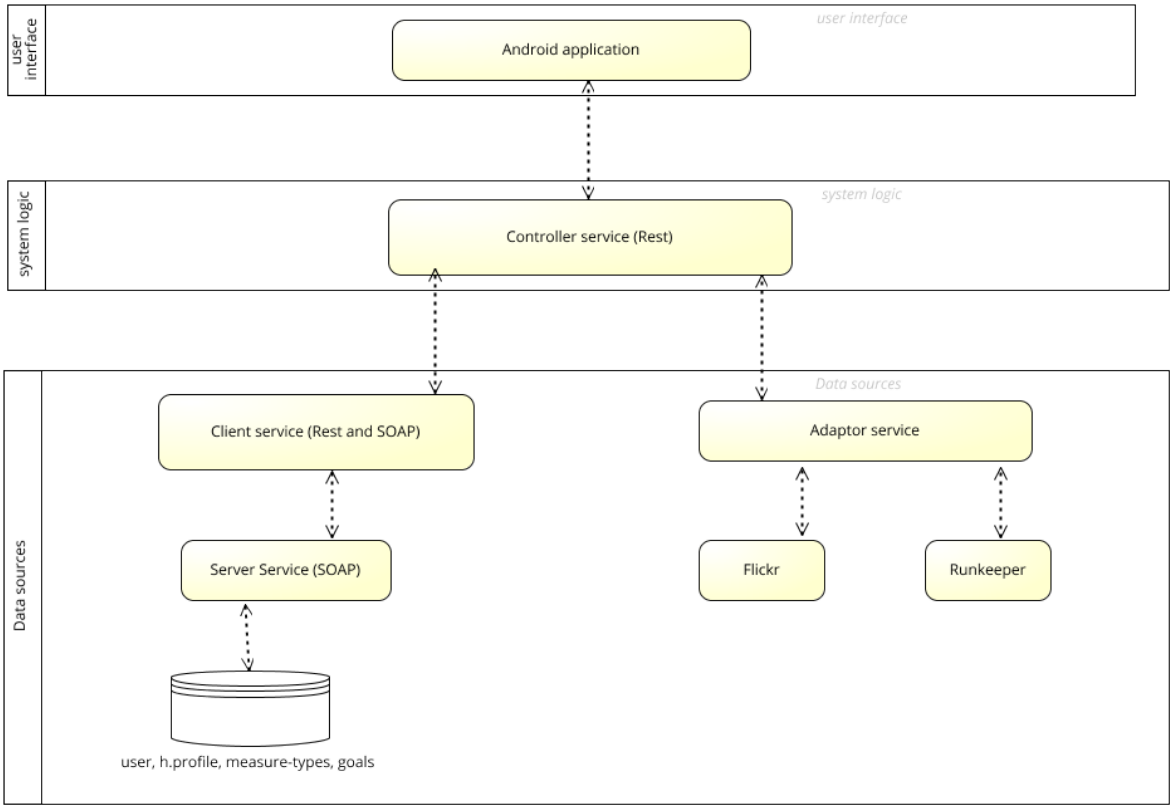
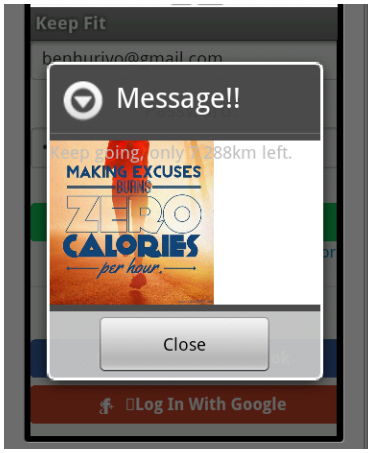
Keep Fit App
This is a mobile application to help runners achieve their running targets by setting a target/goal and linking to an external running API ie Runkeeper which collects their running activities. The user can view and edit their current goals and health profiles at any-time, and can also view their history. The application is able to encourage the user when they go to view their achievements.

Architecture of the Application



User Interface (UI)
The user Interface is built using android and HTML and has calls to the Controller service. It enables the user to input, view and manipulate data ie register, record a health profile, set a running goal edit recorded data.

Images showing the user interface



Controller Service
This service controls communication between the android system (UI) and the data sources layer. It serves all requests coming directly from the user interface layer and also is responsible for all kinds of data manipulations, decision making and calculations. It was built using Java and REST

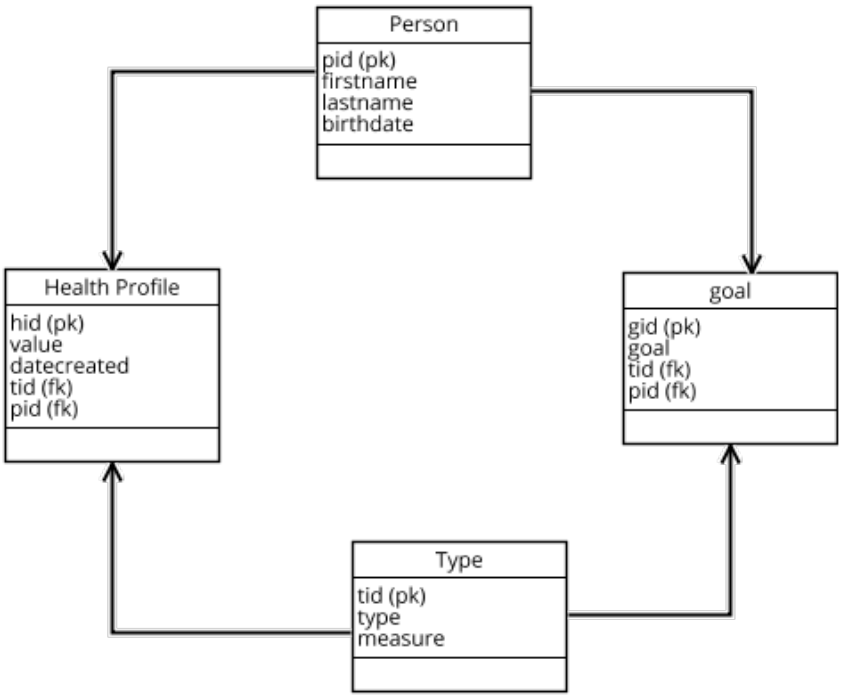
Client Service
This service handles requests from the controller service and deals with fetching / retrieving of data. It is based on two technologies ie REST and SOAP. Receiving of calls to fetch data is implemented basing on REST API while fetching data is based on SOAP.

Server service
Is responsible for handling all data related requests ie persistence and retrieval related tasks. It talks to the database adaptor. It also contains methods which are used in the persistence and retrieval of data at the database level. It was built basing on SOAP.

Adapter Services
These include services which get data from external APIs. In the system, I used two external services to get data ie **Flickr** and **Runkeeper**. Flickr provides images used in motivation of the user while Runkeeper has distance covered while running. This is used to compare with the goal, to provide a motivation image and message.

Database
The database was built using SQLite. There are four tables ie **person**, **healthprofile**, **type** and **goal**. All these are linked with primary and foreign keys thus are related.

Below is an image of the database tables and the relation.



How it works

The user installs the android application on their android phone. Once setup, they are required to register. During registration the first and last names, date of birth, weight and height of the user are recorded.

After registration, the user is added on the list of registered users. He is then able to set a goal and also edit and manipulate his information.

To get a goal gift, and motivation, the user is required to login with their **runkeeper** account and then their running distance is retrieved. This is used to compare and compute with the goal he set and a motivation image from **Flickr** and message sent to the user.

Also the use is able to view, edit and delete the information at anytime.