System design document for SvettIT

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1 Introduction

The purpose of this System Design Document is to explain the design of the SvettIT training application and the design choices made for development. SvettIT is intended to replace traditional training applications by having similar statistics to more advanced training applications. At the same time allow the user to plan and structure their months and workouts on a more detailed level than a normal calendar would do. The System Design Document was made to ensure that all the developers have the same vision and thoughts about the design and implementation of SvettIT.

1.1 Definitions, acronyms, and abbreviations

- Session
  A session is a period devoted to a specific activity. In this document a session is seen as a training session, where a period of time is devoted to training.
- Exercise
  A session is built up of exercises, and an exercise consists of intervals or sessions and repetitions depending on if it's a strength or cardio exercise.
- Routine
  A routine is a premade set of exercises, created to make it simpler for the user to create a session when they have similar recurring workouts week after week.

2 System architecture

The application is built up of two major parts, one being the planning and the other is the statistics.
The planning of the app consists of the construction of new activities and that they will show up in the calendar and the upcoming sessions view. The calendar is just like a normal calendar and it shows the planned workouts. The upcoming sessions view is where the user can see all the next set of planned activities in order based on what date they are set on, newest first.
The statistics part of the application shows the progress towards goals and statistics of earlier workouts. The goals are self selected and there will appear a progress bar

on this page where the user can see where they were when the goal started, what the total goal is and how close they are to reaching their goal, both in percentage in a percentage-bar and also in numerals. The statistics are in the form of graphs, in these graph the user sees tha last week or month of workouts, and it can show generic things like ‘exercise time’ which could be a graph, only going up with each session. The statistics can also show progression of max strength in a specific exercise I.e. ‘squats’. There will also be percentages like ‘total distance run’ which sums up all total runs for the last year and month.

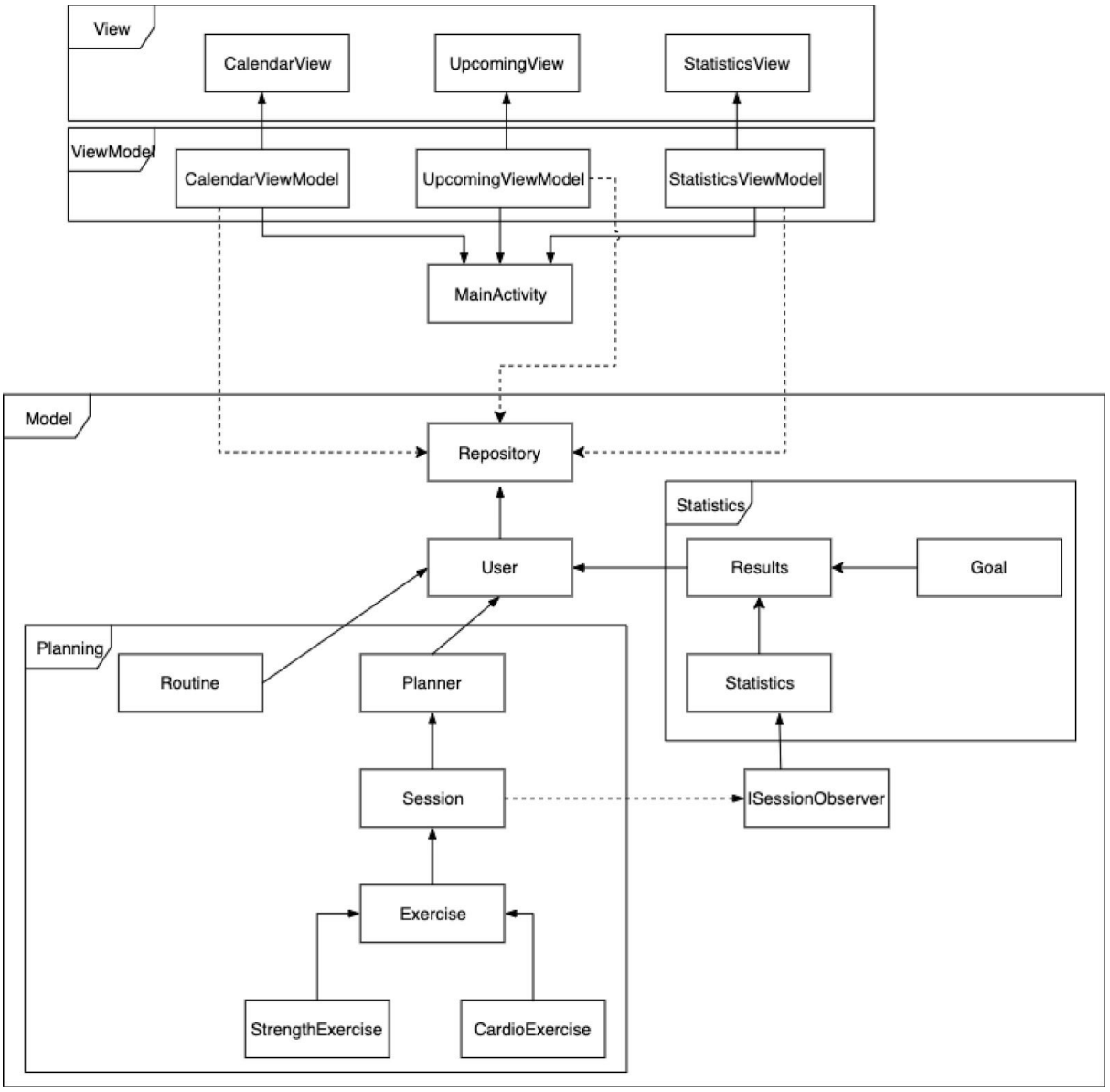
For a user, when the app launches, they will be presented with a view of the upcoming sessions for the following days, on the top of this page is today's session if there is one. From this view it’s possible to create a new session o navigate to the calendar or the results page.

When the user choose to create a session they are presented with a calendar where they choose a date, then they can fill out information of what to do.

In the calendar page the user sees a month view of a calendar, if the user selects a date in the calendar which contains one or more activities, they will appear underneath. If a date is selected and the user selects the create session button they will get the session date set to that day when done.

In the results page the user will see graphs and progressions towards goals, as long as the user have got any goals and/or finished sessions.

3 System design



We decided to follow the MVVM design pattern instead of the MVC design pattern, since this is more tailored to Android. Following a MVC design path Could have meant serious development issues for this application. MVVM is pretty similar to MVC where the biggest difference is that the user interacts witht the View in MVVM rather than the Controller in MVC

4 Persistent data management

The application uses a simple database to store the planned and finished activities, this is so that the callendar can load and display them and the statistics can compare and draw the data.

5 Quality

5.1 Access control and security

6 References