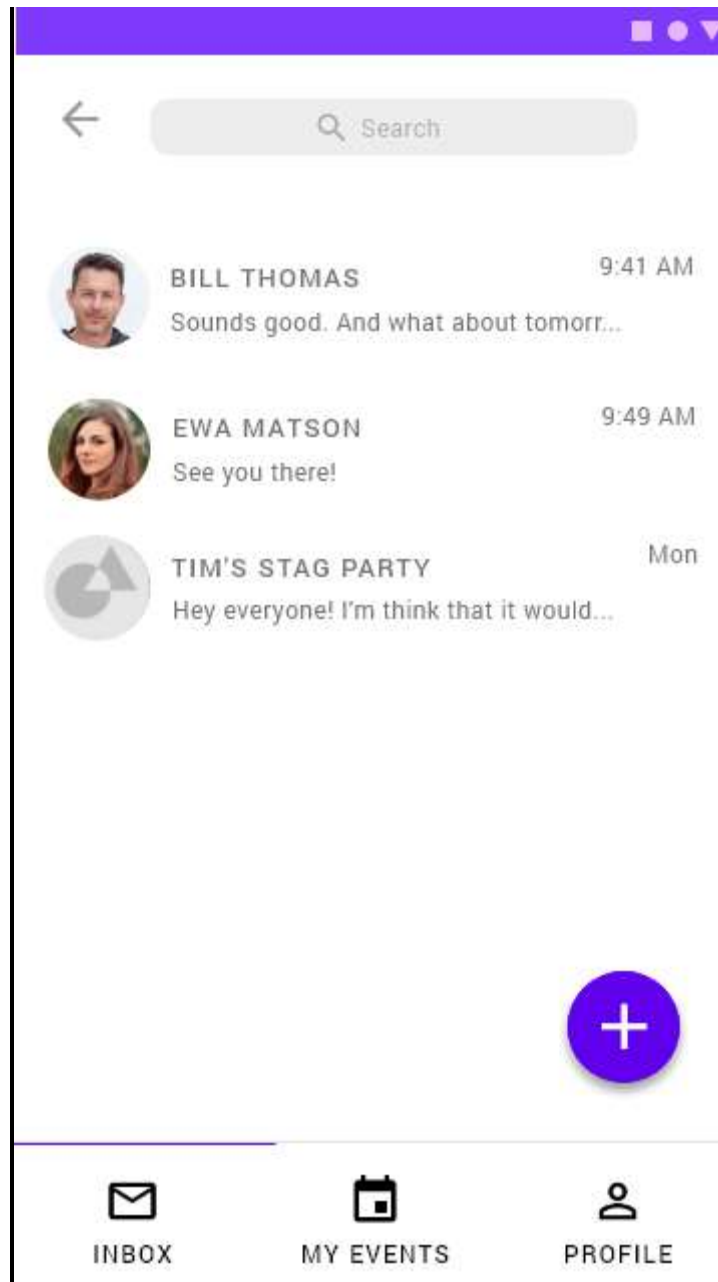
Attachment Fig 45 - Event list (one item)



Attachment Fig 46 – My profile



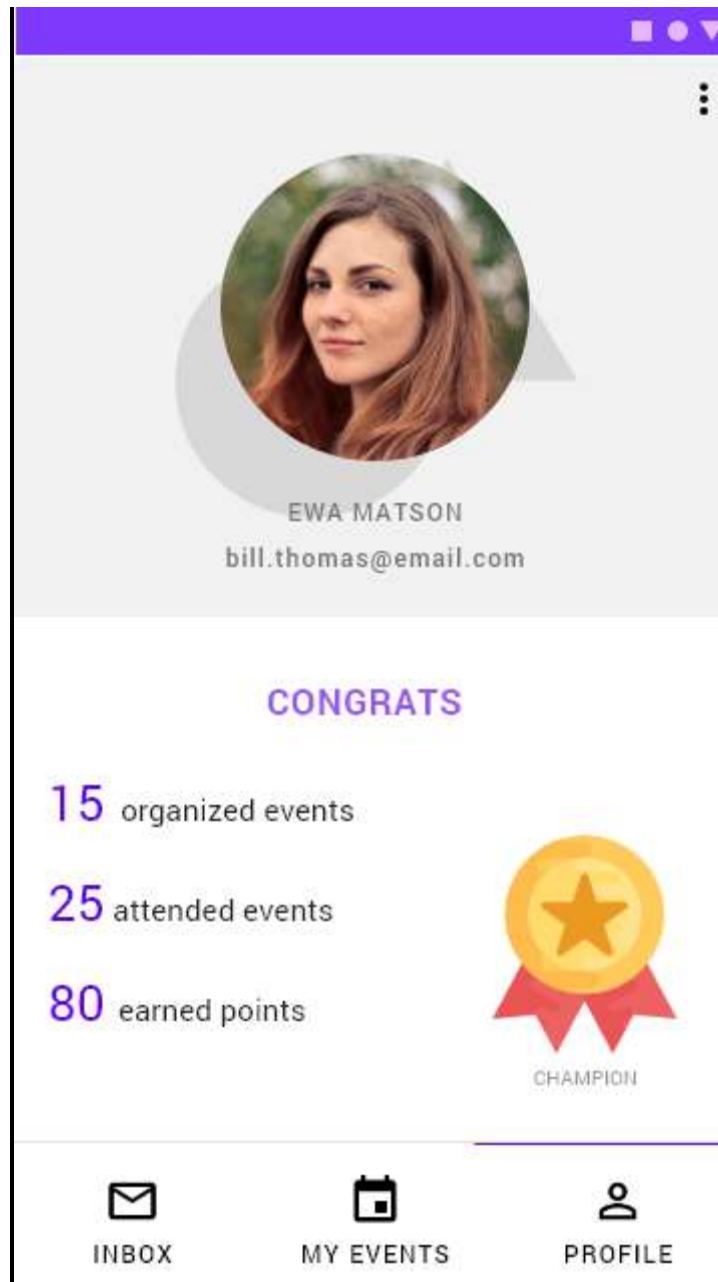
Attachment Fig 47 - My profile (dialog)



Attachment Fig 48 - Inbox



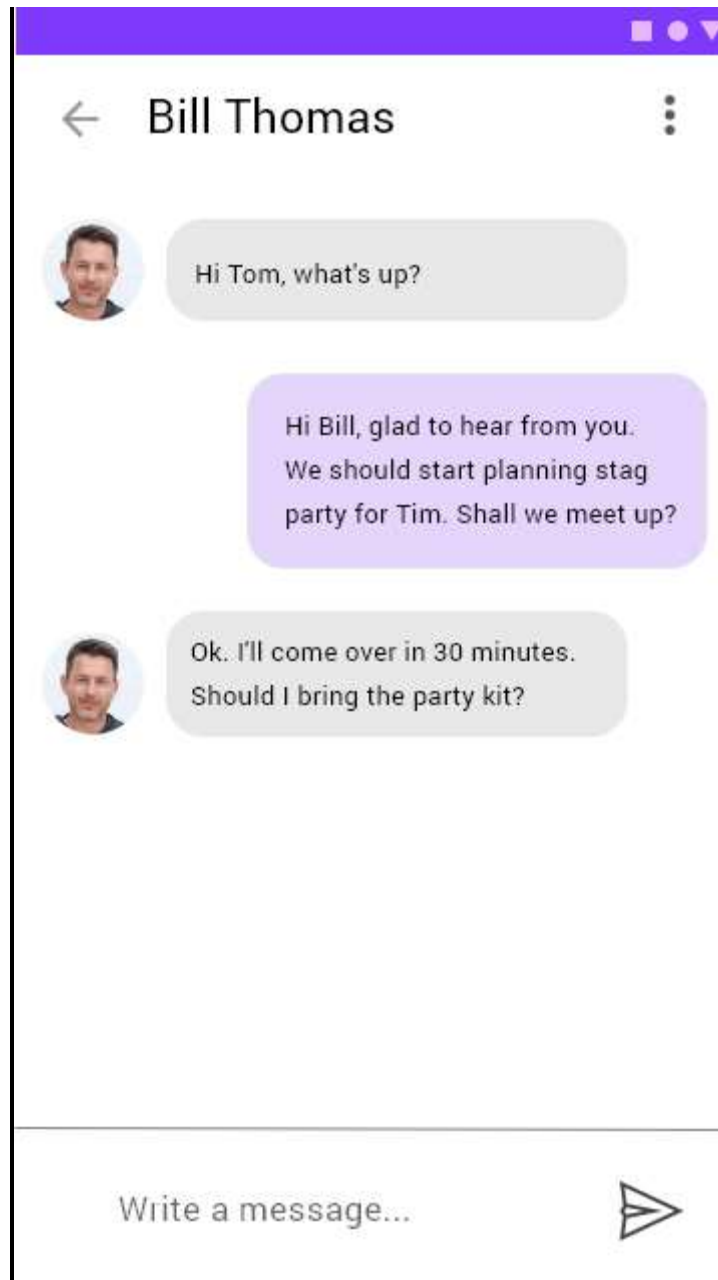
Attachment Fig 49 - Inbox (new message)



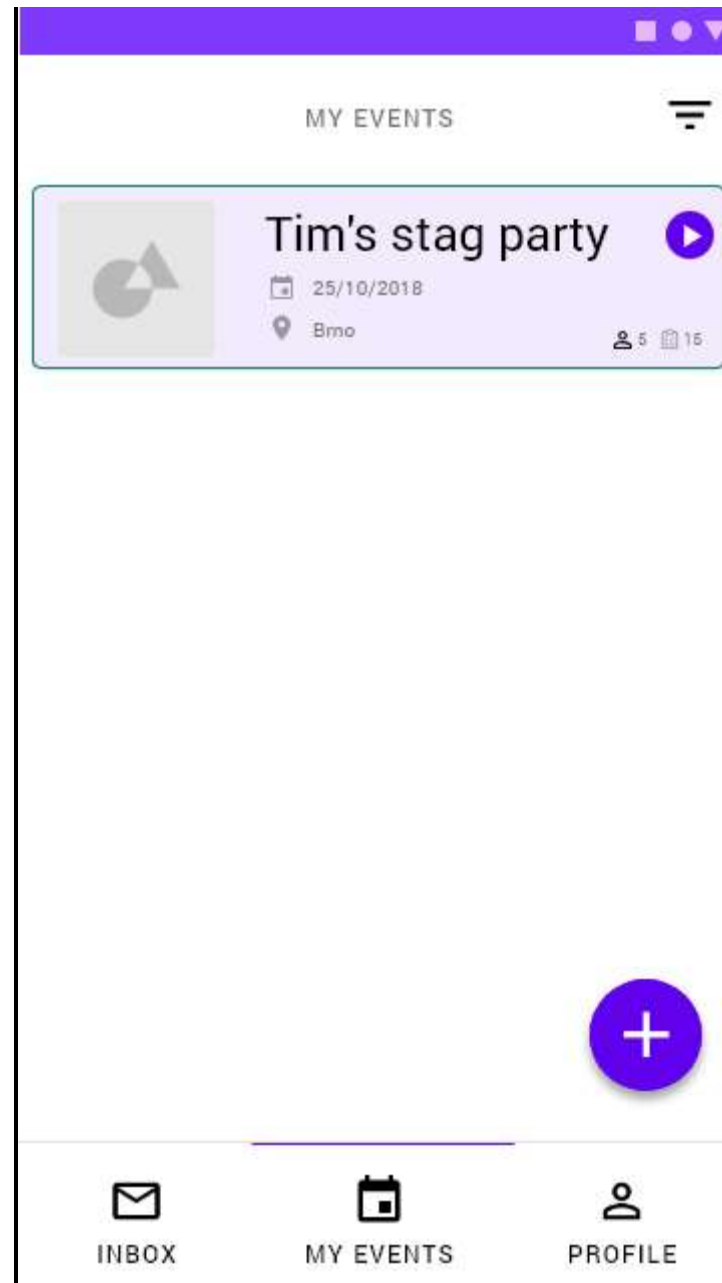
Attachment Fig 50 - User profile (gold medal)



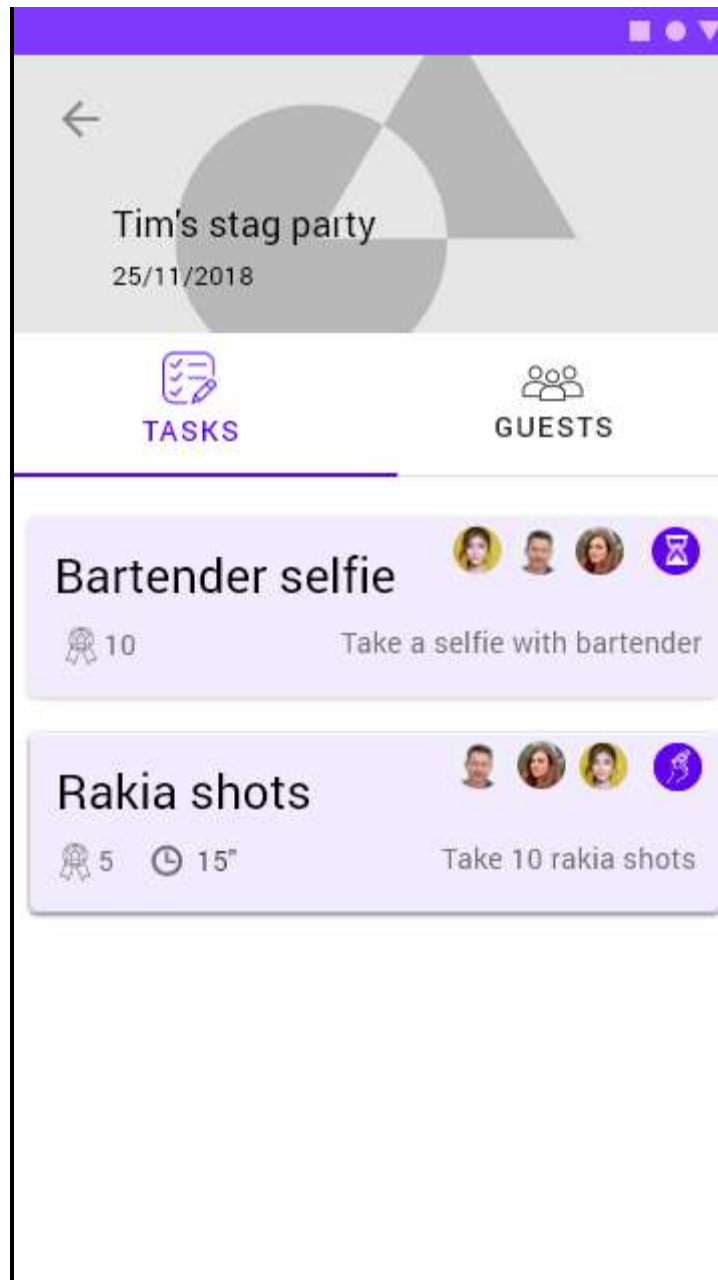
Attachment Fig 51 - Notification (new message)



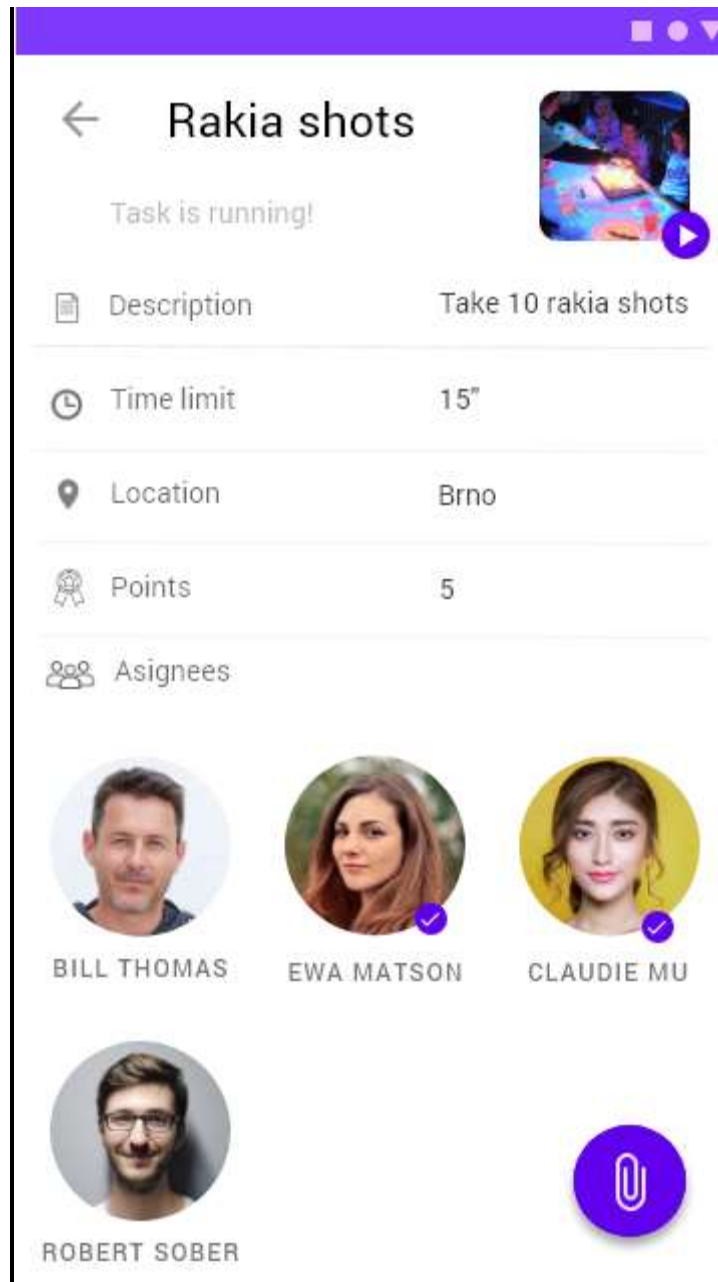
Attachment Fig 52 - Conversation detail



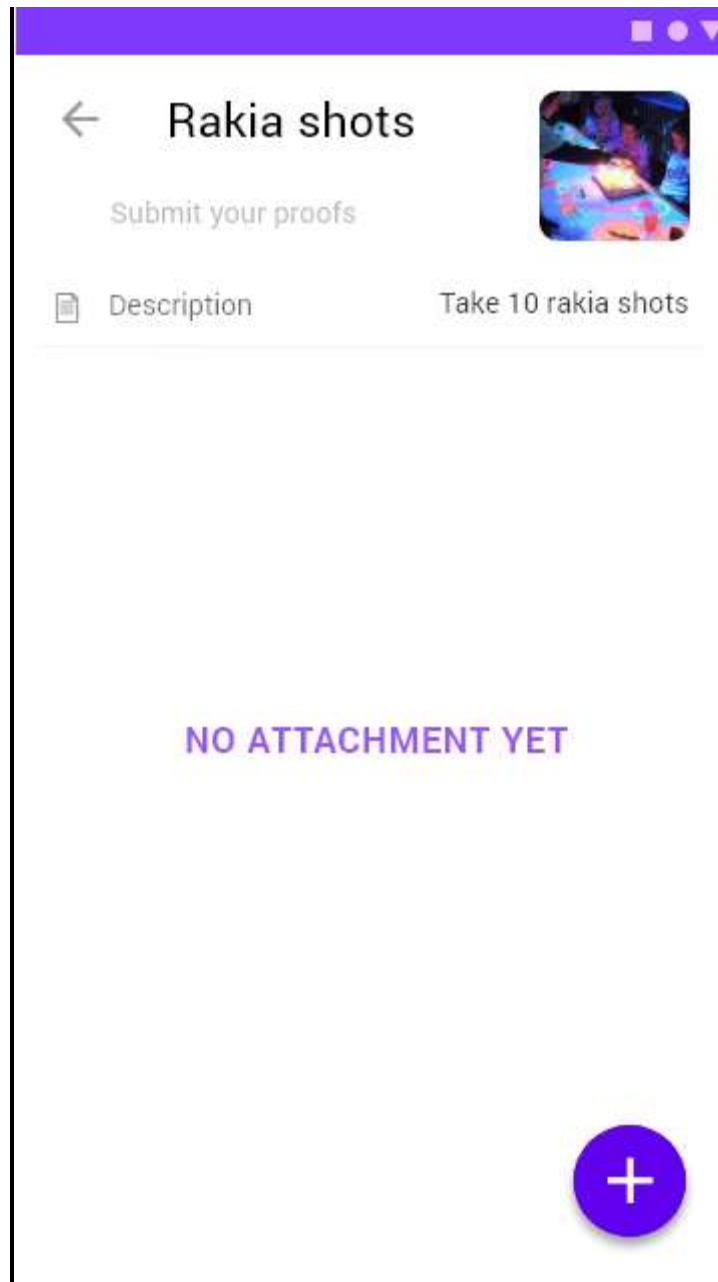
Attachment Fig 53 - Event list (one item) 2



Attachment Fig 54 - Event detail playmode



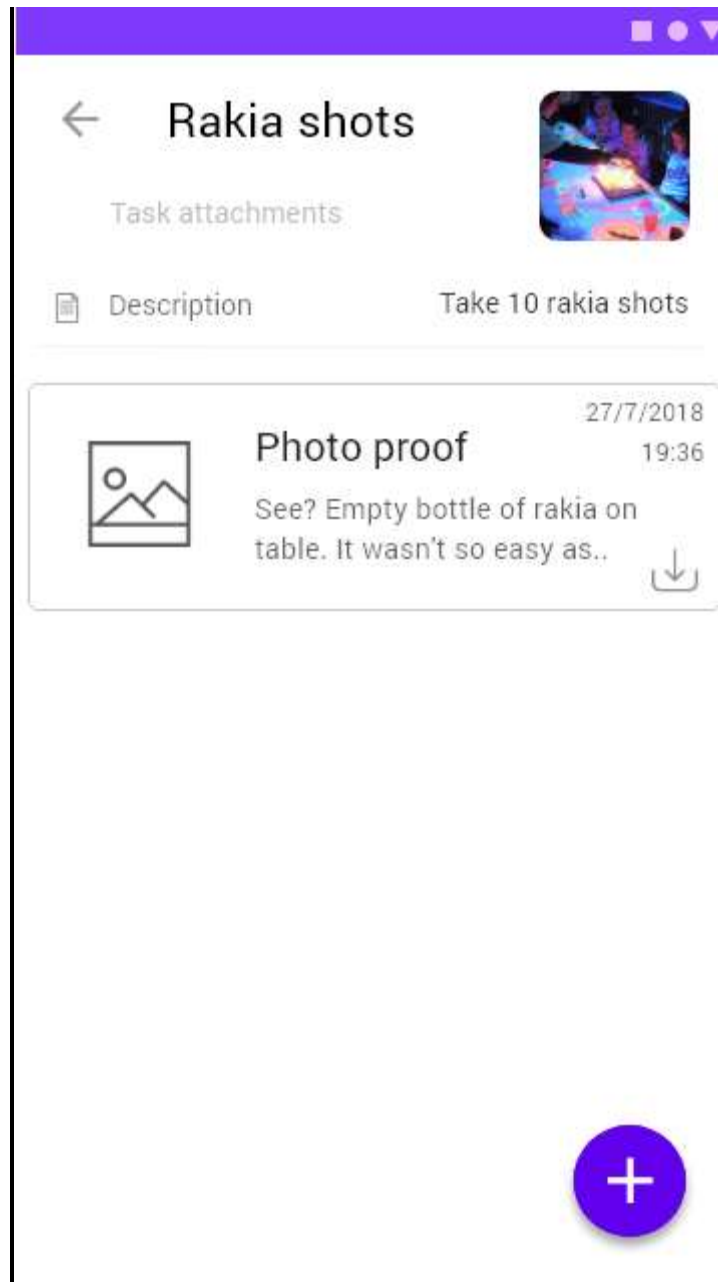
Attachment Fig 55 - Task detail (in play)



Attachment Fig 56 - Attachements list empty



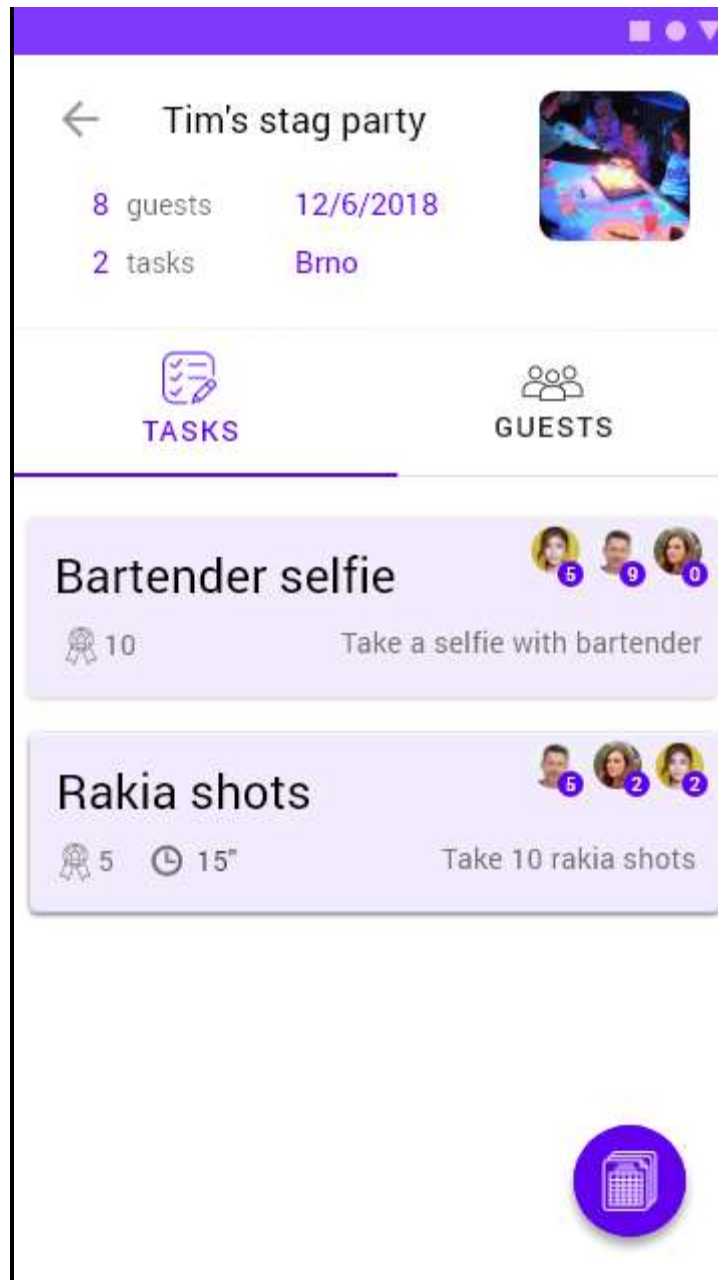
Attachment Fig 57 - Photo edit



Attachment Fig 58 - One attachment



Attachment Fig 59 - Task widget (assignee)



Attachment Fig 60 - Event summary