TransLog Project – Design

Purpose: To make an app that can:

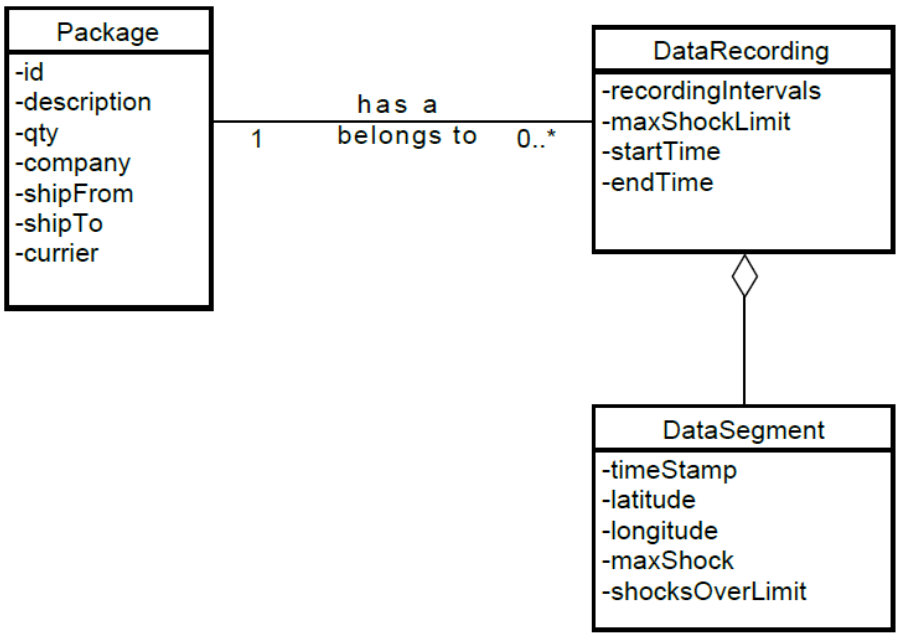
- Record data: In user defined time intervals record shock-data and location-data. **(I think that's all the sensors the Samsung s5 mini is able use)**
- Use QR-scanner to scan package-info: Scan a QR-code to obtain the package information. Maybe also consider making a manual data entry feature.
- Display Data: Display the recorded data in graphs and maybe on google map plugin.
- Save data to database: Save data on device and receiving app using SQLLite Room.
- Send Data: Via Bluetooth send data to the receiving app.

Addition features:

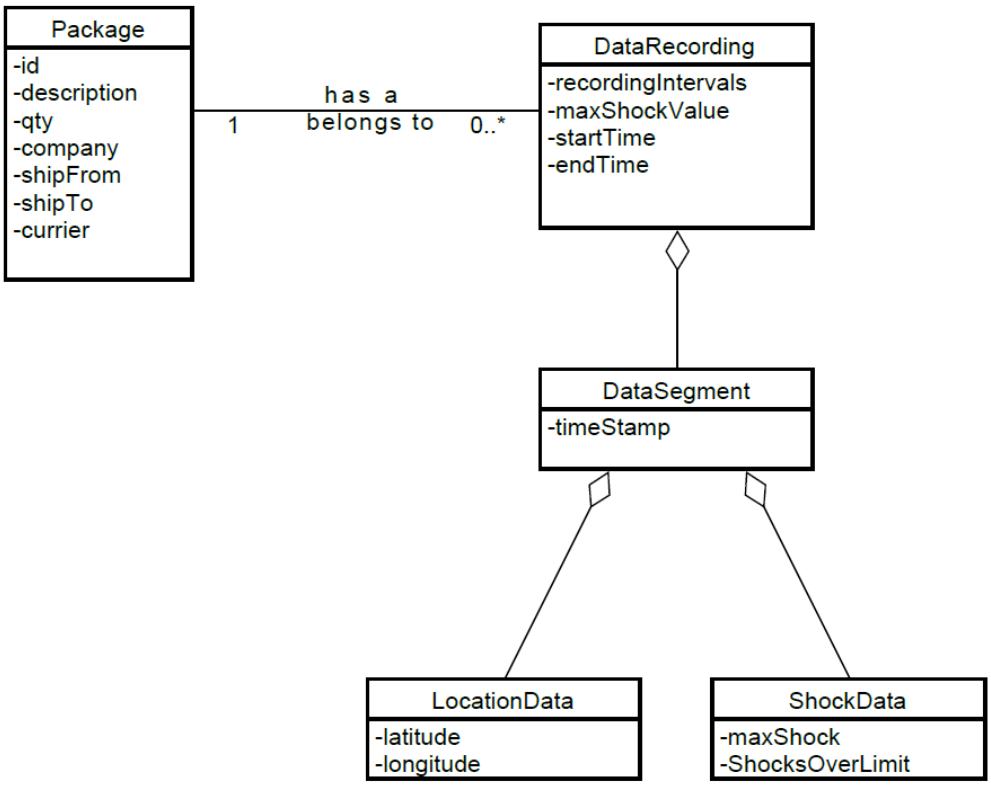
- Menu: Navigation menu on top of screen. Menu items: *New Package, View Data, Settings*
- Settings: A settings activity which gives the user the ability to set: **1) Time for recording intervals, 2) shock sensitivity**

Data Model:

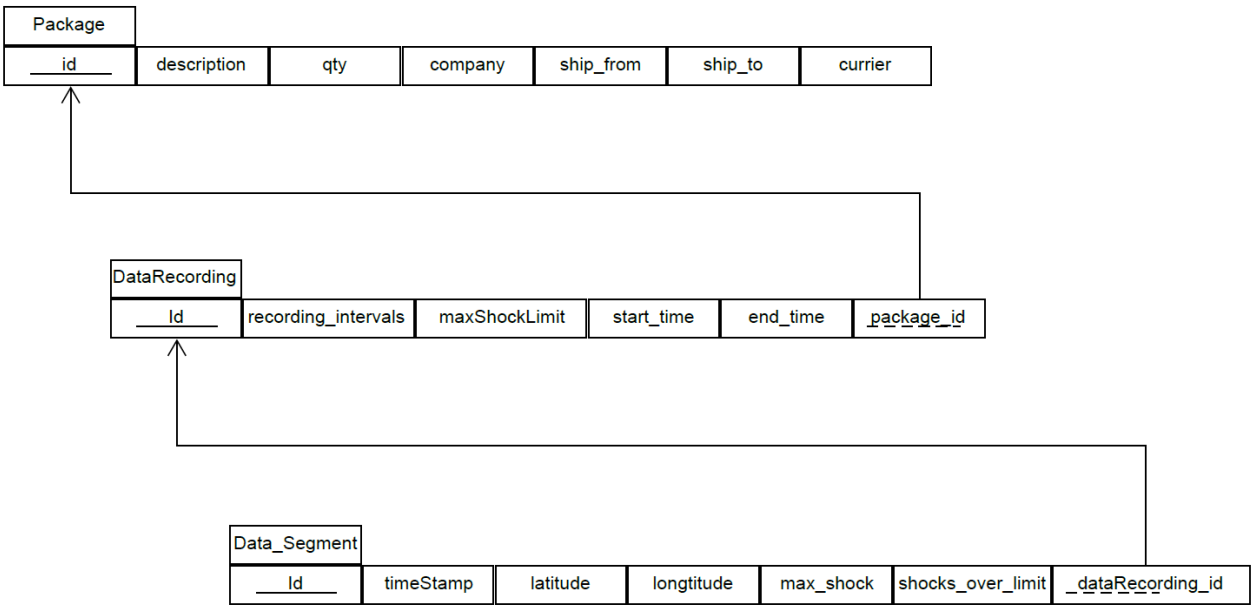
The Simple Model:



The little more complex (More foreign keys)



Relational Model: (The simple one)



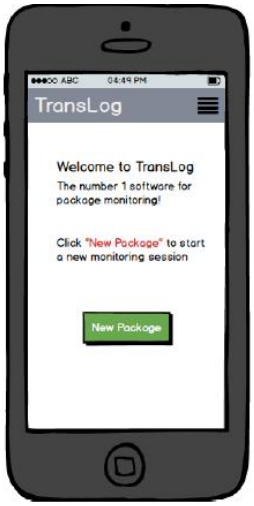
Activities:

1

MainActivity

The first welcome page the user sees.

- Welcome message
- Able the start recording data on new package.
- From menu can access **settings** and **View old data recordings.**



2

ScanPackageActivity

Here the user a QR-code which in parsed into a Package-object.

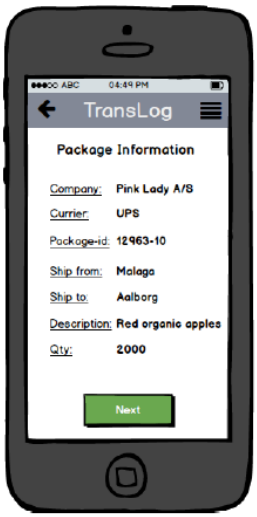
- Access QR-scanner.
- The scanned data returns a string which is parsed into a **Package-object**

3

DisplayPackageDataActivity

Here the user views the result of the scan

- **Note:** Maybe implement a feature that allows the user manually to type in data.



4

RecordDataActivity

After the package is in the system it's time to start the data-recording activity

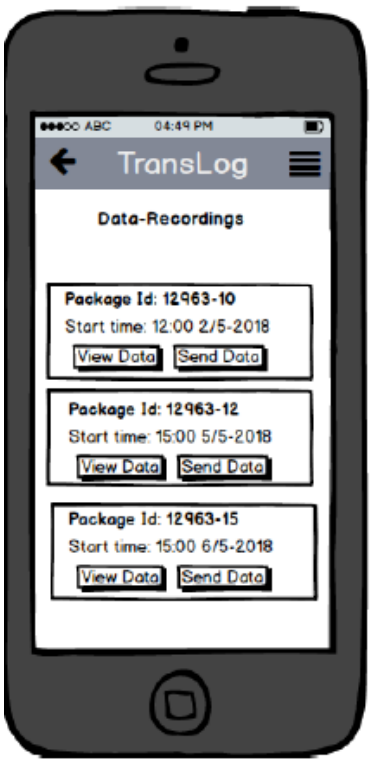
- Display package id
- Display selected settings
- Shortcut to settings in case user wants to change.
- Big button that starts recording data.
- Once recording the screen displays **start time** and **elapsed time** and shows a **"recording"** message and a **stop button**.
- When recording starts a **DataRecording-object** is instantiated and **DataSegment-objects** are made from each recording-interval and associated to Datarecording-object and saved to database

5

DisplayRecodingsActivity

When the data-recording is stopped the user views the data recording-object on a list along with old recordings. Here the user can choose to either view the data or send the data.

- A list view with a custom list adapter.



6. (View Data is pressed)

DisplayRecodingDataActivity

The user vies the data.

- A graph that displays the max-shock value for each data-point.
- A graph that displays the number of shocks for each data-point(recording interval) that exceeds the chosen shock-sensitivity-limit.
- A google map plug-in that can render the route from the location data

7. (Send Data is pressed)

SendRecodingDataActivity

The user sends the data to a receiving app.

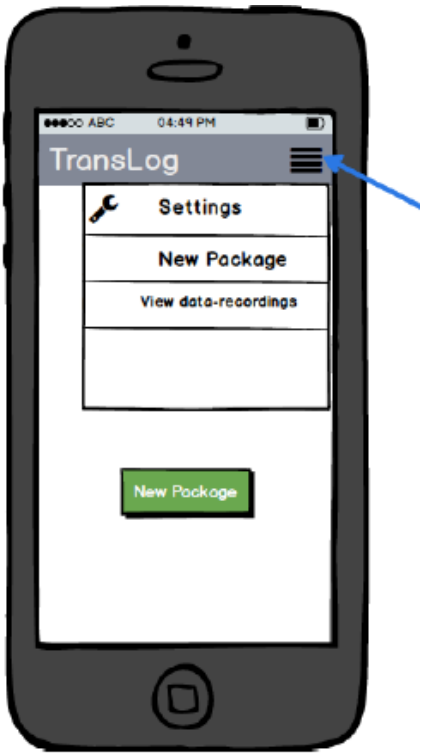
- Blue Tooth connectivity
- Par with the desired phone.
- Send data
- Display success-message

Menu- and SettingActivity

MenuWidget

From selected pages in the app the user can access the menu

- New Data recording
- View Recordings
- Settings
- NOT visible while recording data



SettingsActivity

Here the user edits the settings. Use the built-in preferences class in android studio