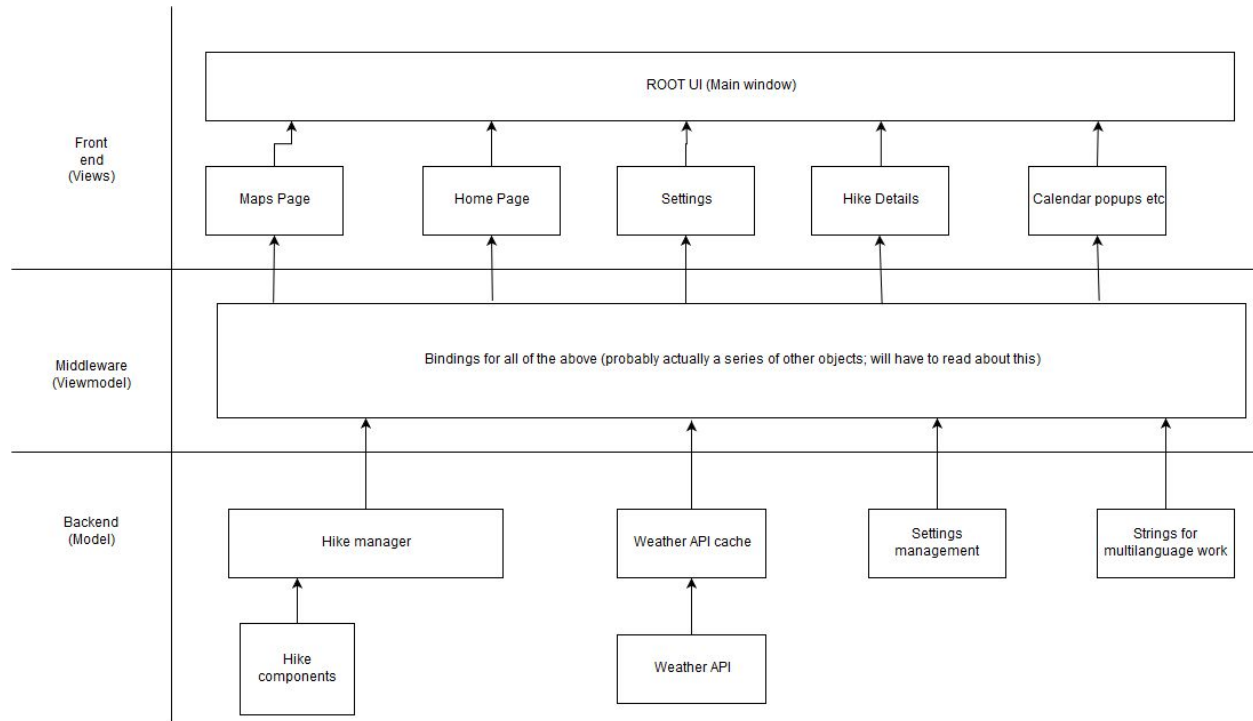


Task 3 - Hi-Fi Prototype

Group 02 - Hiking Weather Application

Design notes:



- Map Design
- Backend
 - We're doing work for fetching weather data from the APIs
 - And dealing with caching this
 - Maybe worth chucking into another object for good modularity
 - We're also doing work with tracking hikes
 - Deal with storing all of these
 - This might be worth putting into an object
 - Hikes should be objects, as should be weather points
 - Weather points should be indexed based on location (allows the cache to scale better)
 - Should extend beyond the API we're using, allows our fetches to time out and cause it to be re-fetched when suitable
 - <https://darksky.net/dev/docs>
 - What is our contract?
 - API Exception - we need some way of conveying when a request is eg. rate limited and there's no suitable data
 - For the map component:

- Find the weather at any point within a fuzzy square or circle
 - Squares are easier to search
 - Log-squared structure actually works properly here
 - Squares which subdivide out
 - So have 2x2 squares which go further down
 -
 - For the details component
 - Find the specific weather at a location
 - Non-fuzzy for hikes
 - Weather forecast
 - Settings object - observer pattern
 - Have a settings object accessible everywhere
 - Strings file - used for multi-language support
- Frontend
 - Layout
 - Individual components are implemented as JavaFX components
 - Graph should be its own thing
 - Map will be its own thing
 - Very useful resource! <https://stackoverflow.com/a/8490764>
 - Popup at position
 - Might already be implemented in JavaFX
 - Yes it is
 - <http://code.makery.ch/blog/javafx-dialogs-official/>
 - Chart plotting library
 - Literally built into JavaFX, javafx.scene.chart.
 - <https://stackoverflow.com/q/29286698>
 - Shows the basics of how to inject references to components from FXML into code as well
- Differences from original design
 - Map doesn't show current weather
 - Drawing layers is hard, and the API we're using for drawing maps really doesn't help
 - You can still use it for opening details screens and adding hikes though
 - Current weather is shown on click
 - Ground conditions are based only on rain probability rather than anything else
 - Our current API just doesn't provide it
 - Can't add hikes later than 5 days from present
 - Adding calendar functionality is hard
 - Popups aren't supported in the desired way in JavaFX