



Adventurer's Guidebook

Team 13

Andrea Rakel Sigurðardóttir

Bjartur Örn Jónsson

Erling Óskar Kristjánsson

Þórarinn Árnason



HÁSKÓLI ÍSLANDS

ÍÐNAÐARVERKFRÆÐI-, VÉLAVERKFRÆÐI-
OG TÖLVUNARFRÆÐIDEILD



Vision Statement

- **For** adventurers (tourists, as well as locals)
- **who** like to go off the beaten path,
- **the** Adventurer's Guidebook
- **is** a social media mobile application
- **that** will provide a community for people to create and share unique travel guides.
- **Unlike** existing sources of travel guides and trip suggestions, **our product** will engage its users by having them create all its content.



HÁSKÓLI ÍSLANDS

ÍÐNAÐARVERKFRÆÐI-, VÉLAVERKFRÆÐI-
OG TÖLVUNARFRÆÐIDEILD

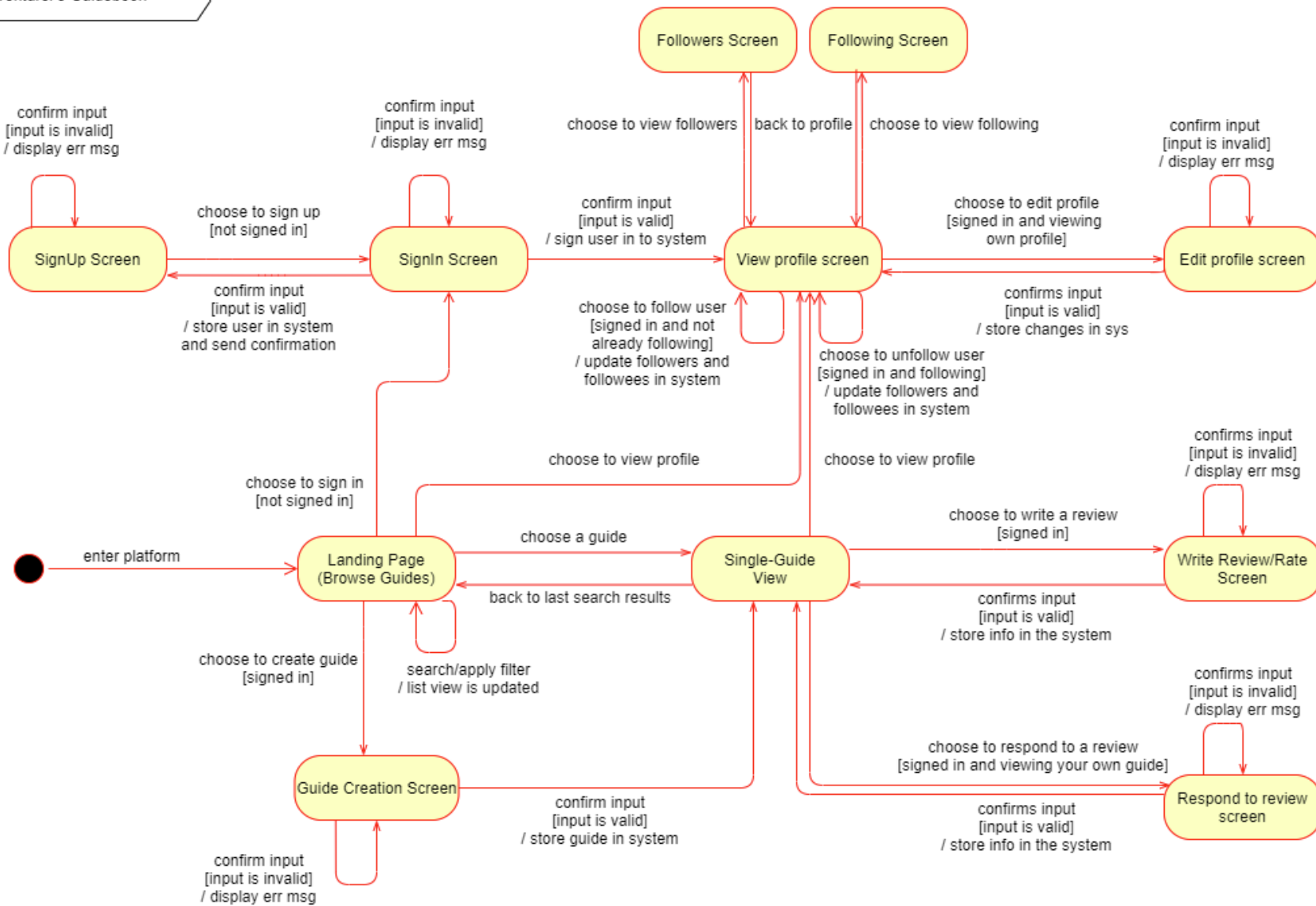


Key Features

- ✓ Browse and search for existing guides.
- ✓ Register to create an account.
- ✓ Login to manage your profile and upload a profile picture.
- ✓ Create a guide with a picture from your device.
- ✓ Rate & Review an existing guide.
- ☐ Guide creators can respond to reviews.
- ☐ View the profiles of other adventurers and follow/unfollow them.



State Machine Diagram



The Landing Page state is accessible from every other state, without a guard, effectively aborting the operation that was underway and losing any changes that have not been stored in the system.

The Sign In state is accessible from every other state.

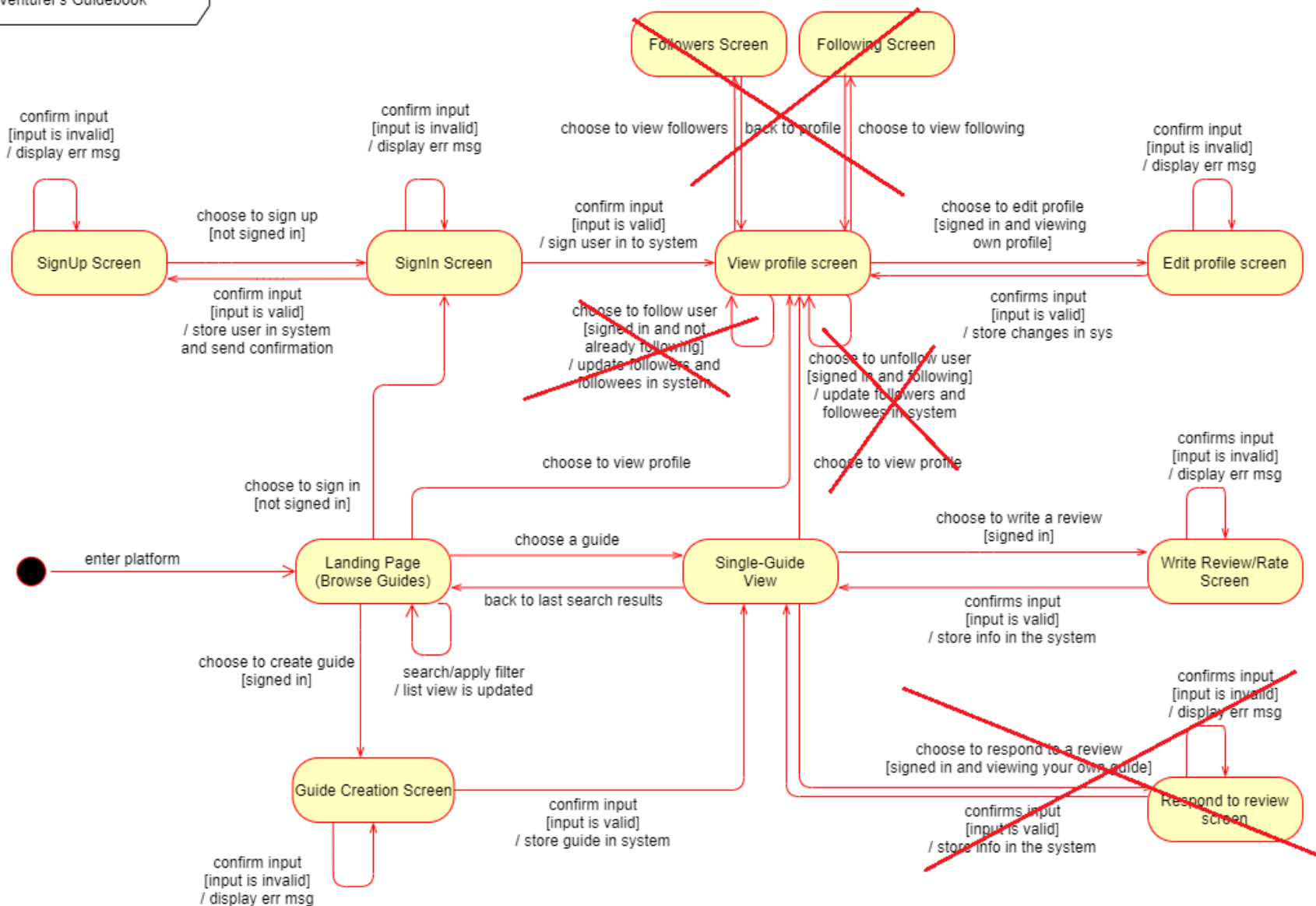
The Profile Page state is accessible from every other state, with guard.

The user can Sign Out from the system on any page, and then transfers them to the Sign In page.

The user can exit the platform from any stage. The system will store their session if they are logged in, but unsaved input will be lost

State Machine Diagram

Smd Adventurer's Guidebook



The Landing Page state is accessible from every other state, without a guard, effectively aborting the operation that was underway and losing any changes that have not been stored in the system.

The Sign In state is accessible from every other state.

The Profile Page state is accessible from every other state, with guard.

The user can Sign Out from the system on any page, and then transfers them to the Sign In page.

The user can exit the platform from any stage. The system will store their session if they are logged in, but unsaved input will be lost



Architecture

- ✓ Client – Server Model
- ✓ Written in Java
- ✓ Back-end uses Spring Framework
- ✓ Front-end developed using Android Studio
- ✓ Model – View – Controller Pattern on client side



Server Architecture

- ✓ Backend application hosted on the Heroku cloud
- ✓ Postgres database hosted by ElephantSQL
- ✓ Restful API written in Java with the Spring Framework
- ✓ Uses HttpSession and JWT to identify users
- ✓ Entities that map to database tables
 - ✓ RestControllers delegate responsibility and control
 - ✓ Services handle business logic
 - ✓ Repositories for persistence layer

Entities



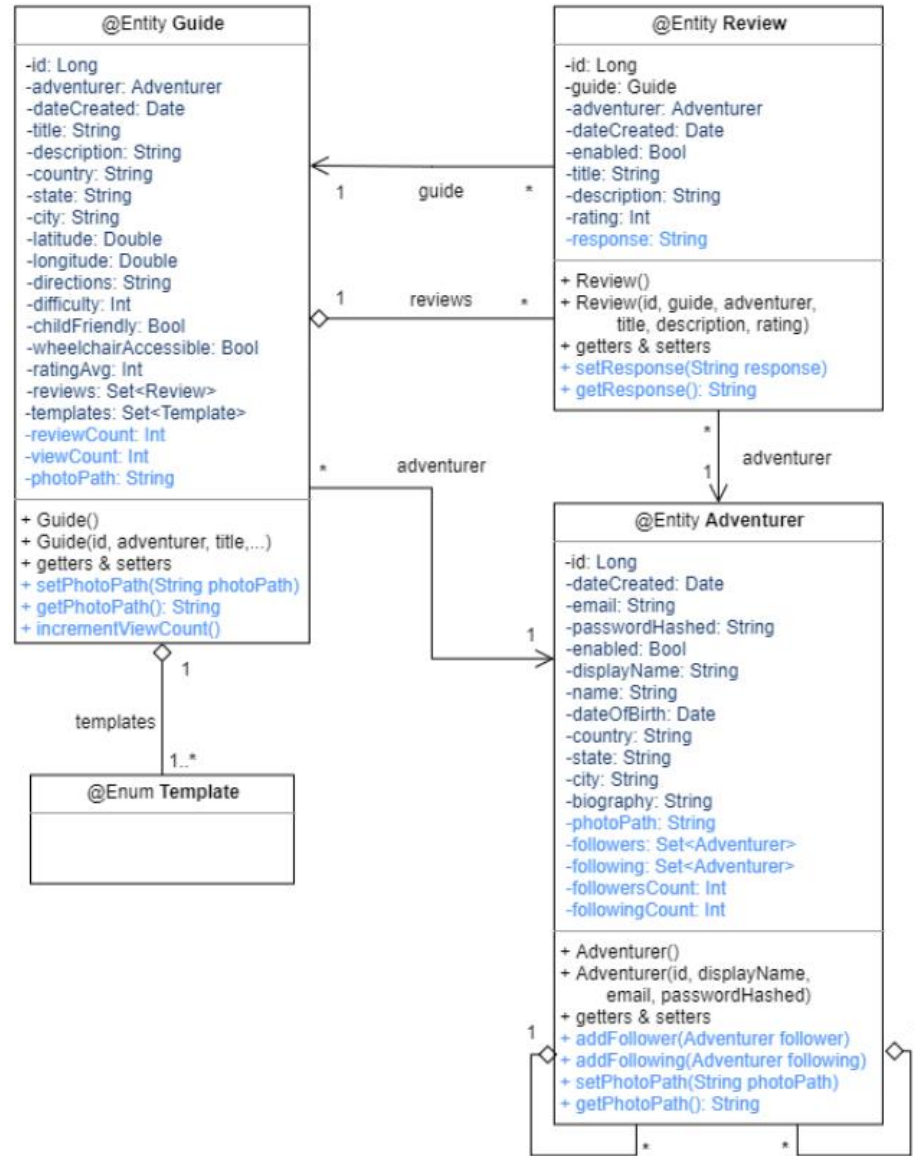
HÁSKÓLI ÍSLANDS

ÍÐNAÐARVERKFRÆÐI-, VÉLAVERKFRÆÐI-
OG TÖLVUNARFRÆÐIDEILD

Entities

Exist and used as needed (aggregation) both on the server and the client.

On the client side, these classes must implement Parcelable or Serializable interfaces, so that they can be passed between activities via Intents.

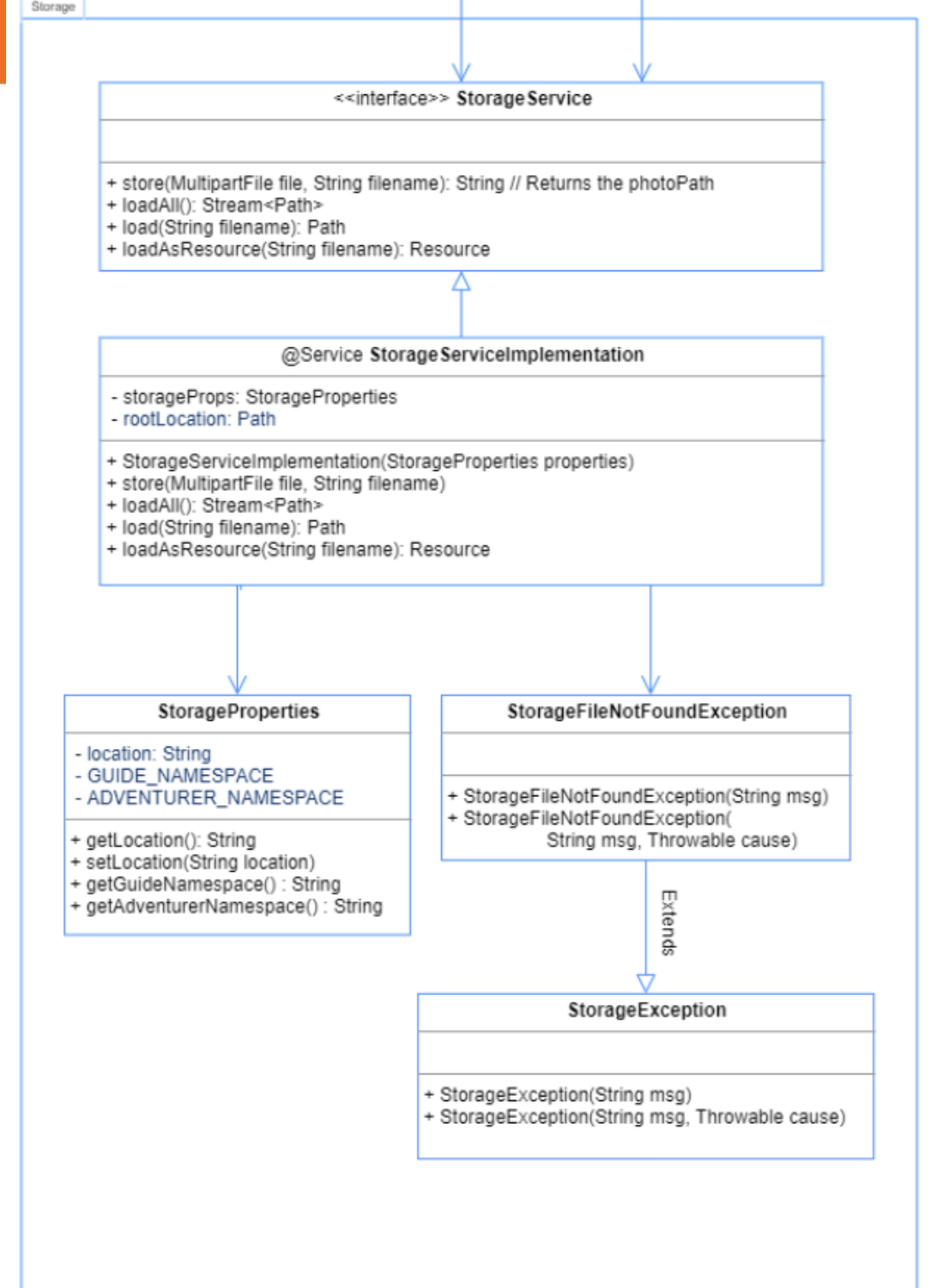


adventurer (follower) adventurer (following)

Each adventurer can have many followers, but each of the followers can only follow this adventurer once. Each adventurer can be following many adventurers, but can only follow each of them once.

File Storage

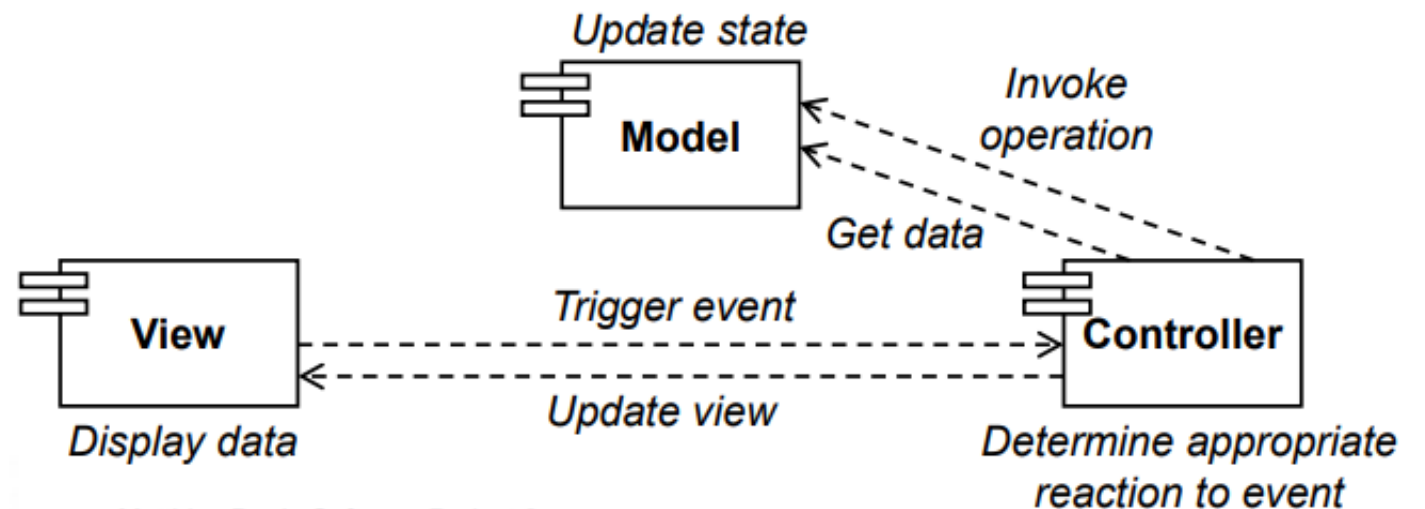
- ✓ Pictures are stored in file directory on the server.
- ✓ Path to each picture is stored in associated entity.
- ✓ Files have a maximum size and their names are generated by the system for security purposes.





Client Architecture – MVC Pattern

- ✓ Models are based on Entities from the back-end
- ✓ View represented by Resources such as `strings.xml` and `activity_main.xml`
- ✓ Controllers represented by activities



Matthias Book: Software Project 2

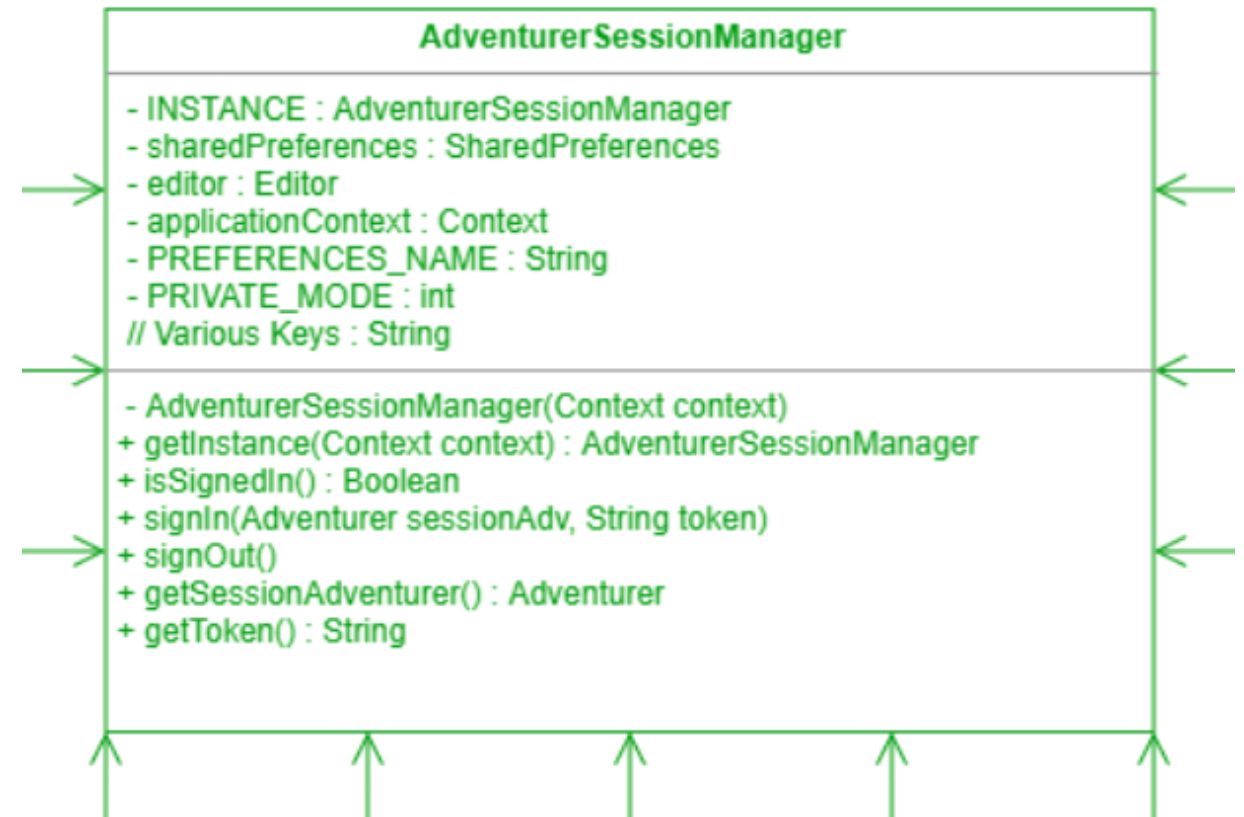
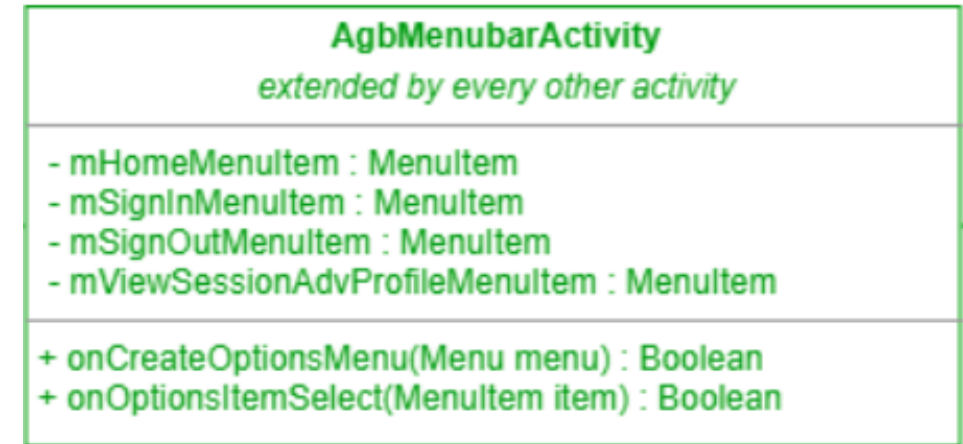


Client Architecture

- ✓ Shared Menu Bar
- ✓ Singleton Session Manager

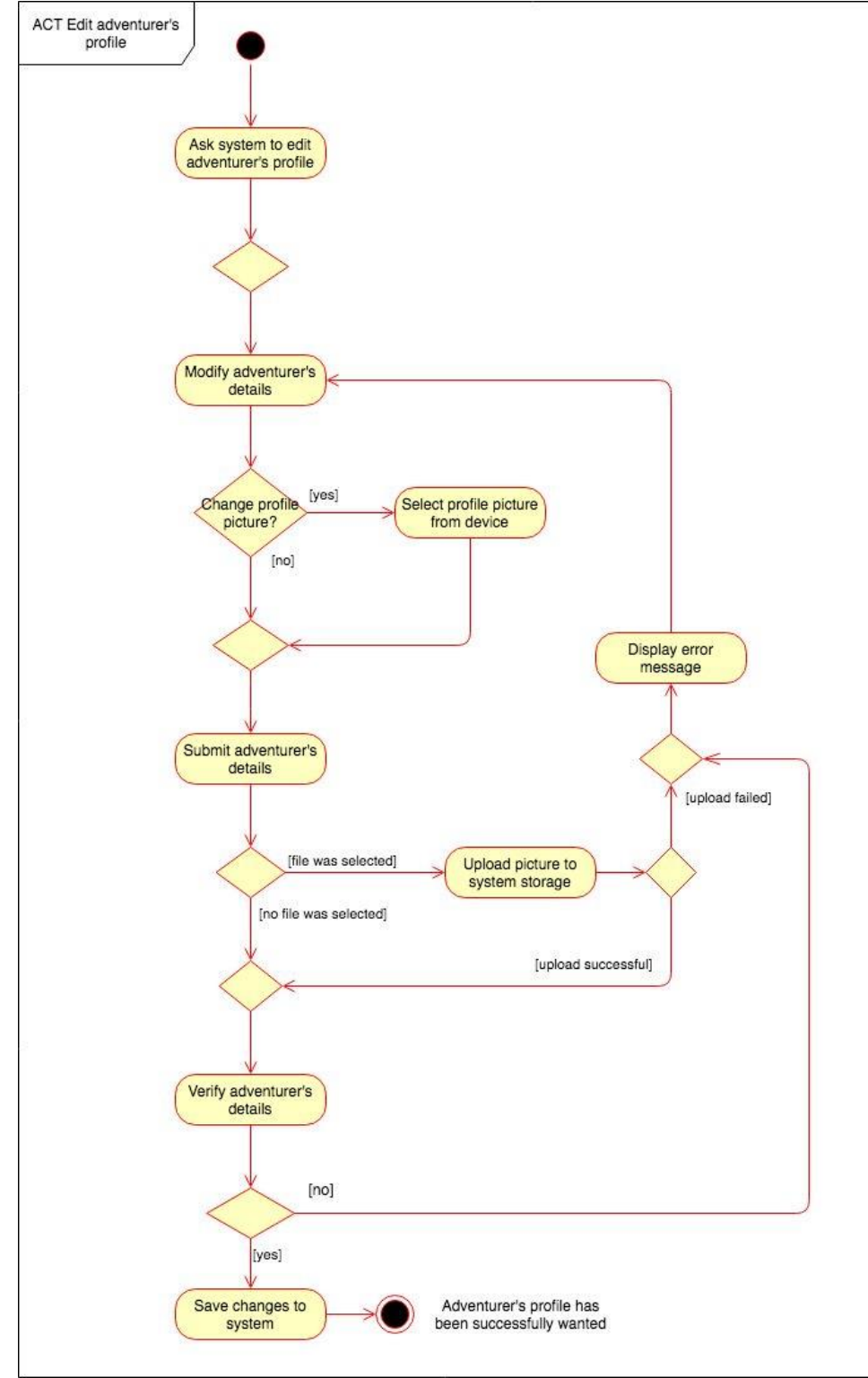
Technical classes (not shown):

- ✓ Singleton Http Client
- ✓ Static Photo Manager



Activity Diagram

- ❖ Showing the process of editing one's profile
- ❖ Can choose whether to change profile picture in which case the adventurer can select it from device or capture it with the camera.*





Process

- ✓ Expanded on project from HBV501G
- ✓ Combination of Agile and Rational Unified Process
 - ✓ Inception: Product vision, scope, and business case
 - ✓ Elaboration: Architecture, models, requirements and schedule
 - ✓ Instead of Use Cases, we wrote User Stories that we later broke into Tasks.
 - ✓ Construction: Development and testing
 - ✓ Three increments, each lasting two weeks, *resulting in viable products*.
 - ✓ Transition: Testing, tuning, refinement, release and rollout.



Combination of RUP and Agile

The Good & Brilliant of Agile

- ✓ Acceptance of change
- ✓ Frequent iterations
- ✓ Emphasis on working code
- ❑ No branching
- ✓ *Short duration* branching
- ✓ Product burndown chart
- ✓ Short iterations
- ✓ Refactoring
- ✓ Continuous integration

Plan-driven Iterative Development

- Gain understanding through models and specifications
- Risk management through planning
- Aspiration for stable structures
- Optimization through planning
- ~~■ Work on most risky features first~~
- ~~■ Increments are partial systems~~
- Stable overall target vision
- ~~■ Well-defined roles and responsibilities~~
- Discipline required to follow plans

Agile Iterative Development

- ~~■ Gain understanding through communication and feedback~~
- ~~■ Risk management through flexibility~~
- Acceptance of fluid structures
- Optimization through refactoring
- Work on most valuable features first
- Increments should be viable products
- ~~■ Open overall target vision~~
- Self-organizing teams
- Discipline required to utilize freedom



HÁSKÓLI ÍSLANDS

Matthias Book: Software Project 1

8



HÁSKÓLI ÍSLANDS

ÍÐNAÐARVERKFRÆÐI-, VÉLAVERKFRÆÐI-
OG TÖLVUNARFRÆÐIDEILD



Retrospective

What could have gone better

- ✓ Tests as a key resource
- ✓ Test with every piece of functionality.

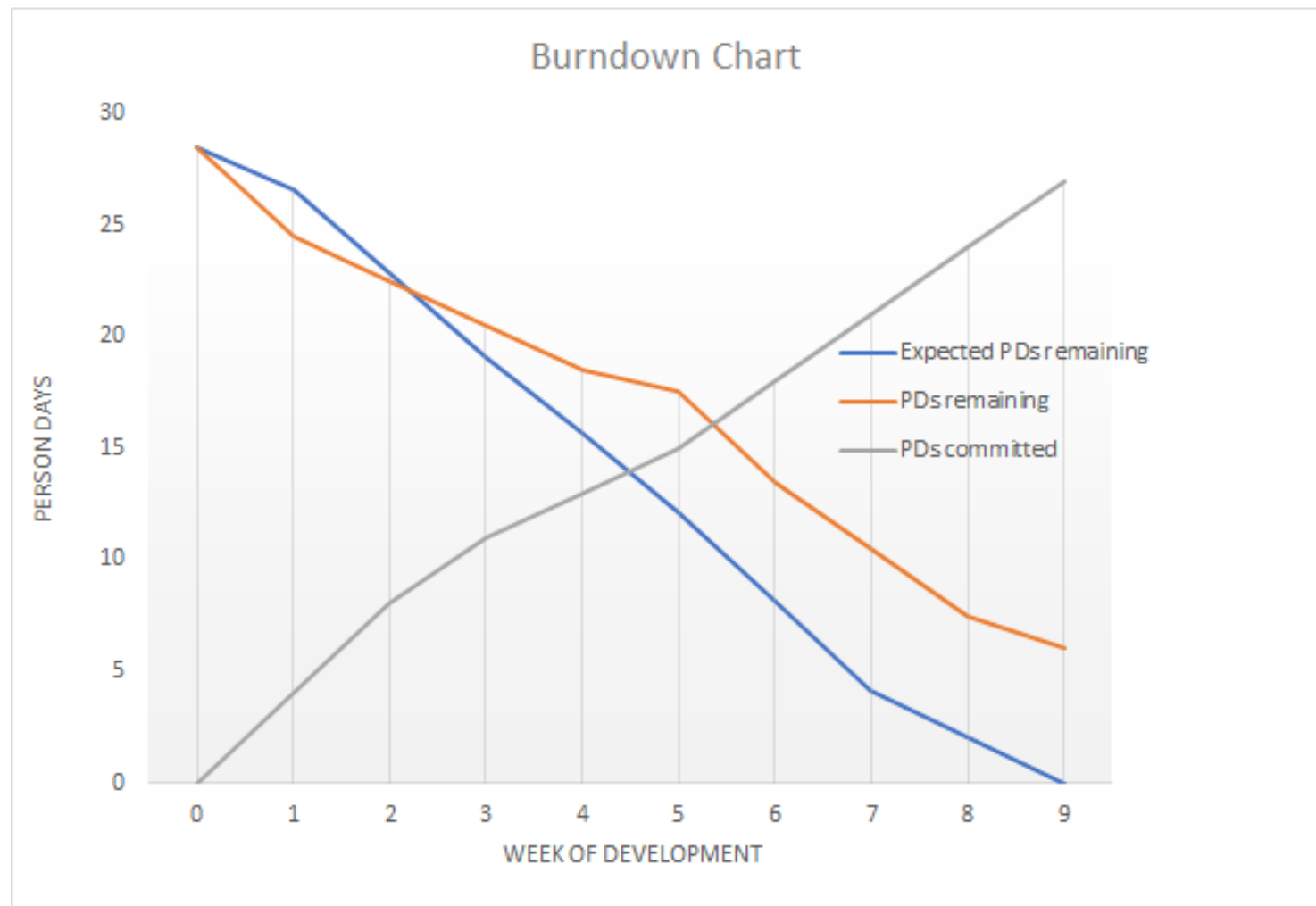
What went well

- ✓ *Sticking to the schedule*
- ✓ *Self-organization*
- ✓ Git Flow
- ✓ Communication
- ✓ Collaboration



HÁSKÓLI ÍSLANDS

ÍÐNAÐARVERKFRÆÐI-, VÉLAVERKFRÆÐI-
OG TÖLVUNARFRÆÐIDEILD





Questions?



HÁSKÓLI ÍSLANDS

ÍÐNAÐARVERKFRÆÐI-, VÉLAVERKFRÆÐI-
OG TÖLVUNARFRÆÐIDEILD