



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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Chyba! Záložka není definována.

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
- Chang 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 – Requirements diagram presents requirements diagram.

1.4. Mindmap

Created mindmap for this application can be found in Attachment 2 – Mindmap

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

Use case diagram for this application can be found in Attachment 3 – Use case diagram

1.5.2. Use case details

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 1 - Create event use case detail

Conditions

⊕ Preconditions:	<ul style="list-style-type: none">● 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:	<ul style="list-style-type: none">● 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

Figure 2 - Add task user case detail

Conditions



Flow of events

-
- A sequence diagram illustrating the steps for generating an event summary. The interactions are:
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](#)

Figure 1 - Generate event summary use case detail

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 change its state to 'finished' when the owner closes it or assigns points for all tasks.

Event state diagram

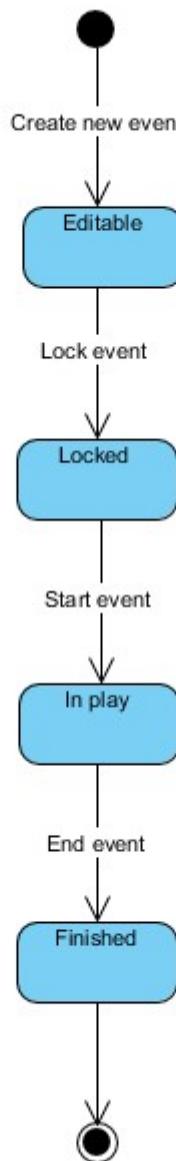


Figure 2 - Event state diagram

The application supports two types of tasks. Particulary 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.

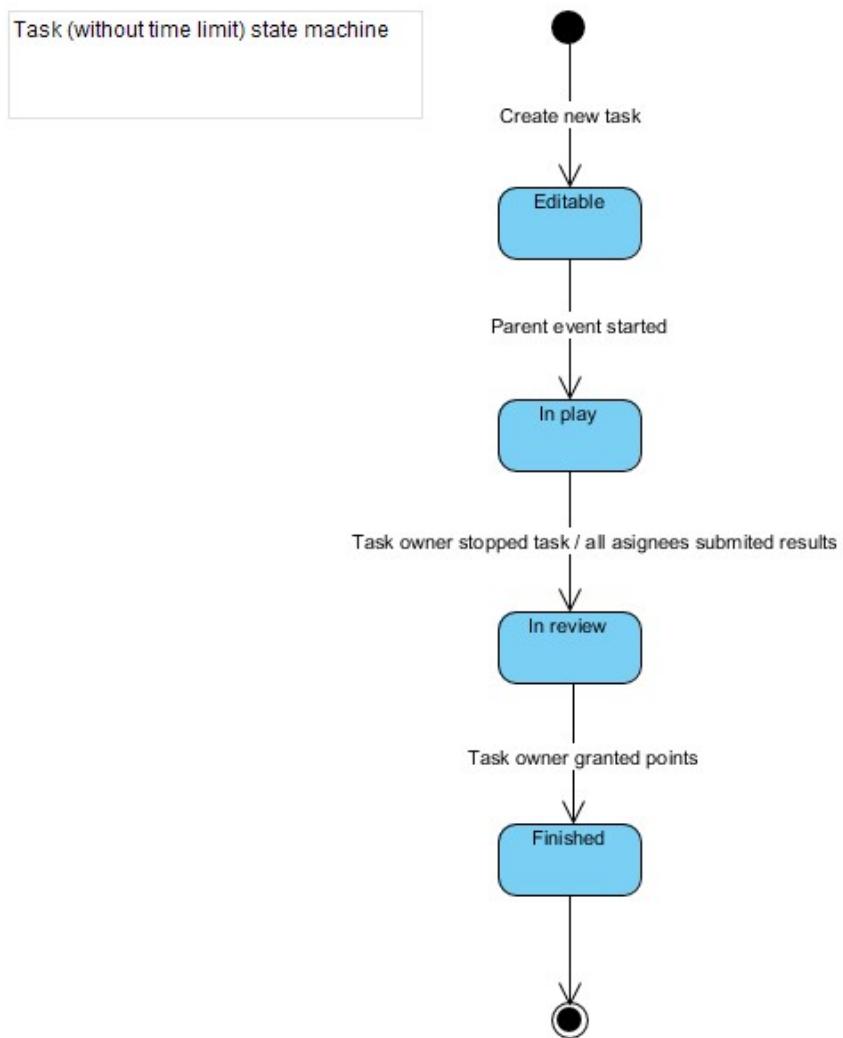


Figure 3 - Task state diagram

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.

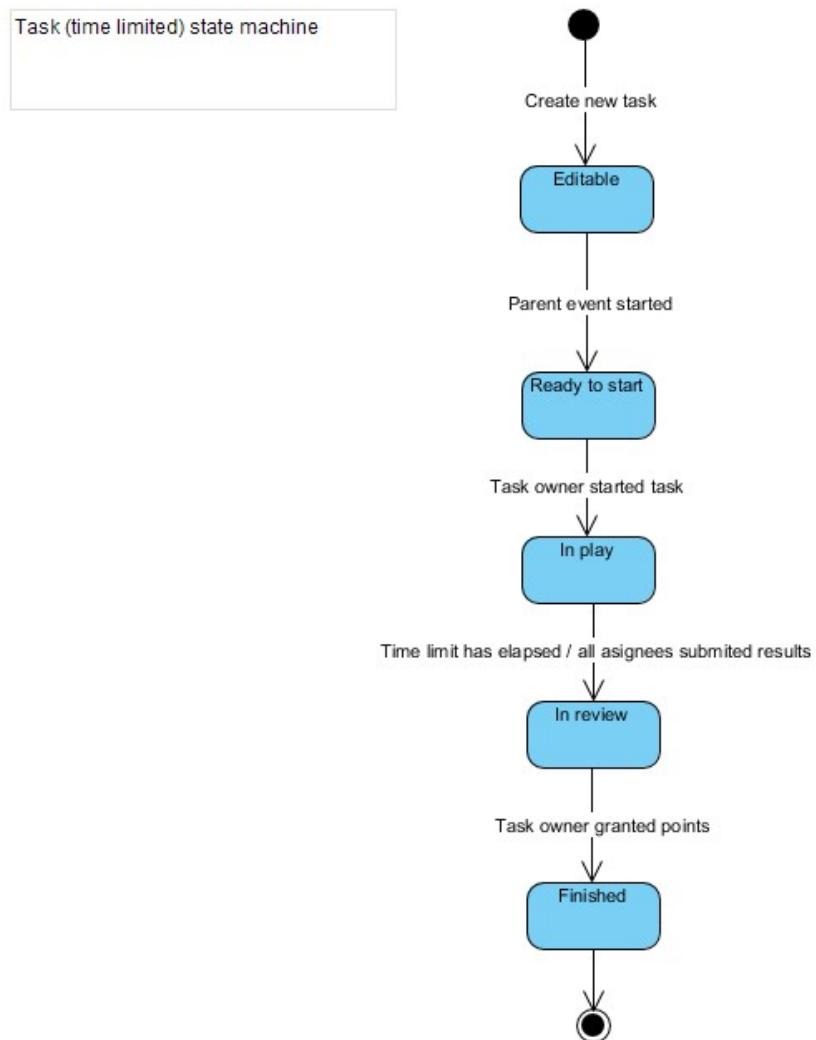


Figure 4 - Task (time limited) state diagram

1.7. Mockups

Mockups were created for following scenarios

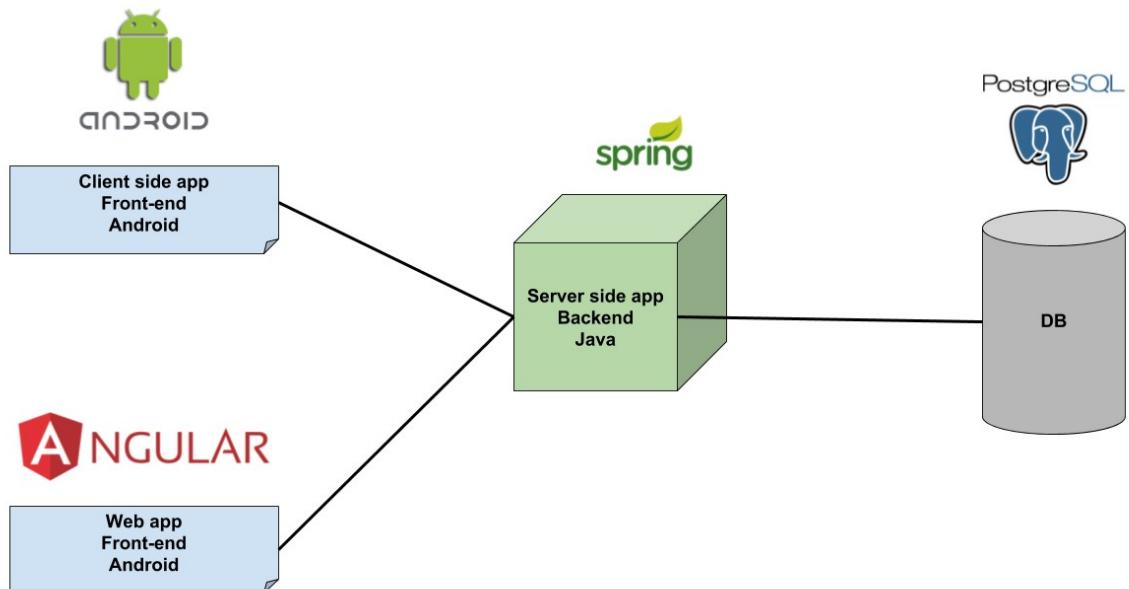
- Attachment 4 – Mockups: Event owner role (Android)
- Attachment 5 – Mockups: Event owner role (Web)
- Attachment 6 – Mockups: Event assignee role (Android)

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

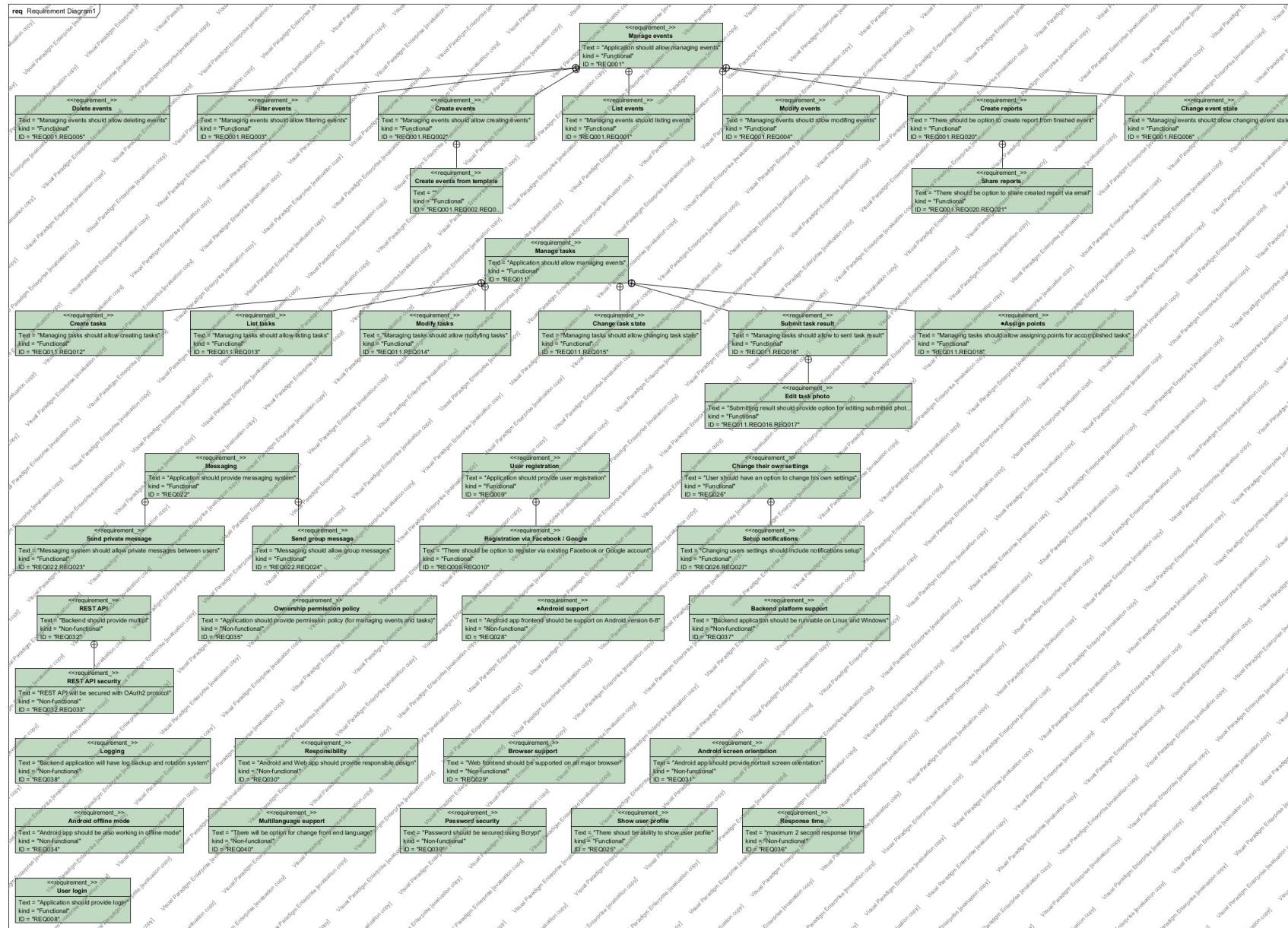
Another type of client-side is going to be implemented as a web application based on Angular framework.

Technology stack

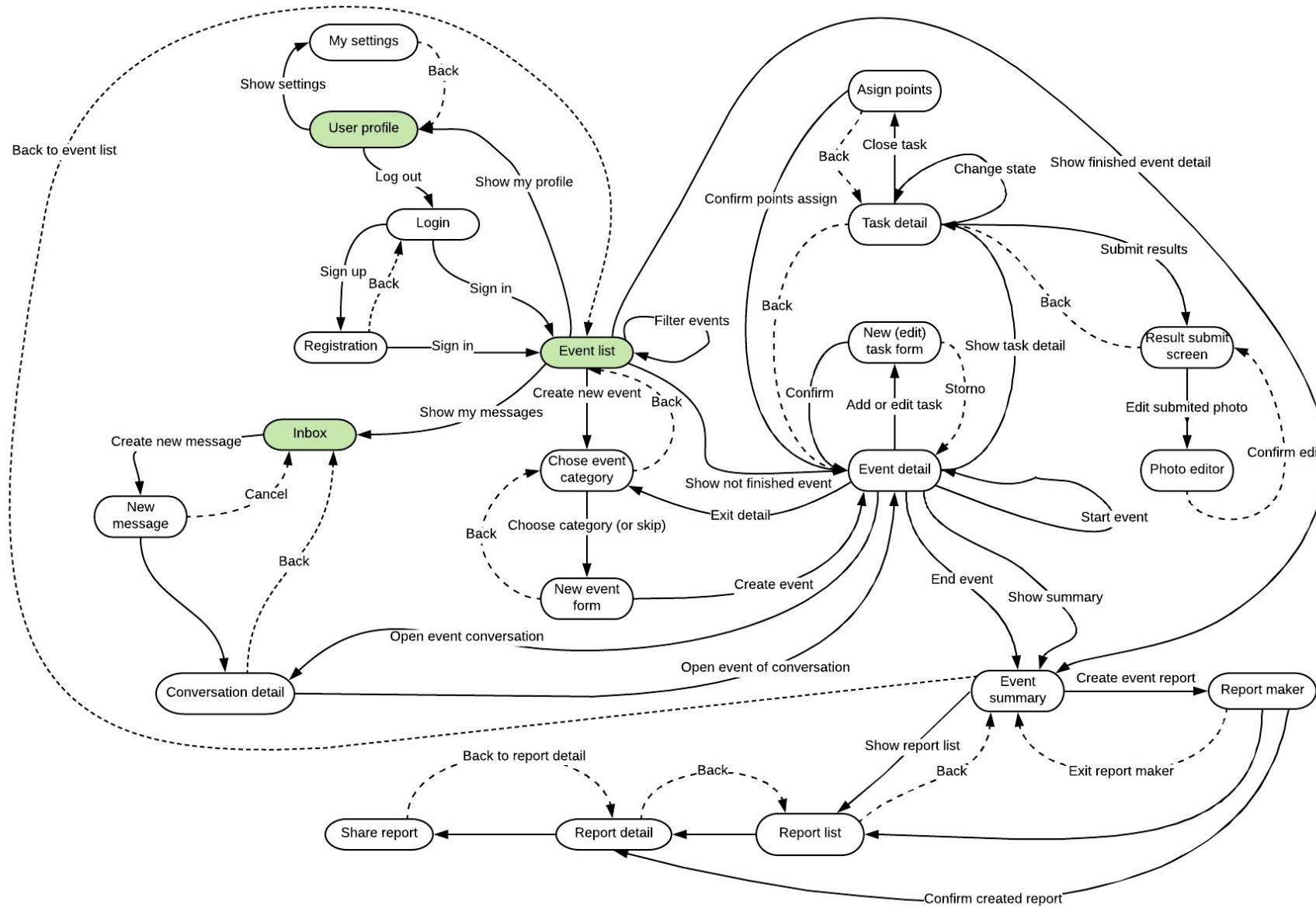
- Angular 6 framework

3. Attachments

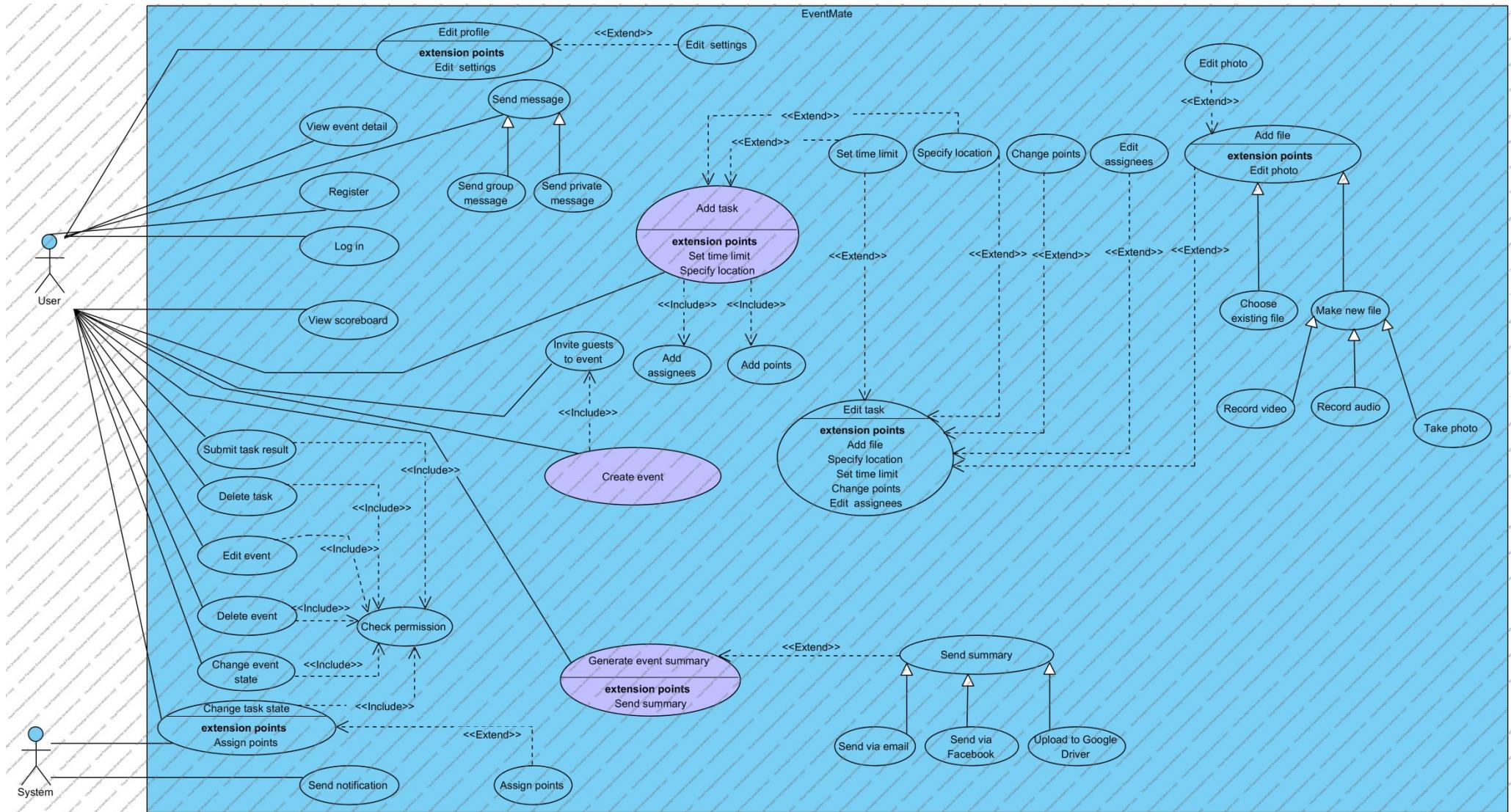
Attachment 1 – Requirements diagram



Attachment 2 – Mindmap



Attachment 3 – Use case diagram



Attachment 4 – Mockups: Event owner role (Android)



HAPPY TO SEE YOU AGAIN



Email

Password

LOGIN

No account yet? Create one
Forgotten password?

OR

FACEBOOK

GOOGLE

[Attachment Fig 1 - Login](#)



MY EVENTS





Dad's birthday

02/12/2018

Vienna

30 20



New Year's Eve

31/12/2018

Amsterdam

7 17



INBOX

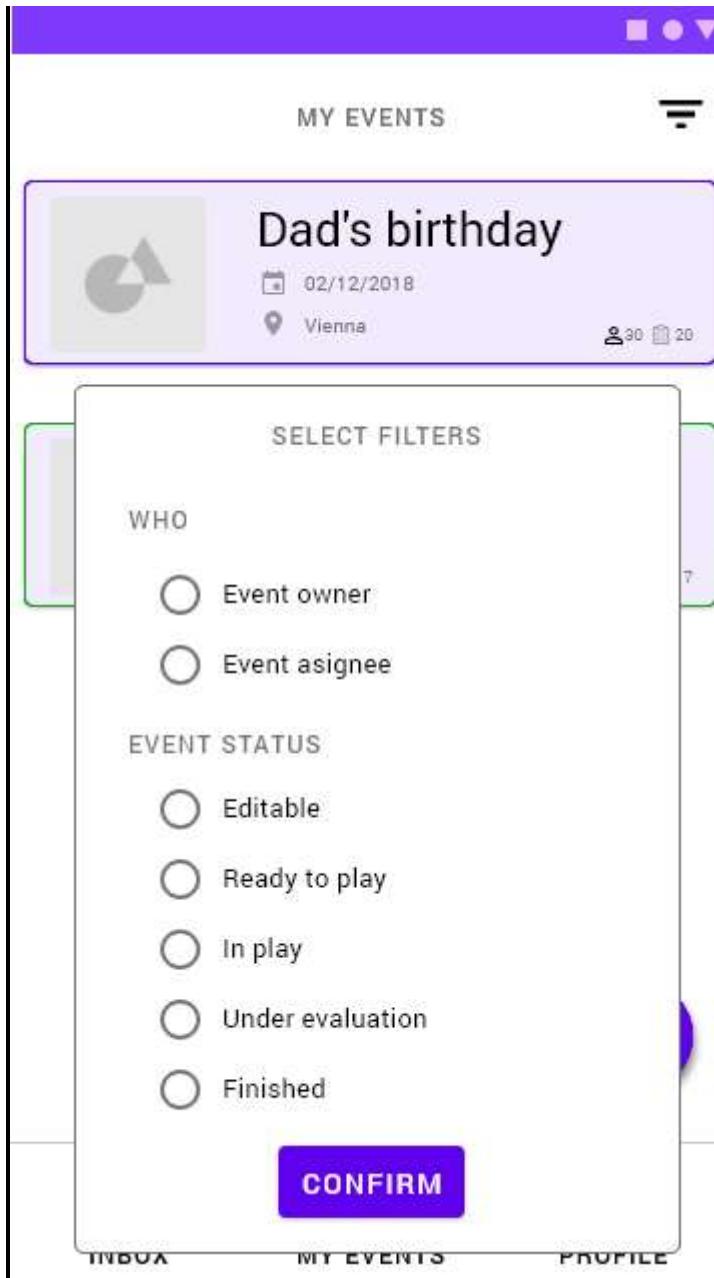


MY EVENTS



PROFILE

Attachment Fig 2 - Event list



Attachment Fig 3 - Event list (filter dialog)

MY EVENTS

ACTIVE FILTERS

Owner ×



Dad's birthday

02/12/2018

Vienna

30 20

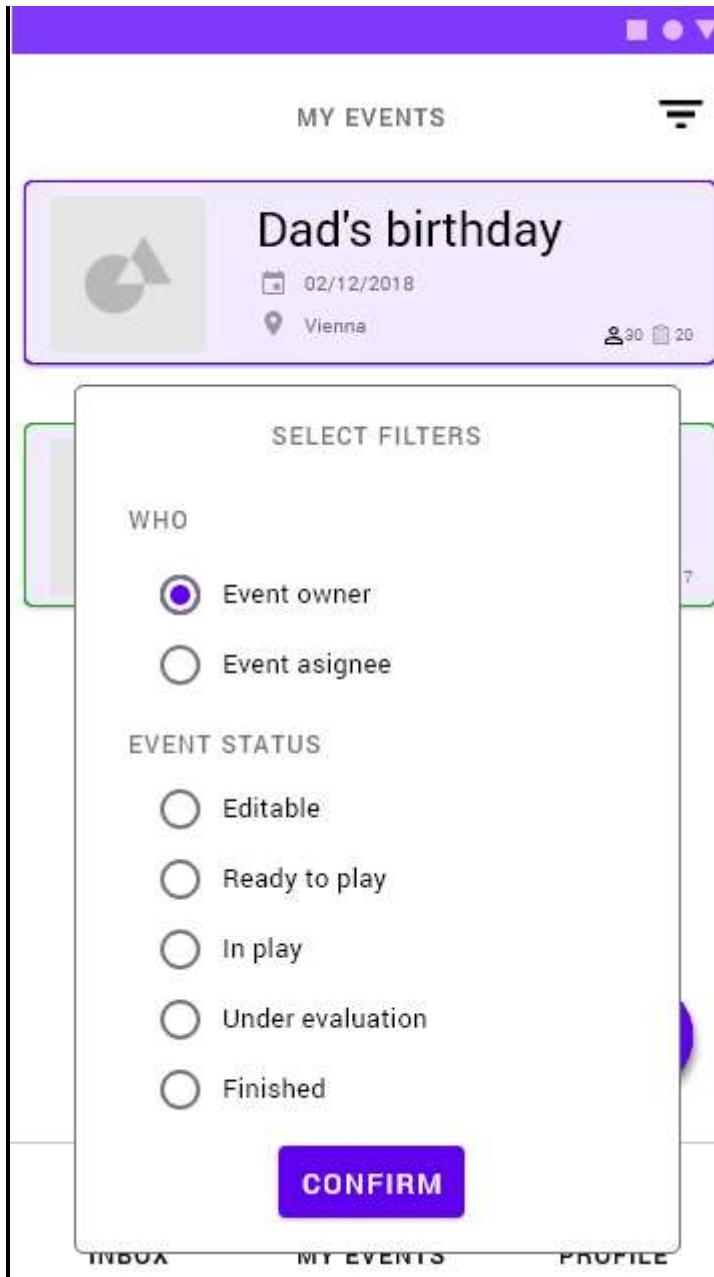
+

INBOX

MY EVENTS

PROFILE

Attachment Fig 4 - Event list (active owner filter)



Attachment Fig 5 - event list (filter dialog 2)

MY EVENTS

ACTIVE FILTERS

Owner Editable

Dad's birthday

02/12/2018

Vienna

30 20

+

INBOX MY EVENTS PROFILE

Attachment Fig 6 - Event list (2 filters active)



WHAT EVENT ARE YOU PLANNING?



BIRTHDAY PARTY



NEW YEAR'S EVE



HEN'S PARTY



STAG PARTY

SKIP >

Attachment Fig 7 - New event template

GIVE US MORE INFORMATION

Event name

*Required

Date
Select date

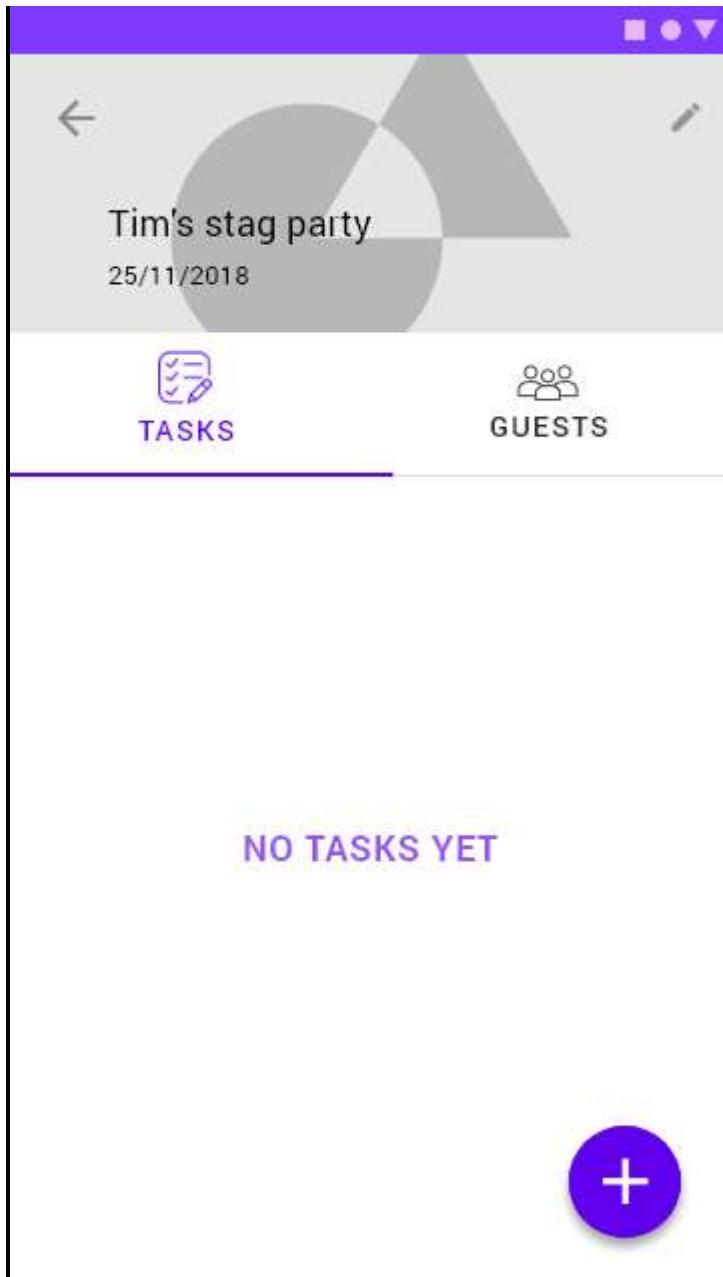
*Required

Place

Guests
 John Smith

SAVE

Attachment Fig 8 - New event form



Attachment Fig 9 - Event detail (no task)

WHAT'S THIS TASK ABOUT?

Task name

*Required

Points

*Required

Asignees

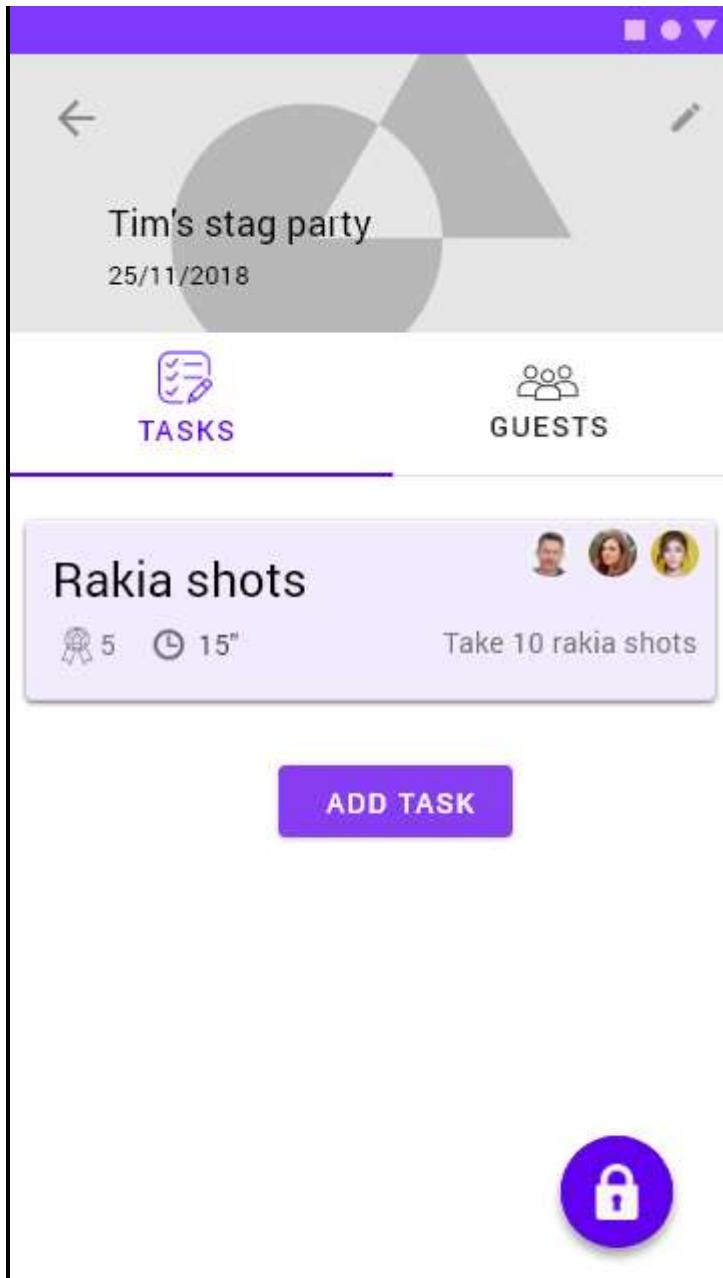
*Required

Description

Location 

SAVE

Attachment Fig 10 - New task form



Attachment Fig 11 - Event detail (one task)

◀ GIVE US MORE INFORMATION

Event name

*Required

Date Select date CALENDAR

*Required

Place

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

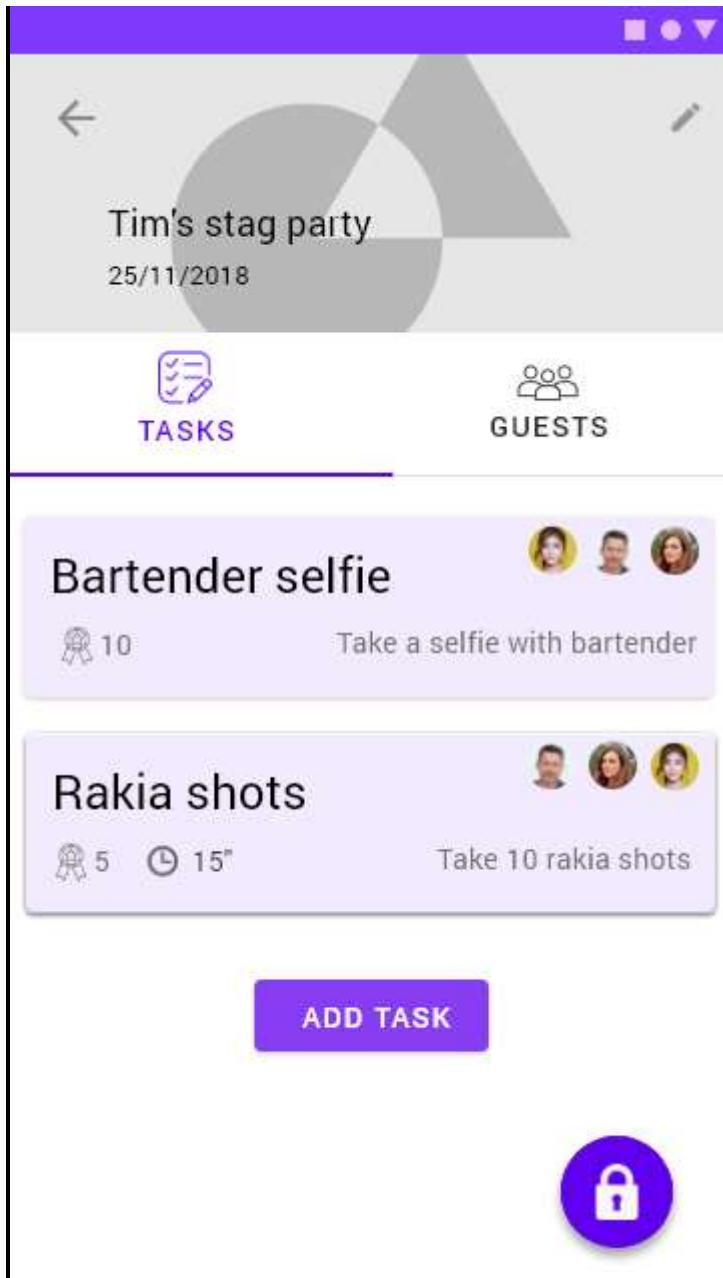


CLAUDIE MU



ROBERT SOBER

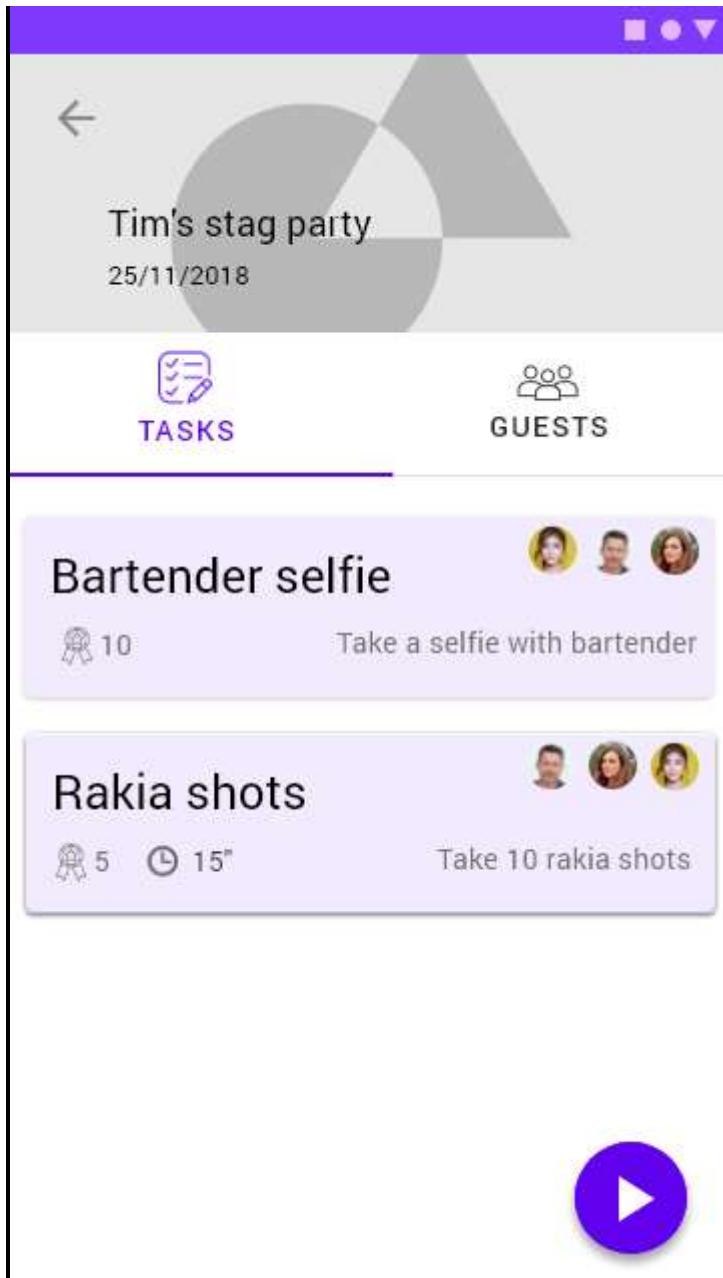
Attachment Fig 13 - Task detail



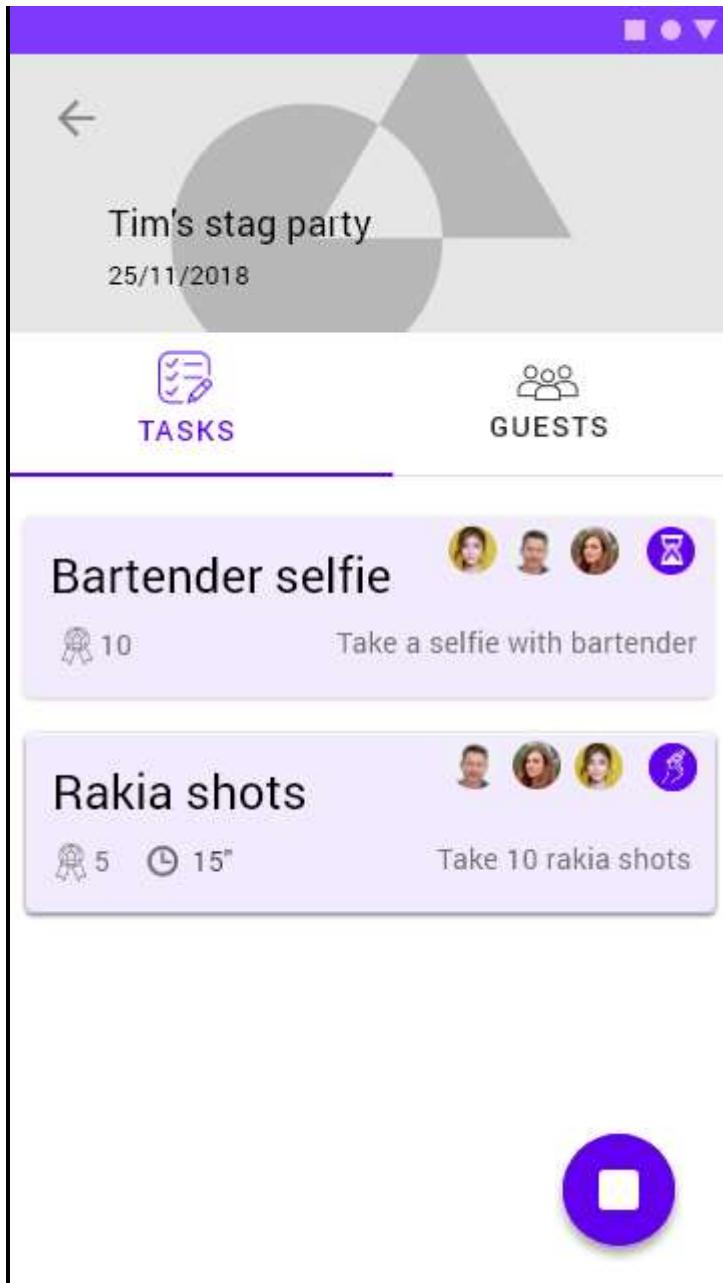
Attachment Fig 14 - Event detail (edit mode)



Attachment Fig 15 - Notification (event start)



Attachment Fig 16 - Event detail (locked state)



Attachment Fig 17 - Event detail (played state)

◀ Rakia shots

Task is ready to play



Description Take 10 rakia shots

Time limit 15"

Location Brno

Points 5

Asignees



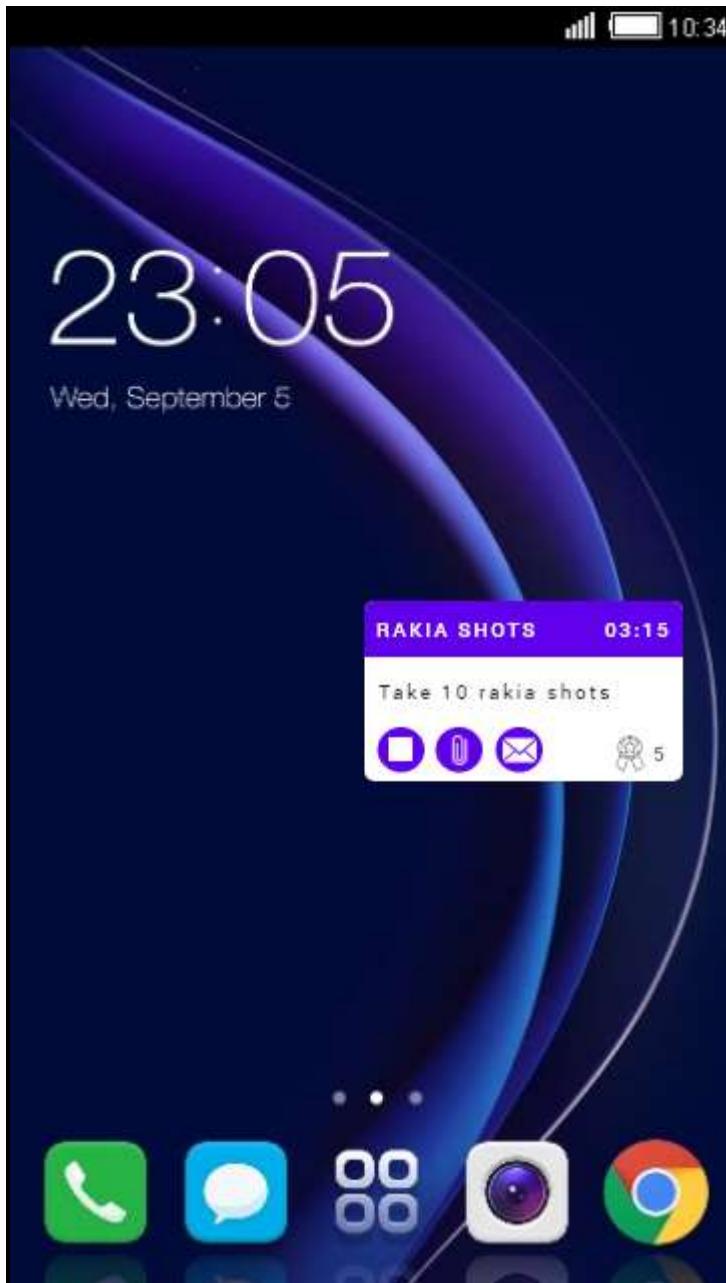
BILL THOMAS EWA MATSON CLAUDIE MU



ROBERT SOBER



Attachment Fig 18 - task detail (before play)



Attachment Fig 19 - Widget (task in play)

← Rakia shots

Task is running!



Description Take 10 rakia shots

Time limit 15"

Location Brno

Points 5

Asignees



BILL THOMAS



EWA MATSON



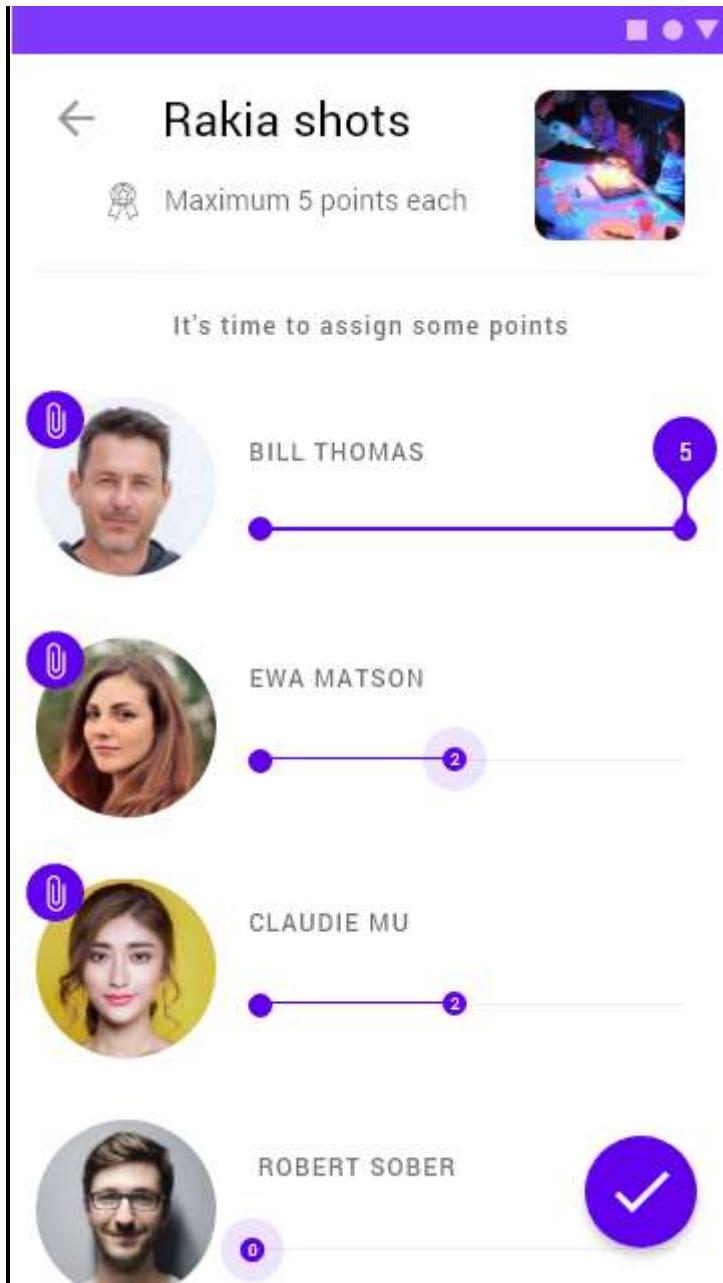
CLAUDIE MU



ROBERT SOBER



Attachment Fig 20 - Task detail (in play)



Attachment Fig 21 - Assign point for task

◀ Rakia shots

Task attachments of
Bill Thomas

Description Take 10 rakia shots

Photo proof 27/7/2018 19:36
See? Empty bottle of rakia on table. It wasn't so easy as.. 

Video proof! 27/7/2018 19:36
Yep, I recorded video selfie.. 

Song 27/7/2018 19:36
And this song was playing during shots, funny isn't it? 

Attachment Fig 22 - Assigned attachments

← Rakia shots

Task is done!



Description Take 10 rakia shots

Time limit 15"

Location Brno

Points 5

Asignees



BILL THOMAS



EWA MATSON

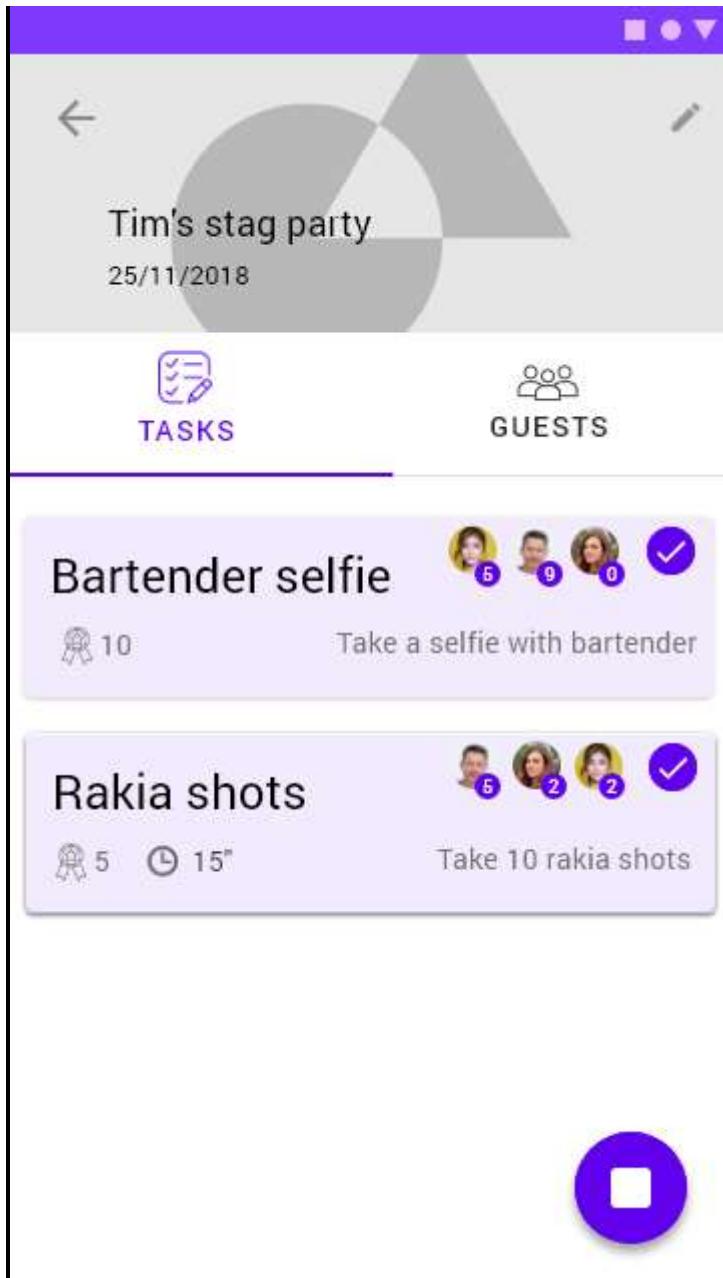


CLAUDIE MU



ROBERT SOBER

Attachment Fig 23 Task detail (finished task)



Attachment Fig 24 - Event detail (all task done)

The screenshot shows a mobile application interface for managing an event. At the top, there is a purple header bar with three small white icons: a square, a circle, and a downward-pointing triangle. Below the header, the event title "Tim's stag party" is displayed next to a left-pointing arrow icon. To the right of the title is a small thumbnail image of a colorful party scene. Below the title, the number "8 guests" is followed by the date "12/6/2018". Underneath that, the number "2 tasks" is followed by the location "Brno".

Below this information, there are two main navigation buttons: "TASKS" and "GUESTS". The "TASKS" button is highlighted with a purple underline and features a checklist icon. The "GUESTS" button features a people icon.

The main content area displays two task cards:

- Bartender selfie**: This card shows a group of three people (two men and one woman) with circular icons containing the numbers 5, 9, and 0 respectively. Below the title, there is a camera icon followed by the number 10, and the instruction "Take a selfie with bartender".
- Rakia shots**: This card shows a group of four people (three men and one woman) with circular icons containing the numbers 5, 2, and 2 respectively. Below the title, there is a camera icon followed by the number 5, a clock icon followed by "15\"", and the instruction "Take 10 rakia shots".

At the bottom center of the screen is a large, circular purple button with a white icon of a document with a grid pattern.

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	<input checked="" type="checkbox"/>
	Ewa Watson	<input checked="" type="checkbox"/>
	Claudie Mu	<input checked="" type="checkbox"/>
	Robert Sober	<input checked="" type="checkbox"/>

CONFIRM

Event photo and category

GENERATE

Attachment Fig 30 - Report maker (attendees 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

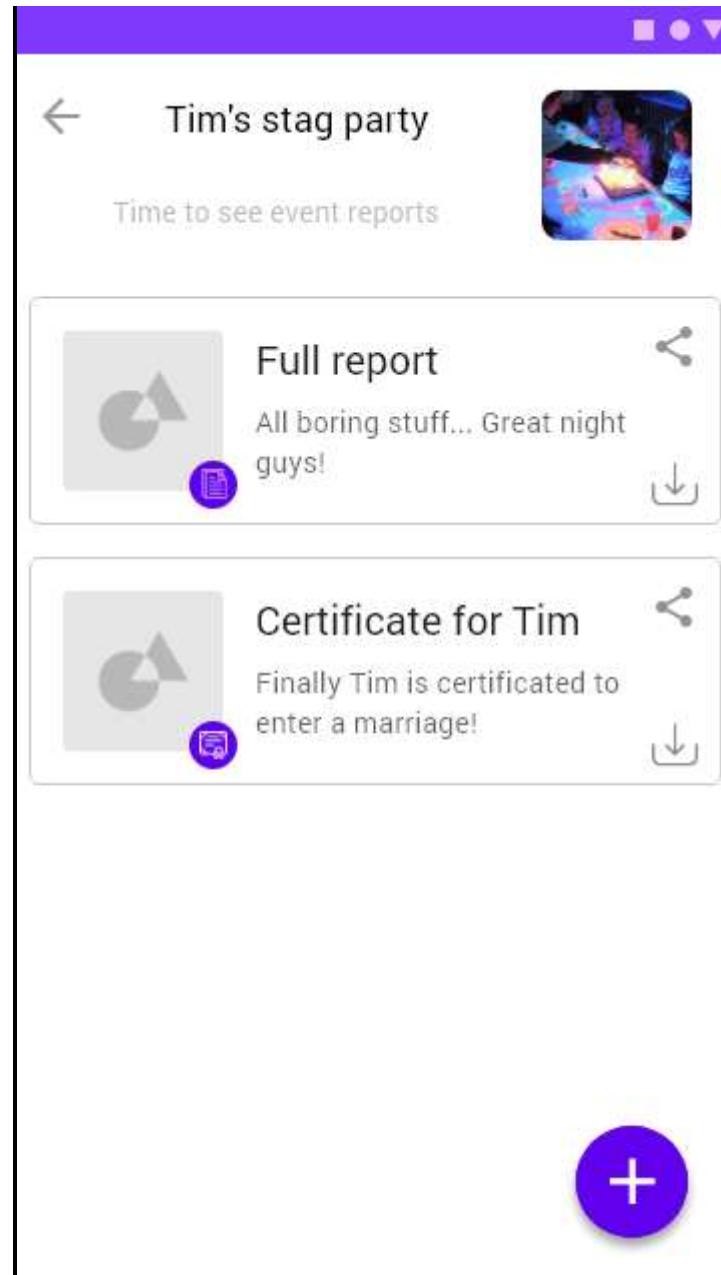
Event photo and category (stamp)

TASKS

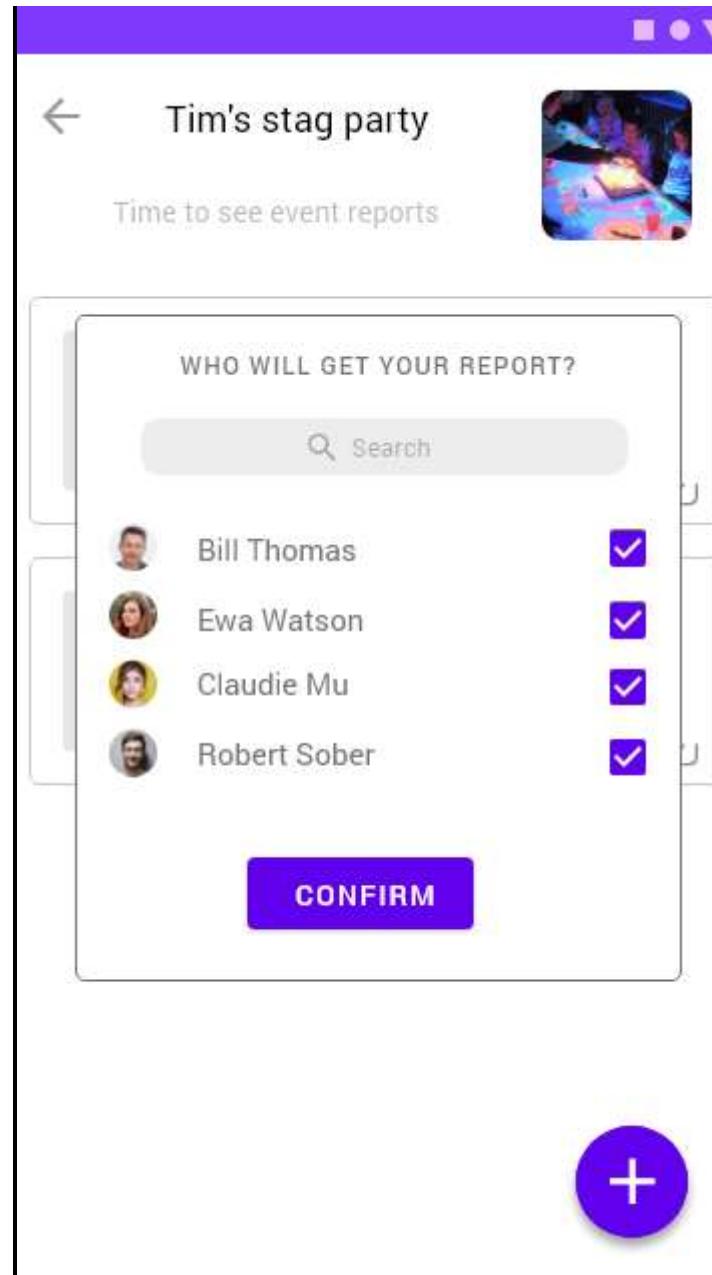
Include tasks

GENERATE

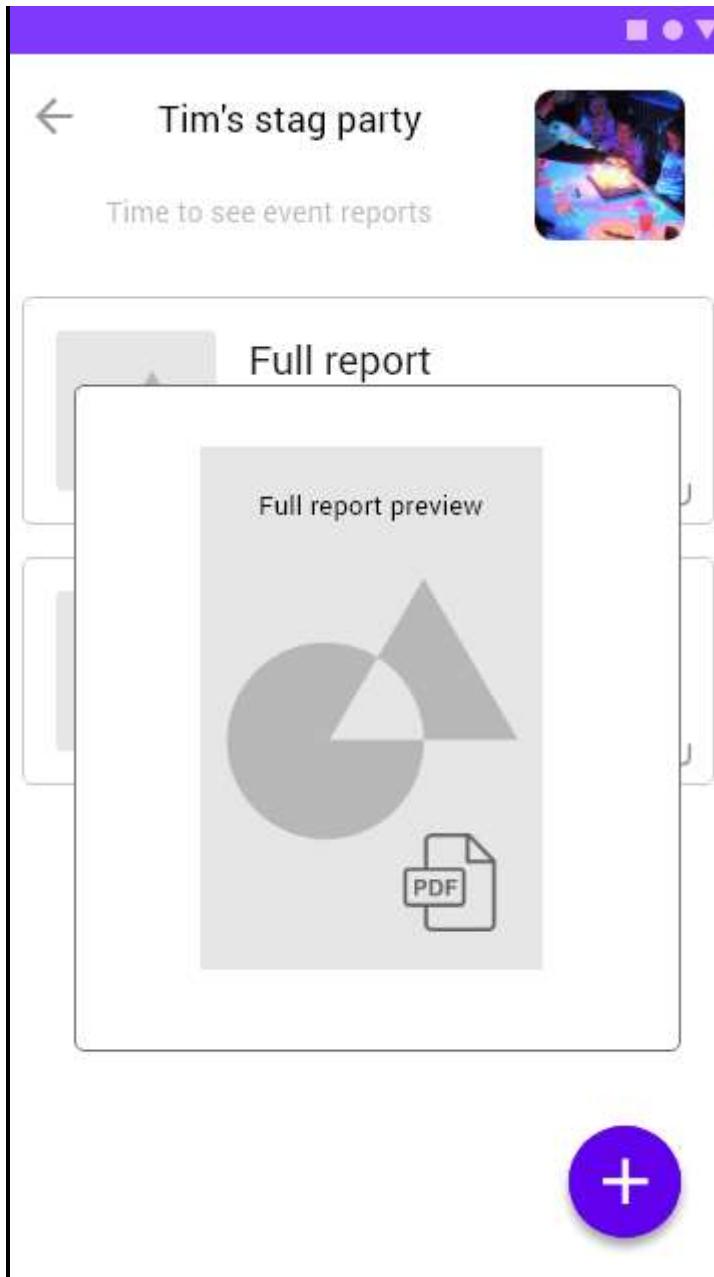
Attachment Fig 33 - Report maker (full summary 4)



Attachment Fig 34 - Report list (with items)



Attachment Fig 35 - Sharing repos



Attachment Fig 36 - Report preview

Attachment 5 – 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	3 people	15"	Take 10 ra...
Bartender selfie	10	Brno	3 people	-	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	(3)	15"	Take 10 ra...
Bartender selfie	10	Brno	(3)		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 6 – 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



MY EVENTS



NO EVENTS YET



INBOX



MY EVENTS

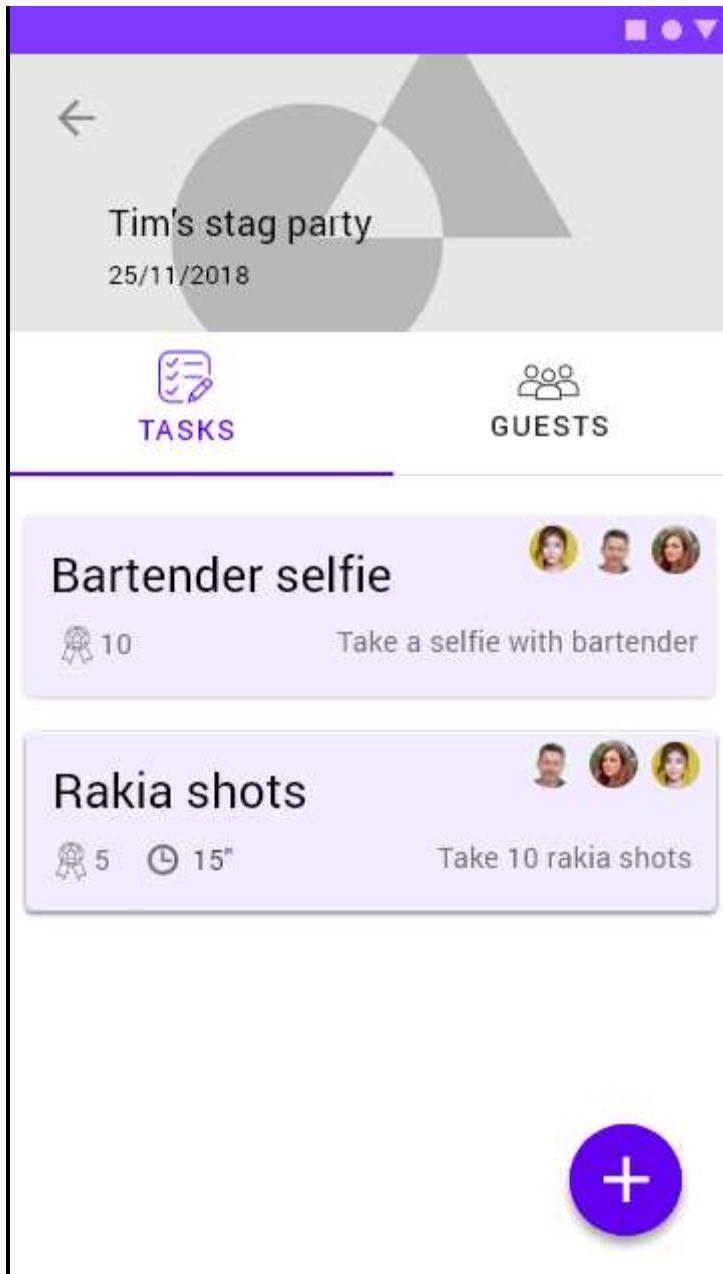


PROFILE

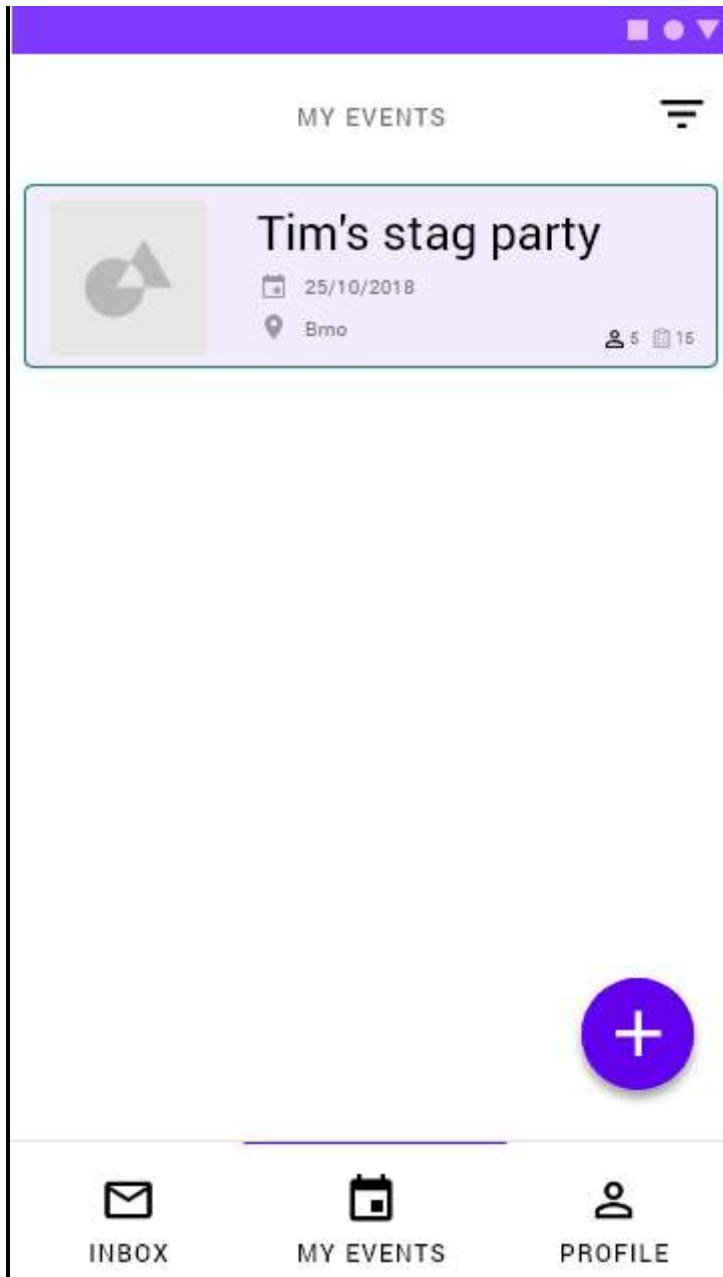
Attachment Fig 42 - Event list (empty)



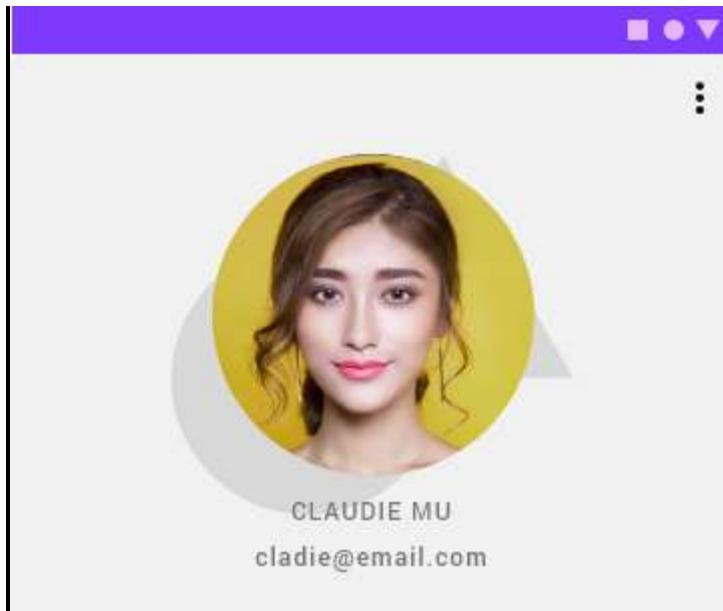
Attachment Fig 43 - Event notification



Attachment Fig 44 - Event detail (edit mode)



Attachment Fig 45 - Event list (one item)



CONGRATS

0 organized events

1 attended events

0 earned points



CHICKEN



INBOX

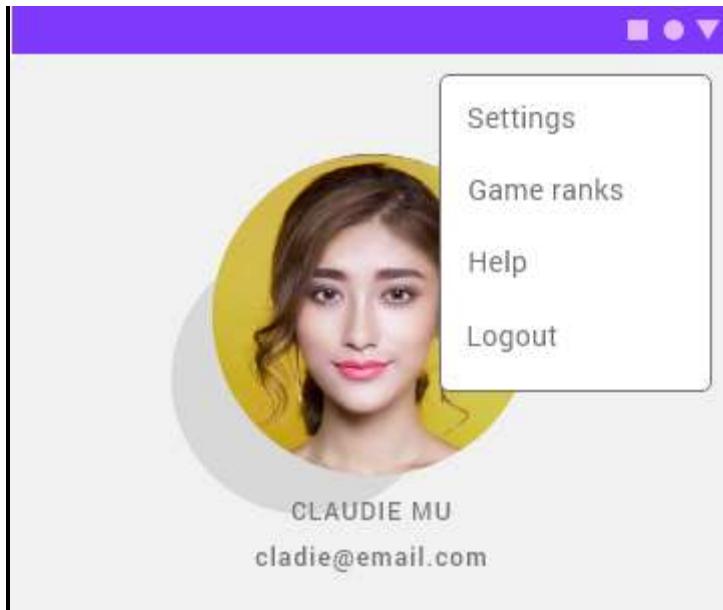


MY EVENTS



PROFILE

Attachment Fig 46 – My profile



CONGRATS

0 organized events

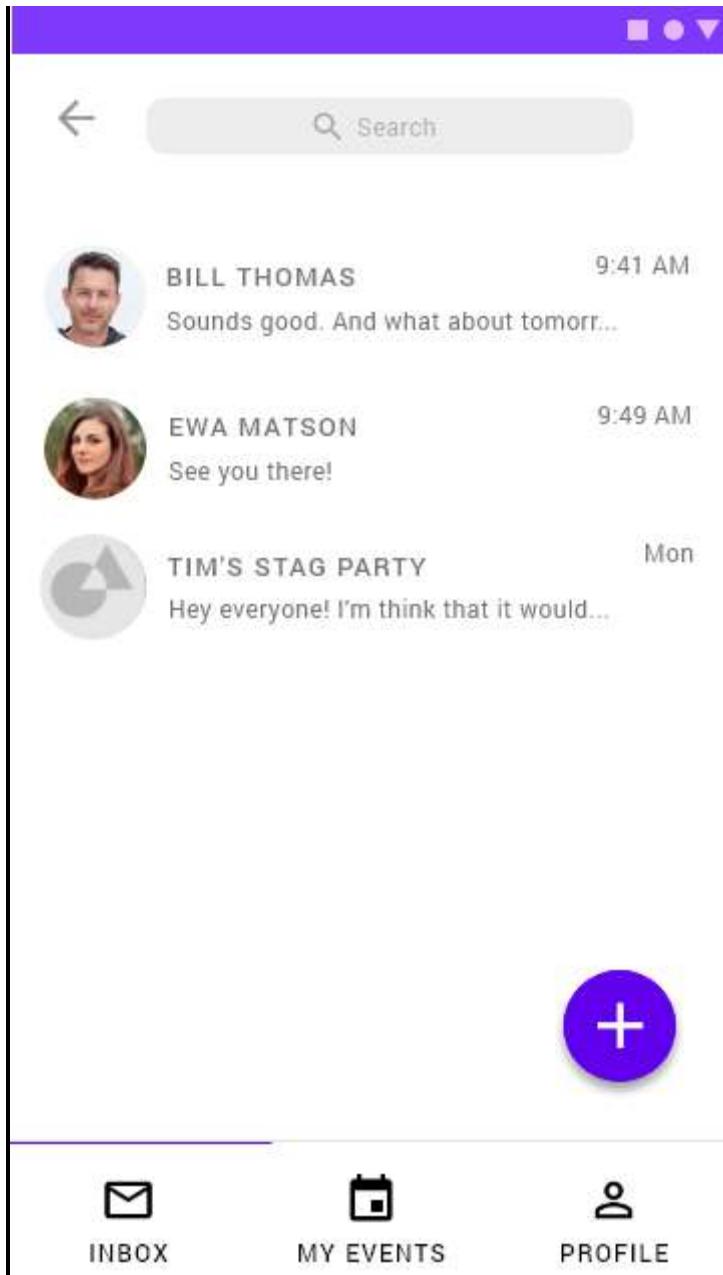
1 attended events

0 earned points

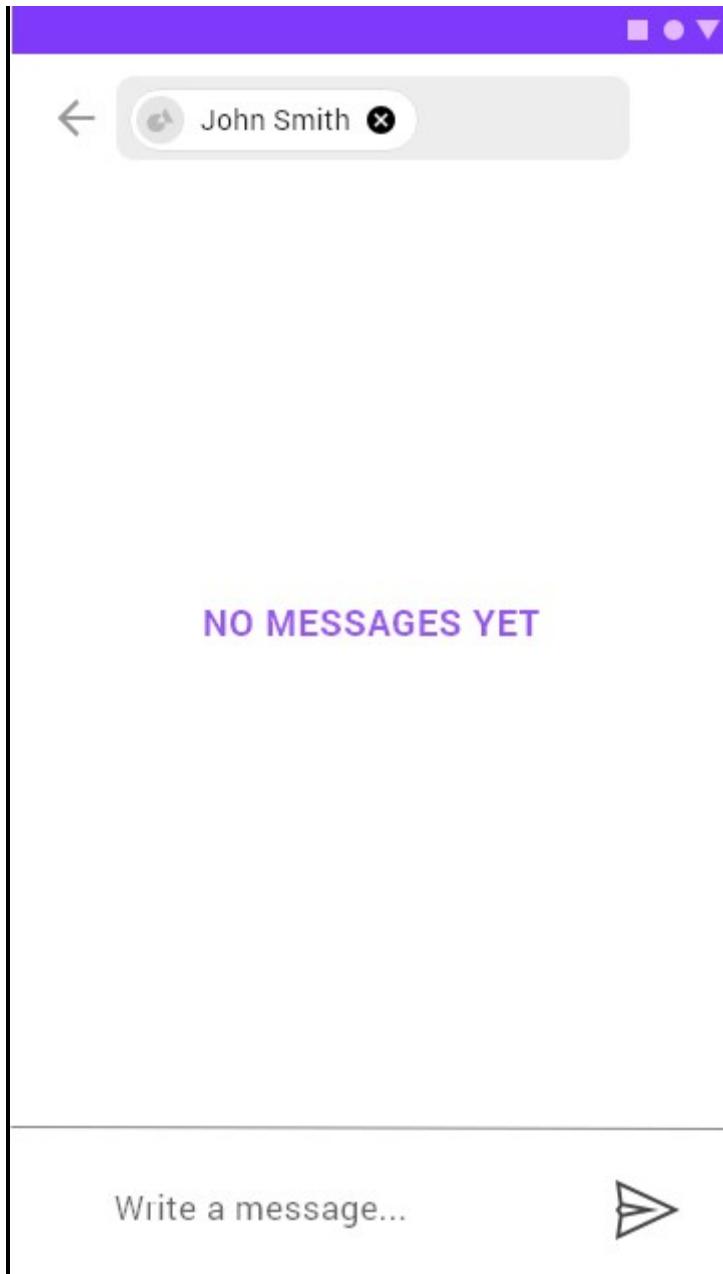
A yellow cartoon chick with black outlines and feet, standing next to the text "CHICKEN".

INBOX **MY EVENTS** **PROFILE**

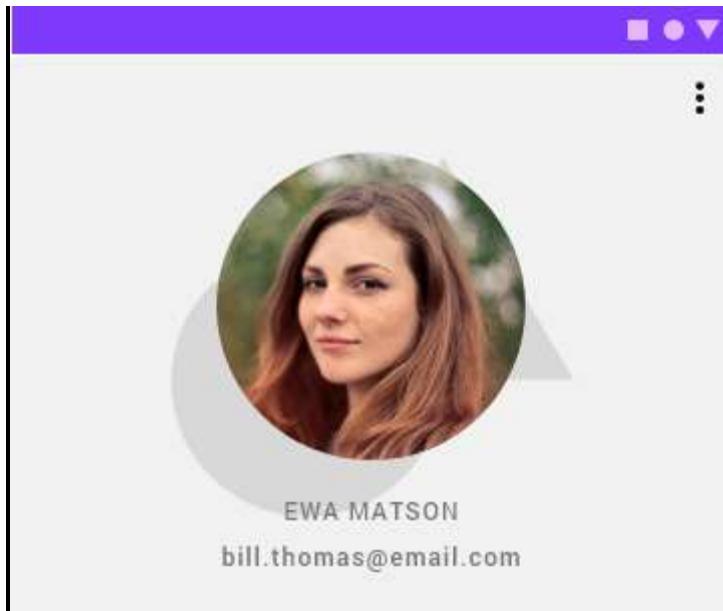
Attachment Fig 47 - My profile (dialog)



Attachment Fig 48 - Inbox



[Attachment Fig 49 - Inbox \(new message\)](#)



CONGRATS

15 organized events

25 attended events

80 earned points



INBOX



MY EVENTS

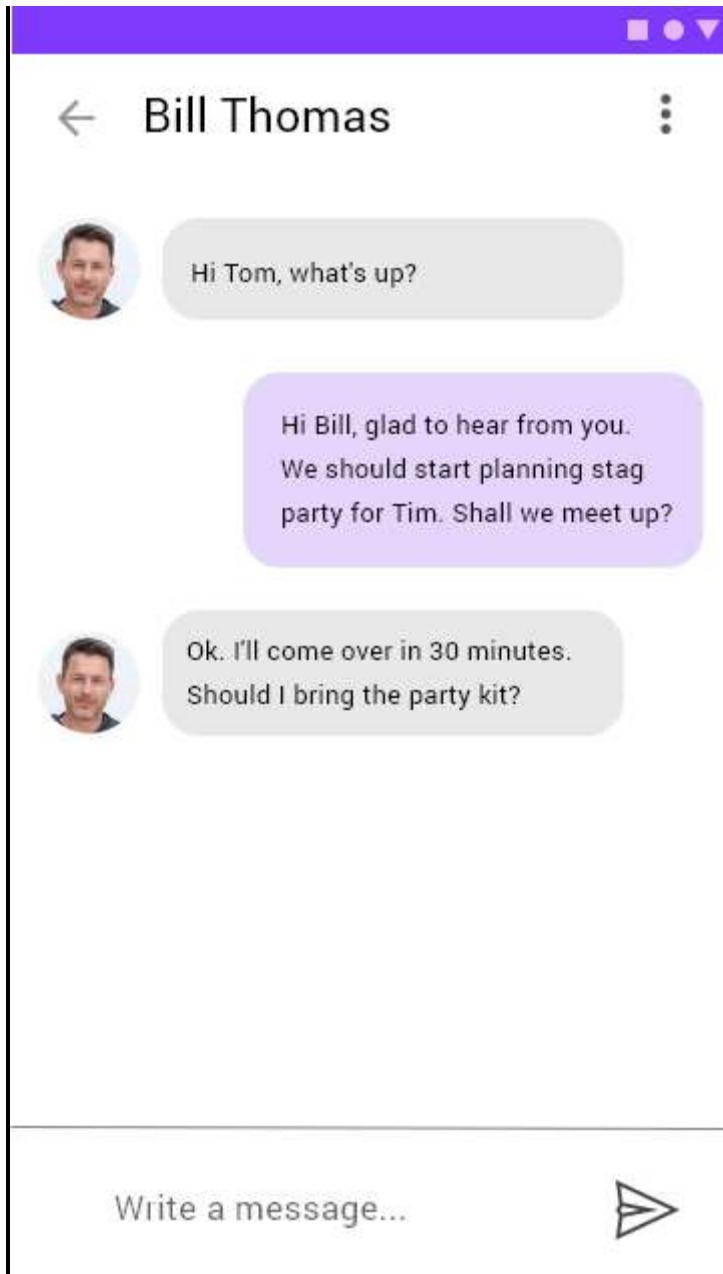


PROFILE

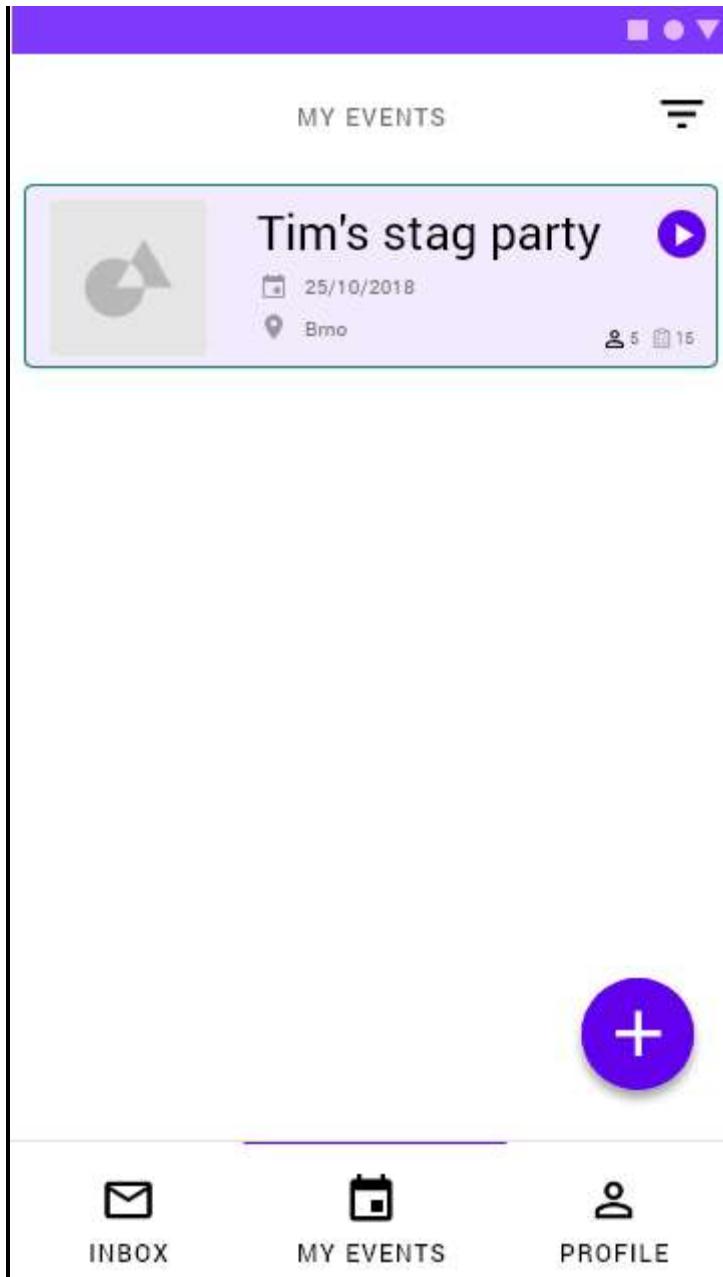
Attachment Fig 50 - User profile (gold medal)



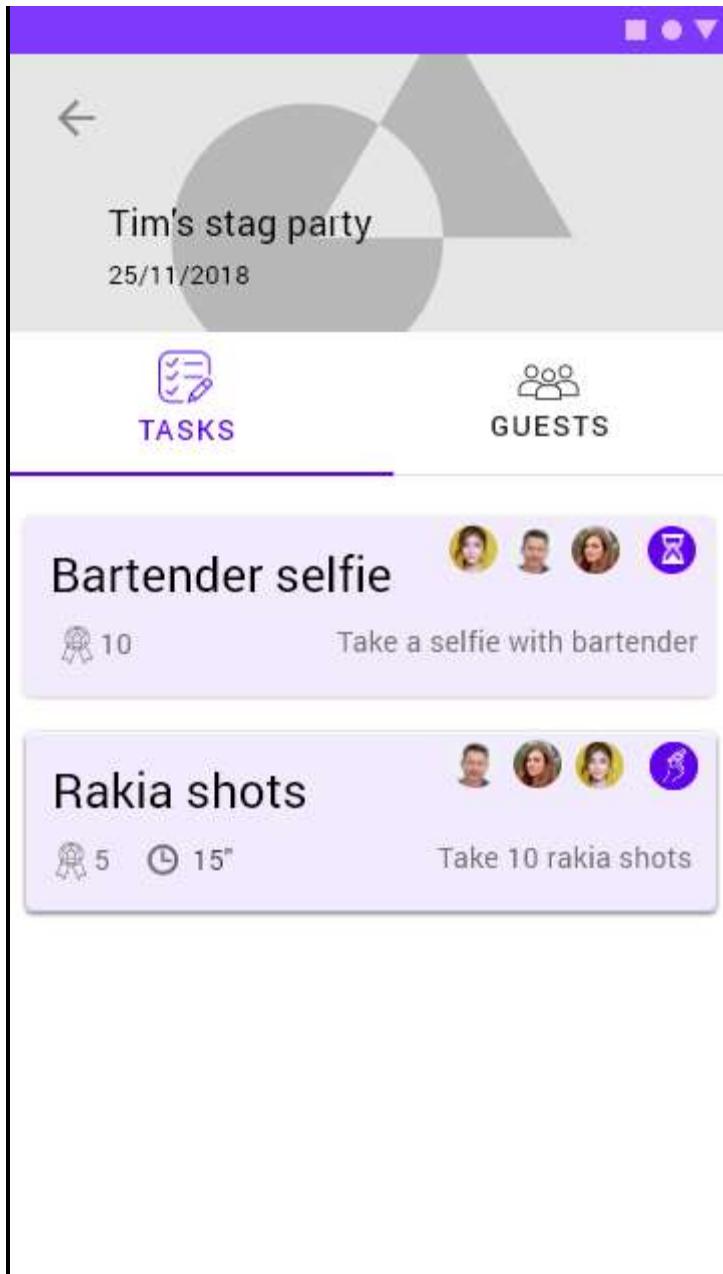
Attachment Fig 51 - Notification (new message)



Attachment Fig 52 - Conversation detail



Attachment Fig 53 - Event list (one item) 2



Attachment Fig 54 - Event detail playmode

← Rakia shots

Task is running!



Description Take 10 rakia shots

Time limit 15"

Location Brno

Points 5

Asignees



BILL THOMAS



EWA MATSON



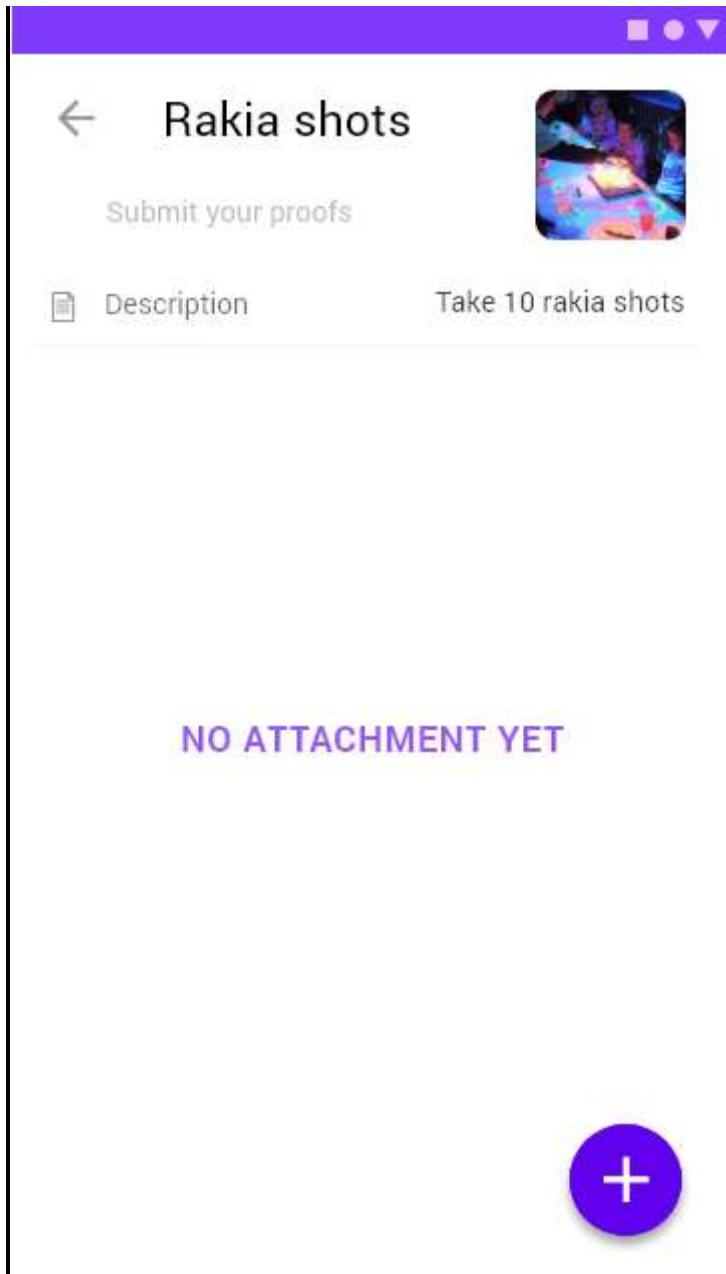
CLAUDIE MU



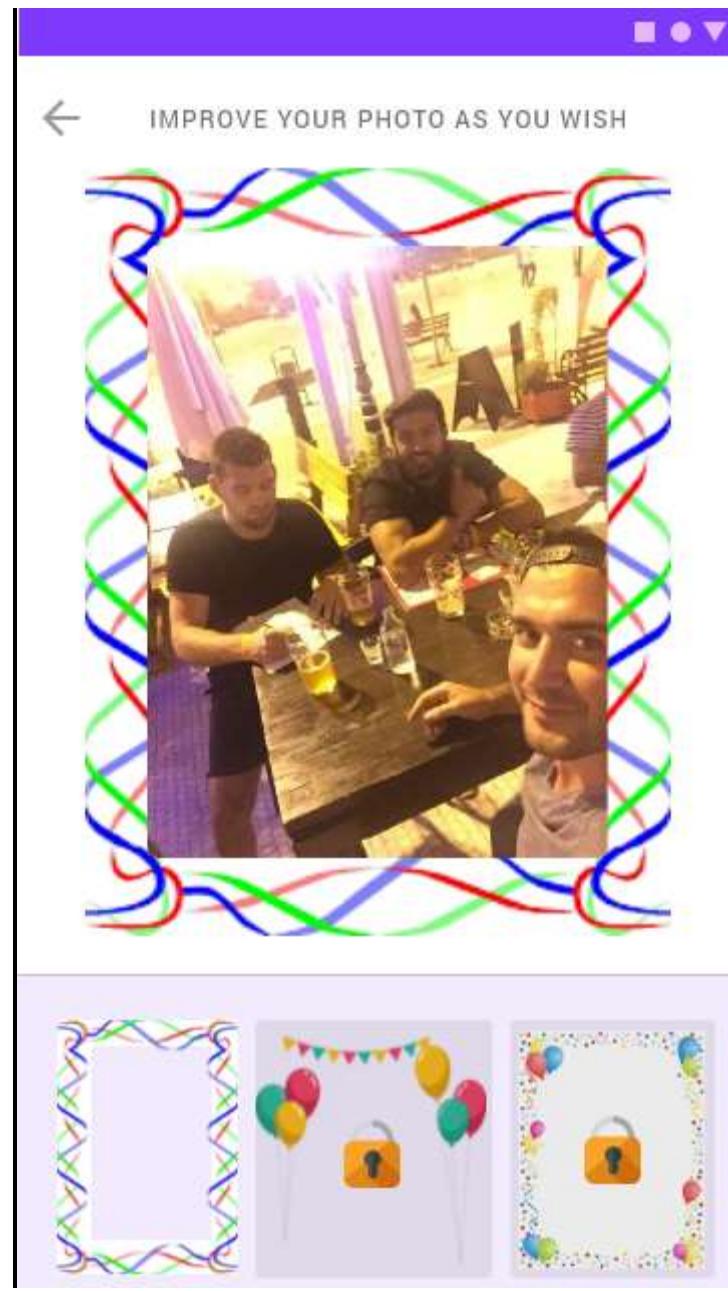
ROBERT SOBER



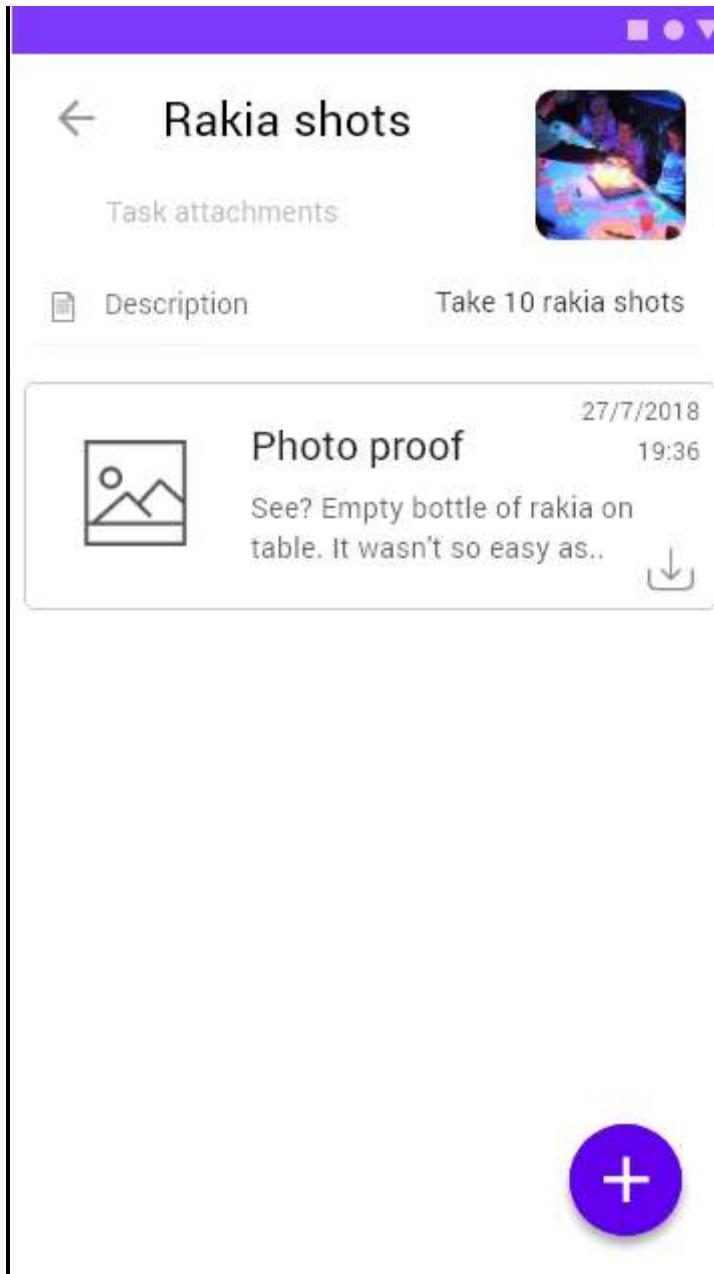
Attachment Fig 55 - Task detail (in play)



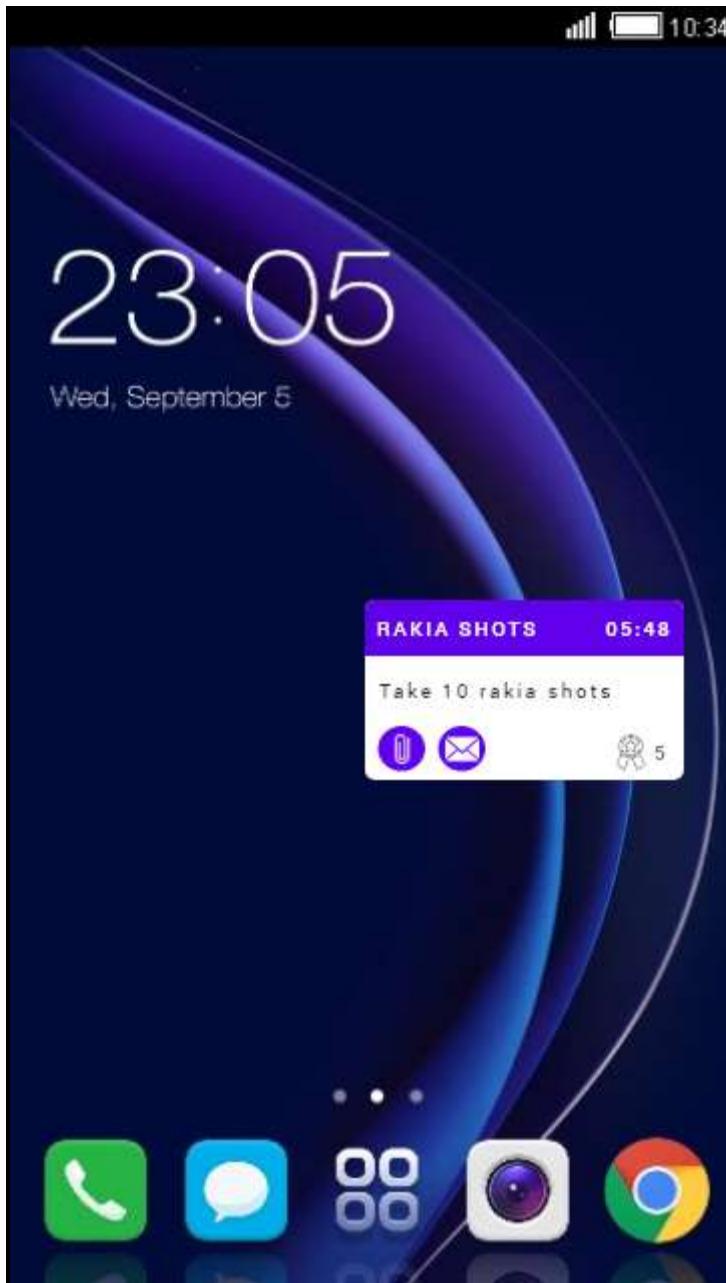
Attachment Fig 56 - Attachements list empty



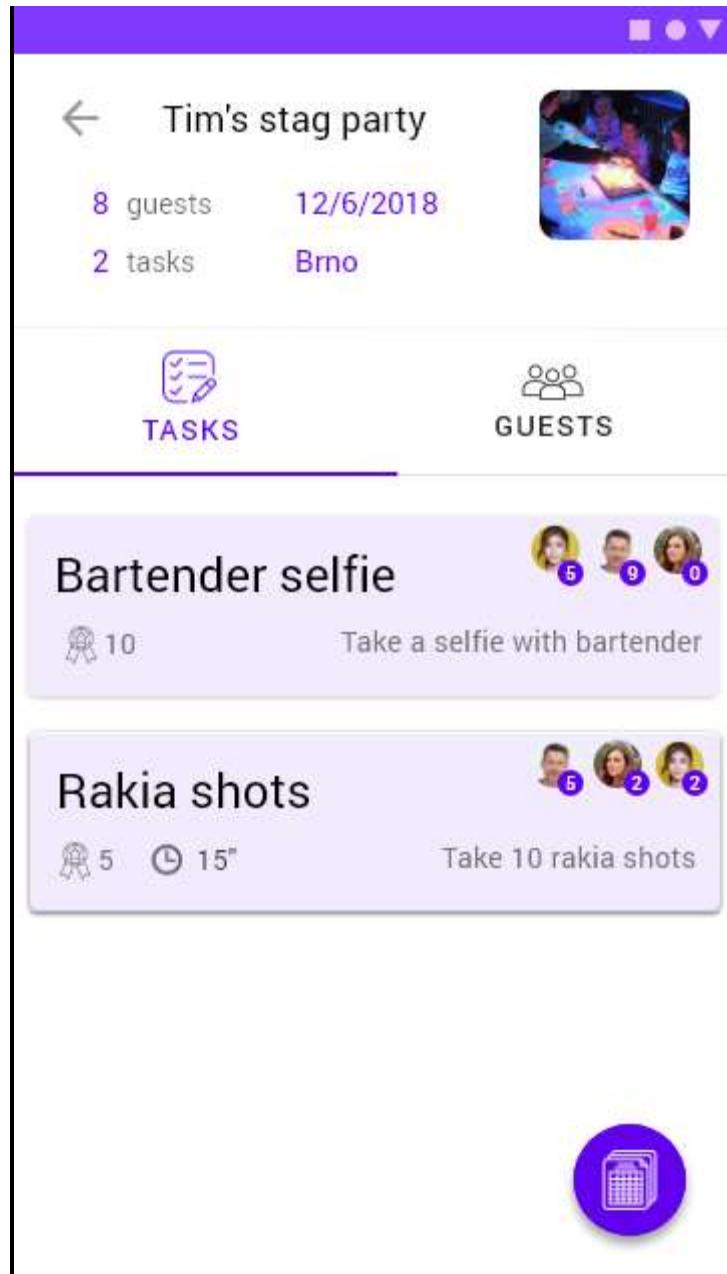
Attachment Fig 57 - Photo edit



Attachment Fig 58 - One attachment



Attachment Fig 59 - Task widget (assignee)



Attachment Fig 60 - Event summary