GitHub Username: Aleisamo

Child Adventures

Description

Child Adventures improves communication between childminders and parents. It allows parents to follow the development of their child by sharing the main moments of the day. Easily and instantly upload photos, videos and journals.

Intended User

Intended users are childminders and parents.

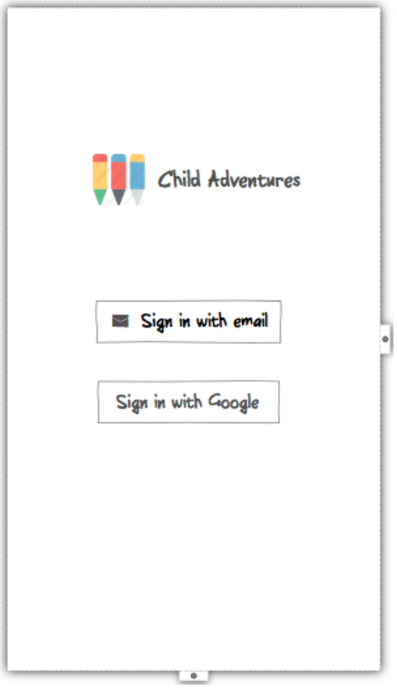
Features

- Create/Edit children's profile
- Add/Share photos, videos, journals
- Gallery
- Save information (Firebase storage, Firebase Database)

User Interface Mocks

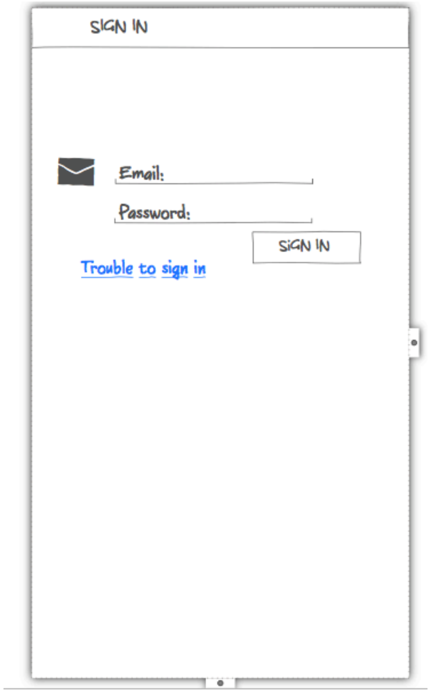
Screen 1

Create an account or log in if they already have one.
Integration with other providers such as Google.



Screen 2

Provide email and password to access or create a new account.



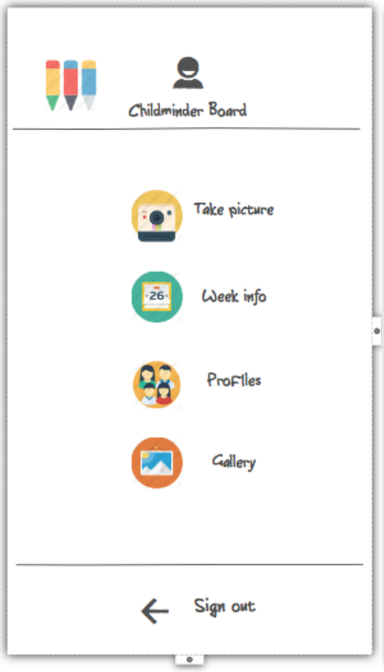
Screen 3

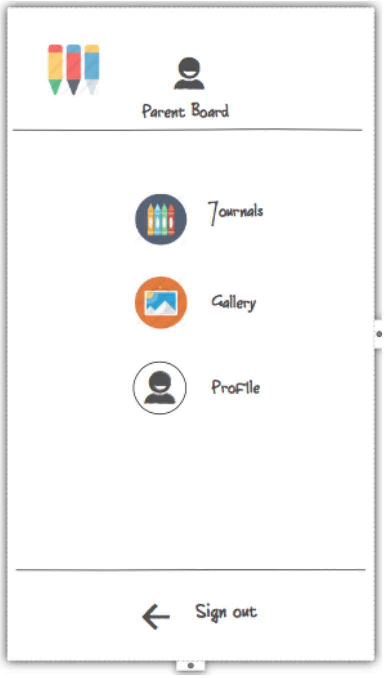
Childminder board

Main UI, the entry point of the application.
Present the features that the child-minder can use to take pictures, register the activities and menus, check/edit profiles, and a gallery to keep pictures that the child-minder intend to describe later.

Parent board

Main UI for the parents that allows navigating between the child's journals, gallery, and profile.





Screen 4

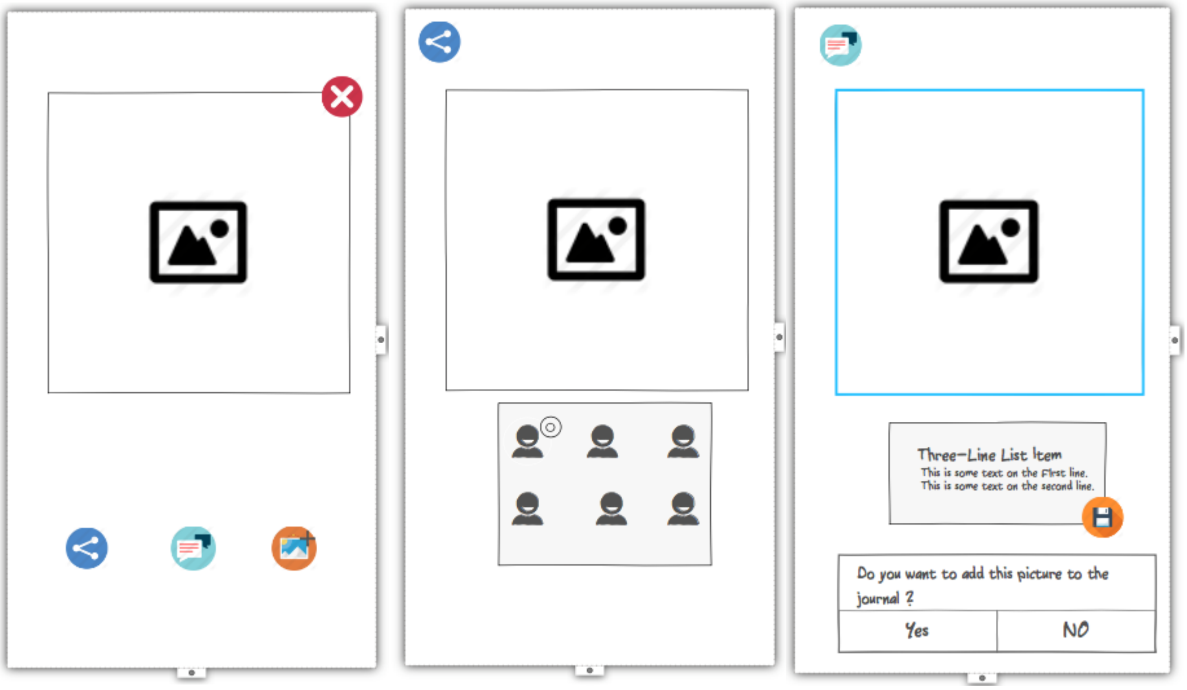
Take picture

This first option allows the childminder to launch the camera device and take a picture that will be displayed as shown below.

Once this picture is taken, the child-minder wil have some options:

- Discard the picture and take a new one.
- Share the picture with one of the child on the grid view.
- Write a comment and add to the journal.
- Keep the photo in the gallery to use it later.

The options to describe and share will also be available from the child-minder's gallery.



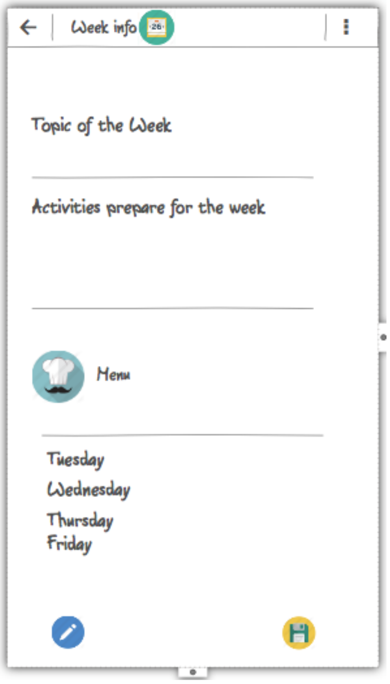
Three-Line List Item
This is some text on the First line.
This is some text on the second line.

Do you want to add this picture to the journal ?

Screen 5

Week Info

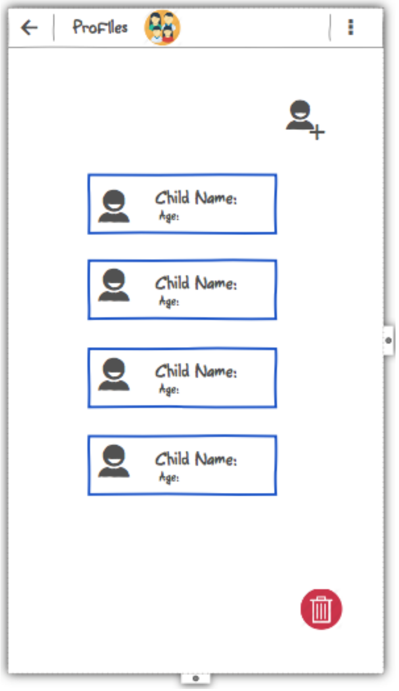
Selecting the second option from the main UI the child-minder will be planning the activities and menus for the week as shown below. This information will be used later to complete the child's journal.



Screen 6

Profile list

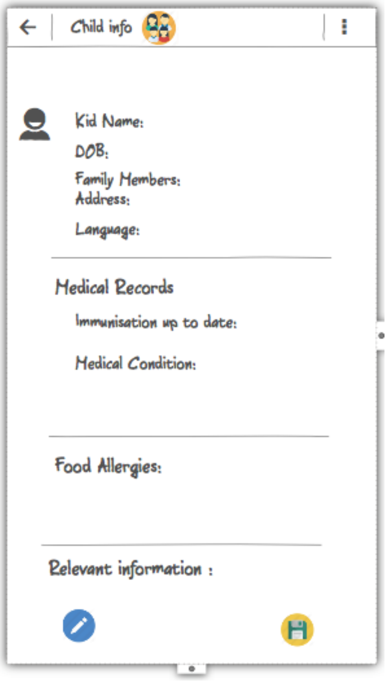
The third option presents a list of children and the option to delete or add a new one.



Screen 7

Child info

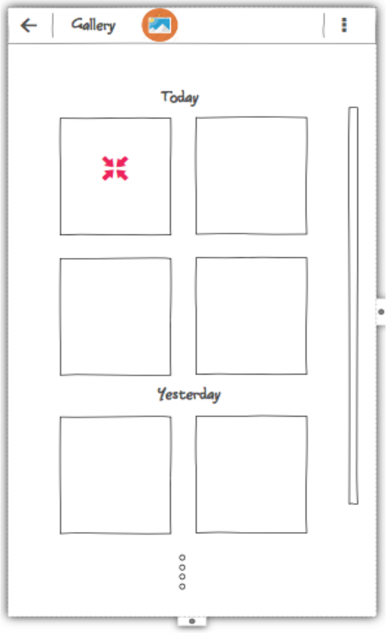
By clicking on one of the children on the list, the child-minder will access the details that can be updated. By clicking on the add a new child the childminder will access the same screen that can be completed and shared with the parents.



Screen 8

Childminder’s gallery

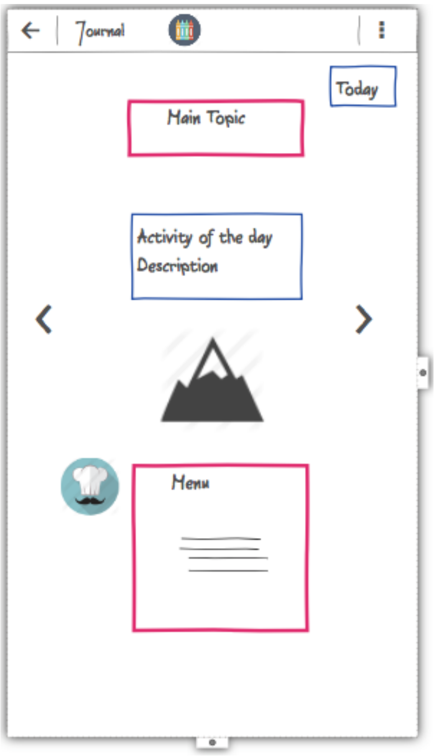
This option will display saved pictures that the child-minder took and can use later.



Screen 9

Journals

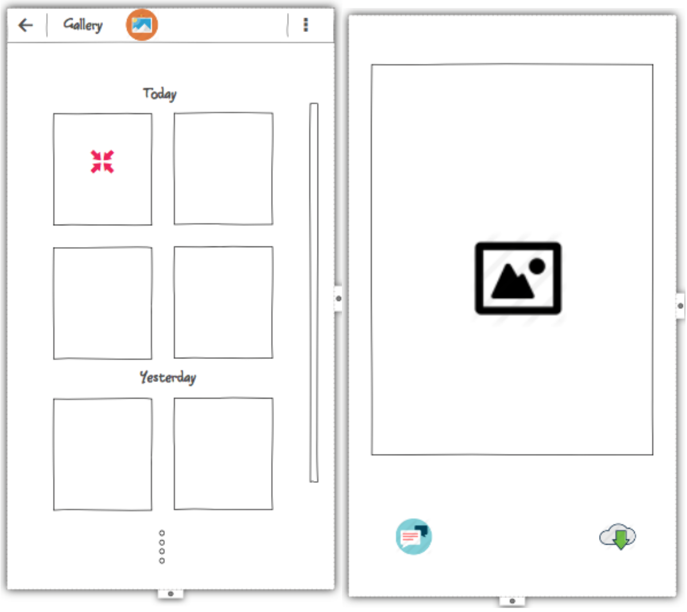
The parent will easily navigate between the different journals and have an idea about the various activities that the child-minder is doing with their child as shown below.



Screen 10

Parents' gallery

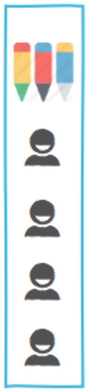
Shows a selection of pictures that were used to create the journals.
Selecting one of the pictures, the parents will be able to maximise the picture and if they want, download it, check the description, or swipe between pictures.



Screen 11

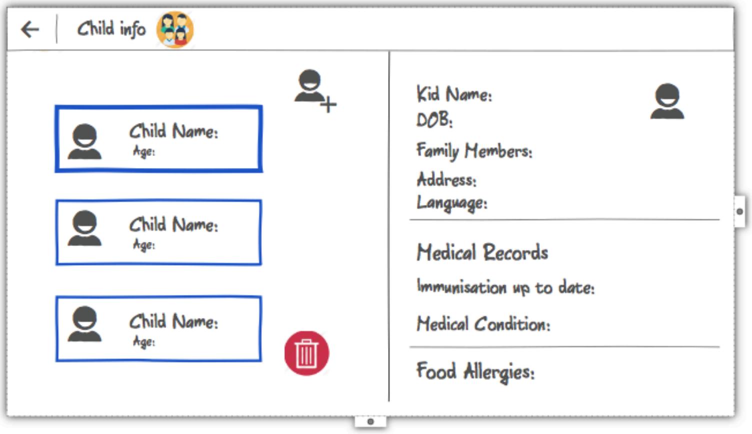
Home screen Widget

Shows the children that don't have a photo for today yet.



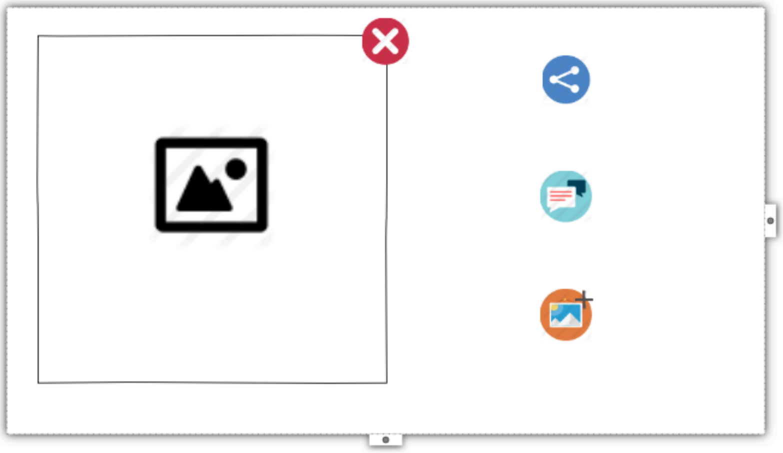
Screen 12

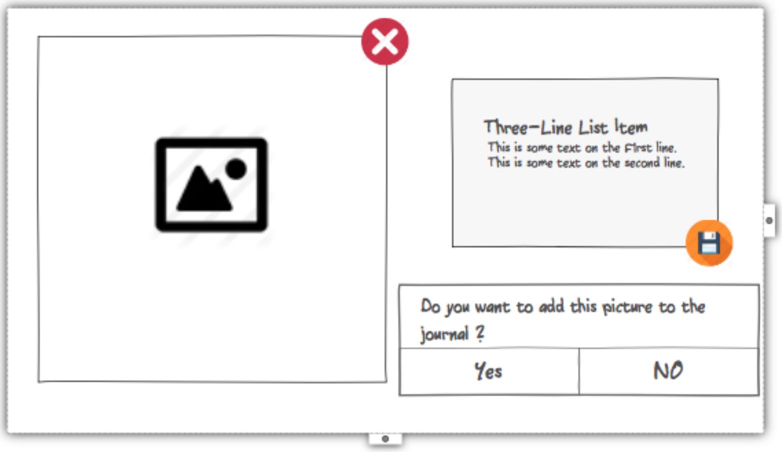
Tablets Profiles



Screen 13

Tablets take picture




Three-Line List Item
This is some text on the First line.
This is some text on the second line.

Do you want to add this picture to the journal ?

Key Considerations

How will your app handle data persistence

The app will be using Firebase in order to have a Real-time database to keep the data synchronized between the users.
Extend the service to non-Android users in a future.

UX cases

Going back from a full screen photo to gallery with the back button.
Select picture to be deleted from the gallery.
Select picture to edit description.
Working offline. The child-minder can still work when her/his device is offline. The app will synchronize the work when it returns online.
First time experience. The child-minder will be directed to the profiles activity and suggested to add children.

Describe any libraries you'll be using and share you're reasoning for including them.

Glide or Picasso to load images.
Butterknife to simplify the annotation and injection of the views.
Videos Exoplayer to play videos.
Cardview
RecycleView
Expresso for test purpose

Describe how you will implement Google Play Services or other external services.

Firebase real time database
Real-time database to share instantly the main moments with the users.

Firebase storage
The Application will be using firebase storage for photos, videos and text.

Firebase Authentication
Authentication to protect the data and check users' identities, this part is really important as the app will manage sensible data like children's pictures that only the parents or the child-minder should access. The application will use the service setting rules and roles to manage this.

Firebase Notification
To let the users know when a new journal is created.

Stage 1 Child Adventure App implementation guide

Firebase implementation

- Setup firebase on the project
- Use firebase console to create the project
- Link firebase with the android studio project
- Add firebase SDK
- Setup real time database check the most recent dependency
- Setup firebase UI Authentication
- Setup firebase storage to keep pictures, videos, and text

Additional libraries

- Loading pictures
- Play videos
- Design support

UI structure

Create UI Structure for each one of the activities and build fragments to work on phones and tablets.

- Create the main activity, which represent the child-minder's dashboard and parent's dashboard. This dashboard will allow both sides to navigate in the app.
- Each options presented on the main activity list will be action buttons.
- The first button will launch the camera device to take a picture and transfer it to an edit activity.
- The edit environment will be created using fragments to coordinate picture description, share list, save picture.
- Create a week activity that saves the planning of the week using a template that will be filled by the child-minder.
- The template will be created using fragments for the journals.
- Create list profile activity, which displays a list of children, add, and deleted options.
- Create child profile activity that will be launched
    - When an element of the list profile activity is selected.
    - From profile launch button on the parents dashboard.

- Create child-minder gallery activity in charge of displaying the pictures saved beforehand. Opens picture description once a picture of the grid view is selected.
- Create Journals activity that will be launched from the parents dashboard, this activity will display
  - Topic of the week
  - Activity of the day
  - Pictures selected and commented
  - Menu of the day
- Create photo gallery activity for the child, which presents all the pictures posted by the child-minder. Once an element of the grid is selected a detail picture activity is launch.
- Create detail picture activity which consist of
  - Display the picture full screen
  - Check description button
  - Download picture button

- Create a home screen widget that lists the children that don't have any photo for the current day yet.
  - List view populate with data from firebase
  - Updated this list once some change is done
  - Using remote view service, remote view factory, and widget provider.

Additional resources implementation

- Recycle views
- Intents passing data between activities
- Array adapters, view holder, remote view factory
- Activity and fragment lifecycle
- Preserve and restore app state
- Intent to invoke android camera App
- Download pictures using Asynctask and show progress dialog

Testing

- Create test to check UI behavior
- Create Functional test to check the main operations.

Polishing UI

- Adding Custom colors

- Theme and Style
- Make the app friendly to improve the user experience
- Use Material design to create smooth transition between screens
- Generate responsive layouts