

# Requirement and Analysis Document

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## Introduction

During a workout it is common to keep track of progress in different ways in order to improve. It is necessary to plan workouts, what to do and when to do it. It is also desirable to keep track of progress and set up goals.

This is a workout application where it is possible to do these things. It is similar to a calendar where it is possible to create workout sessions and have an overview over upcoming workouts. Every workout shows a set of exercises and it is also possible to see statistics from finished workouts. In addition, it is possible to set up goals and see the progress towards these goals.

## 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 is a strength or cardio exercise.
- StrengthExercise:  
For example biceps, legs or other workouts to gain strength.
- CardioExercise:  
For example running, walking or intervals.

## Requirements

### User Stories

Below are all of the user stories that were thought of in the planning phase. [In the end] Each user story is marked whether it is implemented or not.

- As a user I would like to organise my workout in order to make it easier for me to perform.
  - As a user I would like to see my coming workout in a list, sorted by date, so that I can get an overview of my coming week. (Implemented)
  - As a user I would like to see a monthly view of my workouts, to be able to plan far ahead. (Implemented)

- As a user I would like to be able to create workouts, which are saved in my list of sessions. (Implemented)
- As a user I would like to save a set of exercises, so that I can add them quickly to a session.
- As a user I would like to repeat a workout in my schedule if I wish to do it on certain days.
- As a user I would like to add new exercises to customize my workout. (Implemented)
- As a user I would like to delete or change my workout sessions if I change my mind.(Implemented)
- As a user I would like to mark sessions as done to remember what I did. (Implemented)
- As a user I would like to see detailed information about the workout session when I select it, to know the details of my workout. (Implemented)
- As a user I would like to see statistics from my performed workouts to see if I am improving.
  - As a user I would like to see my total workout time and other overall statistics in order to feel good about myself. (Implemented)
  - As a user I would like to see my total workout time during the last month/week in order to feel good about myself.
  - As a user I would like to set up goals so I can feel good when I reach them. (Implemented)

## Definition of Done

The Definition of Done is described below. It has been discussed in the group and agreed upon.

- The code has been tested and works.
- At least 1 group member has tested it and read through the code using pull requests on GitHub.
- All group members agree the UI and implementation is as envisioned.
- Not necessarily implemented into the app if it relies on other user stories to work properly.
- It has been pushed to git and all group members can access it.
- It has been tested on different types of phones or emulators to make sure it works on different screen sizes and hardware.
- The code is commented.
- Code follows the code structures and conventions agreed upon in the group

## GUI

The GUI consists of three main views and two secondary ones, where the first main view is a list over upcoming workouts (see Figure 1). The second view is a monthly view where it is possible to pick a date to display a list of planned workouts for that date. From both of these views it is possible to plan and create a new workout. The third view is for displaying

statistics gathered from completed workouts. There are two types of statistics available. The first one is overall, showing total exercise time and such while the other type is tracking your personal goals. The two secondary views are for creating a new Session and reviewing an old one.

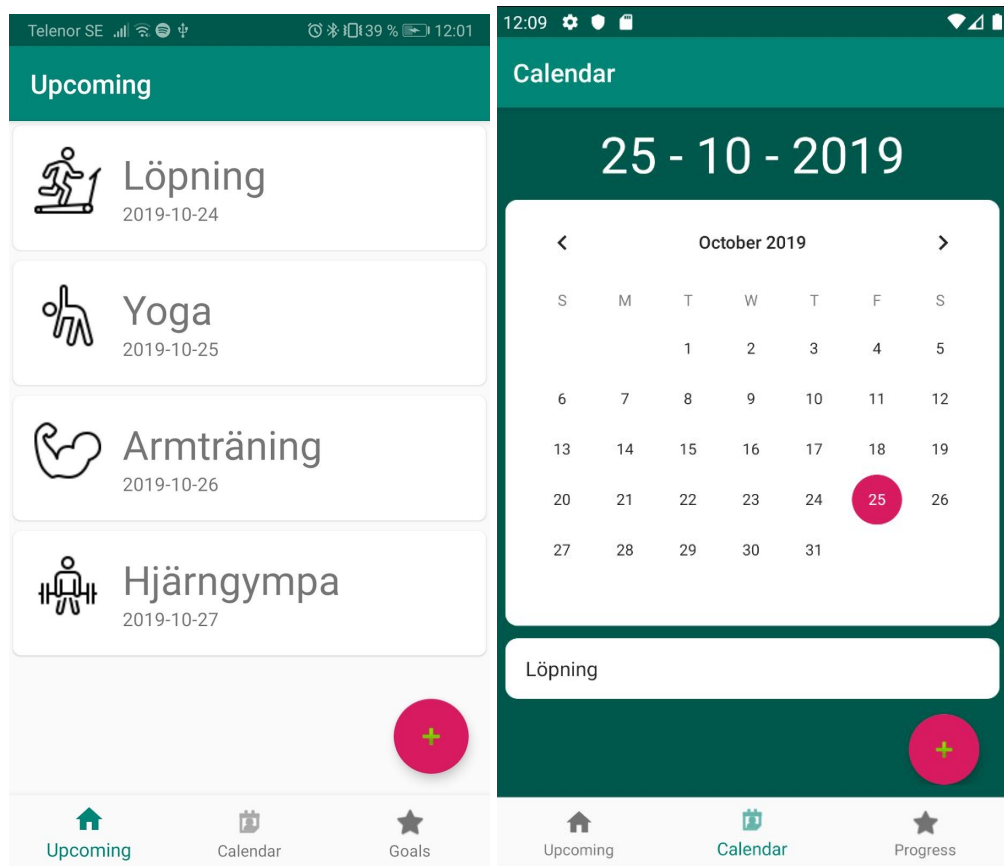


Figure 1: To the left: A printscreen of the first view, a list over upcoming workouts. To the right is the calendar view.

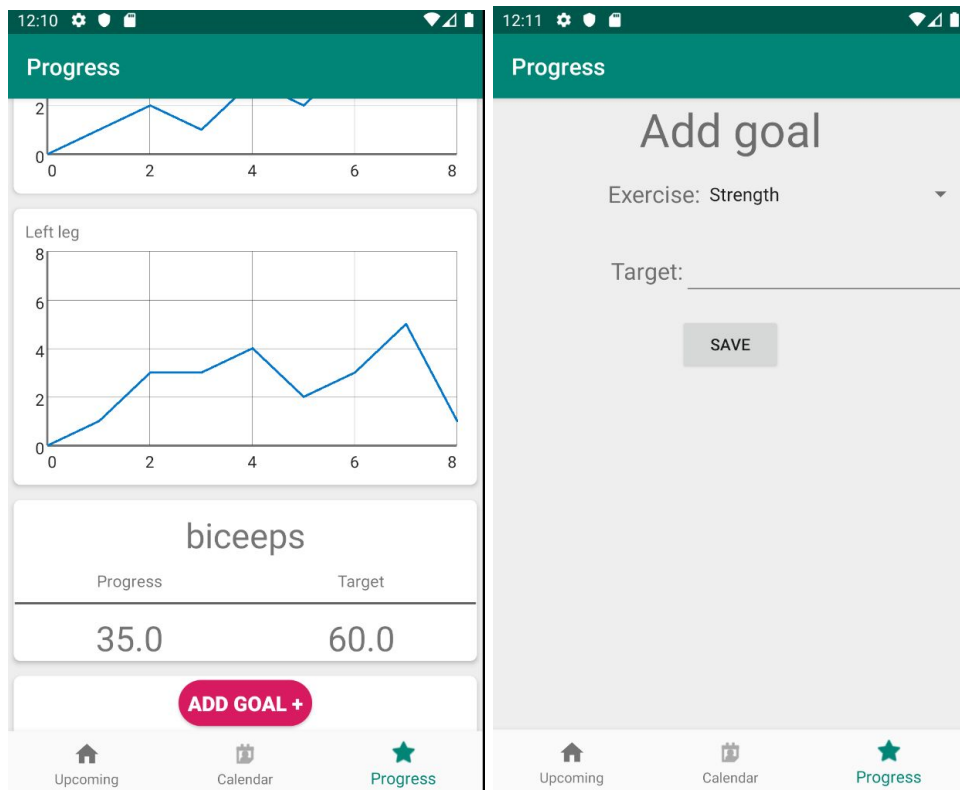


Figure 2: To the left: the goals view, which contains both goals and graphs. To the right: the view to add a new goal.

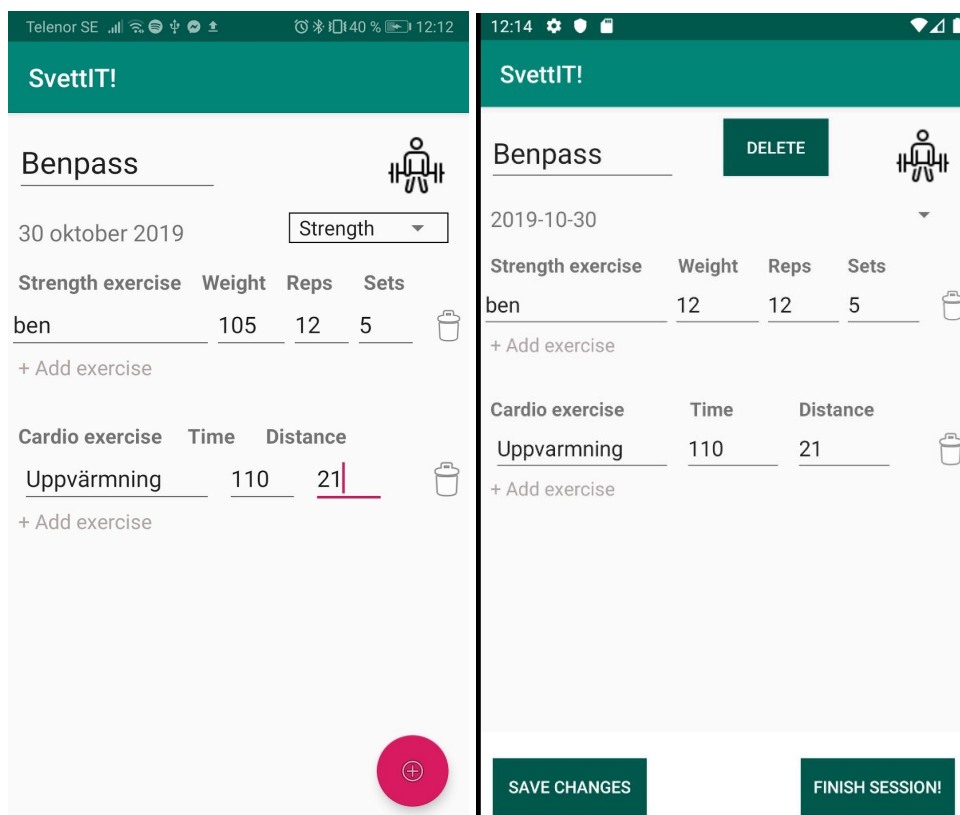


Figure 3: The two secondary views. To the left, the view to create a new workout session. To the right, the view when an existing session is clicked on.

## Domain model

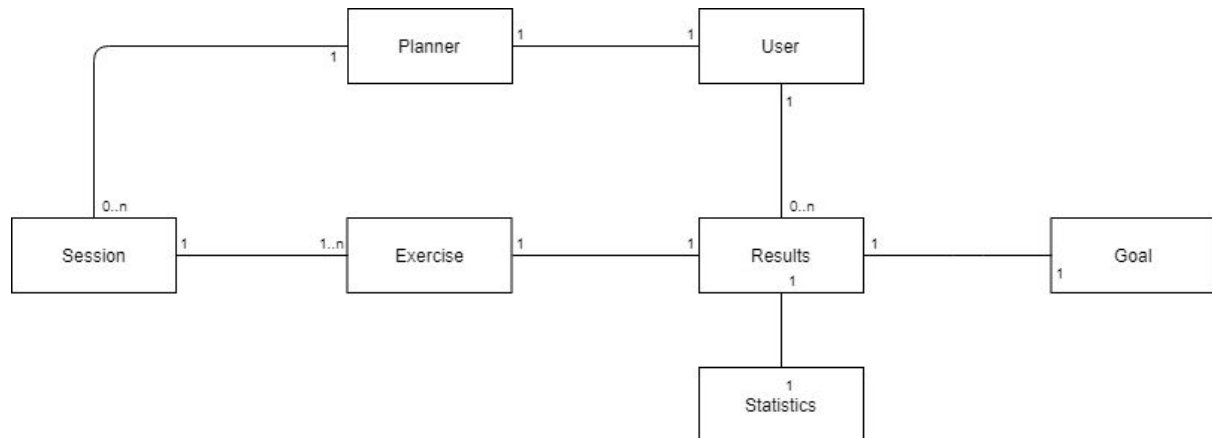


Figure 4: Domain model showing an overview of the application.

The domain model in Figure 4 shows an overview of the application. The user has a planner which holds different sessions. Each session has a list of exercises to be performed. The user also has a class for holding results from the workout. Statistics hold the progress and goal holds the targeted result.

## Class responsibilities

### User

User is the class in which the information regarding the user of the application belongs. It has two instance variables, Planner and Results, whose responsibilities are explained later in this chapter. The application is made for only one user per device.

### Planner

The Planner class is responsible for keeping track of the Sessions created by the User. These are stored within a list, which can be reached by other classes. Other classes can also add more Sessions to this list through the Planner class.

### Session

A Session is representing one of the user's workouts. To allow the user separating one Session from another, the Session has a name, date, icon, and a list of Exercises. The Session provides the Statistics with data. A Session can be marked as finished so it can not be edited anymore.. The Sessions are designed in such a way that they can be sorted by their dates.

### Exercise

There are two kinds of Exercise, CardioExercise and Strength exercise, with small differences between the two. Exercise holds everything the two types of exercises have in common. Whilst StrengthExercise hold information regarding the weight, the number of repetitions and sets lifted by the user, CardioExercise keep track of the time and distance of

the exercise. As the names suggest, the two classes are used depending on what sort of exercise the user is performing.

### **Statistics**

The Statistics part of the SvetlIT application is used for tracking the user's workout progress. It holds a list of Goals (explained in further details below) and a list of Exercise specific statistics. This class, in turn, holds the data for each specific Exercise: a name, a list of data and a list of dates. The data is collected from the Exercises in a completed Session, which is then presented in various forms in the Goals section of the application. By adding the data of each performed Exercise, Statistics also keep track of the total amount of sets/ reps/ distance etc. of which the user has completed.

### **Goal**

The Goal class allows the determined user to set Exercise specific goals for him or herself. Each Goal has a name, targeted goal and progress. The name and target is set by the user, and the progress is updated in Statistics after each completed Session. How the progress is updated is depending on whether the Goal is set for a StrengthExercise or a CardioExercise; a Goal for a StrengthExercise is focused on reaching the set weight, whilst a Goal for a CardioExercise is tracking the total distance performed for that specific Exercise.