

Senior Project, 2017, Summer Breazehome 2.0, Map

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Problem

- Breazehome provided users with a consistent and efficient website application to buy and sell homes.
- Did not offer services to buy and sell real state on a mobile platform.
- Did not allow users to utilize a mobile platform to view homes on a map.

Solution

- Allow users to access Breazehome through Android, IOS, and Windows devices.
- Provide Breazehome's functionalities on a mobile platform.
- View properties on the map through a mobile platform.

Current System

- Improves mobile map subsystem performance by using Leaflet.markercluster plugin.
- Demonstrates clusters of homes on the map through a mobile platform.
- Addition of cluster and property cards on a mobile platform.

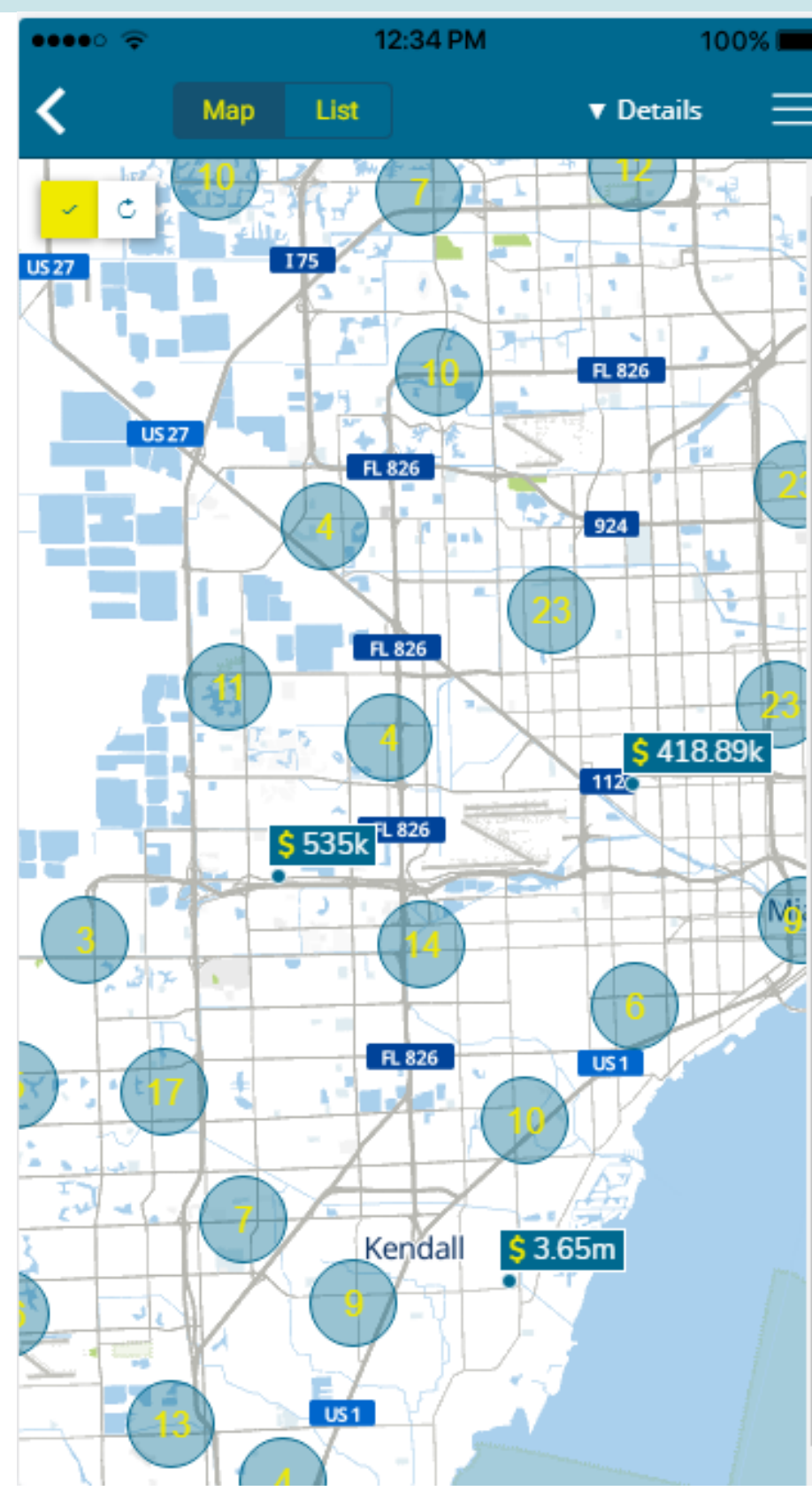


Figure 1



Figure 2

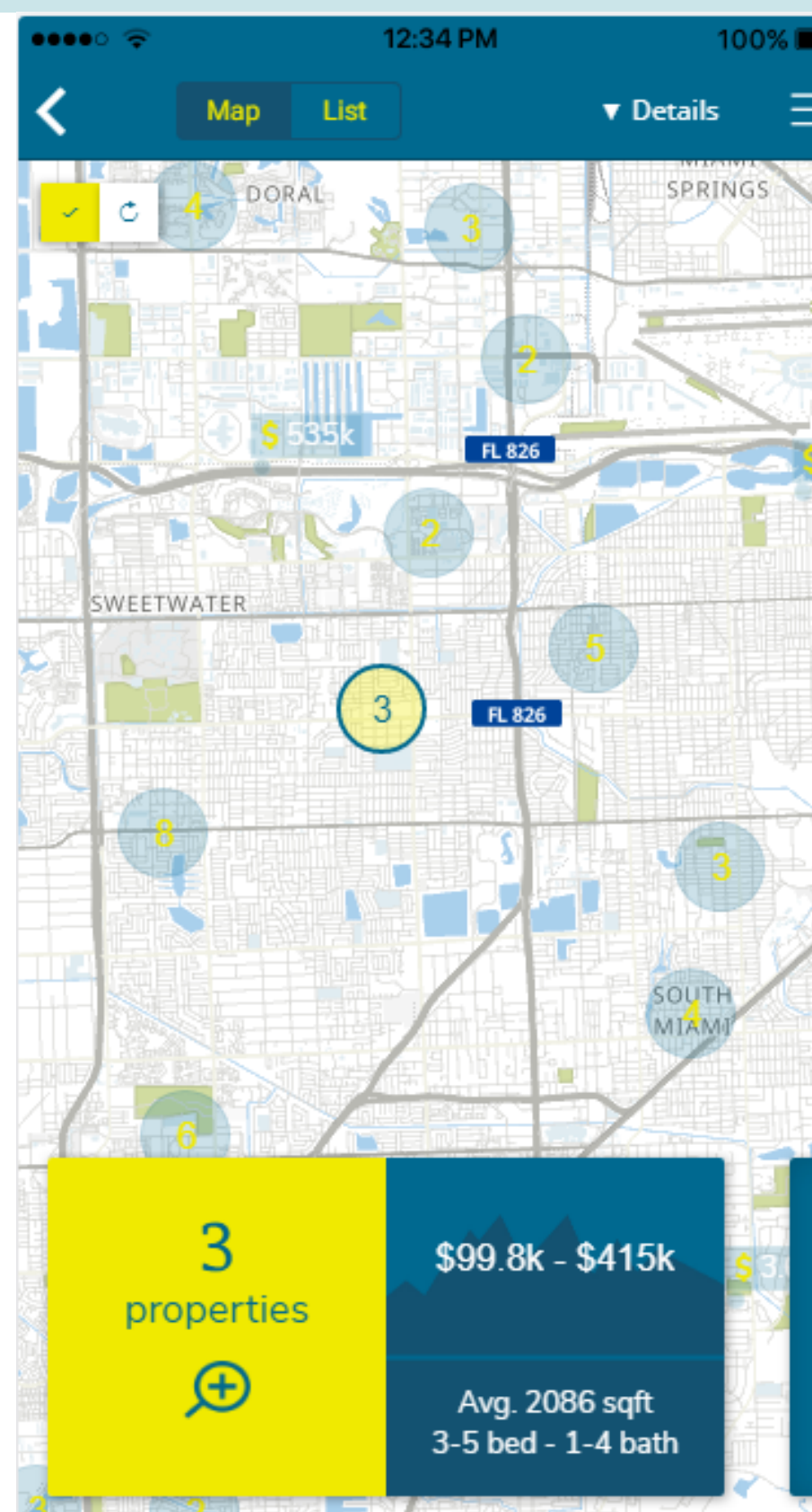


Figure 3

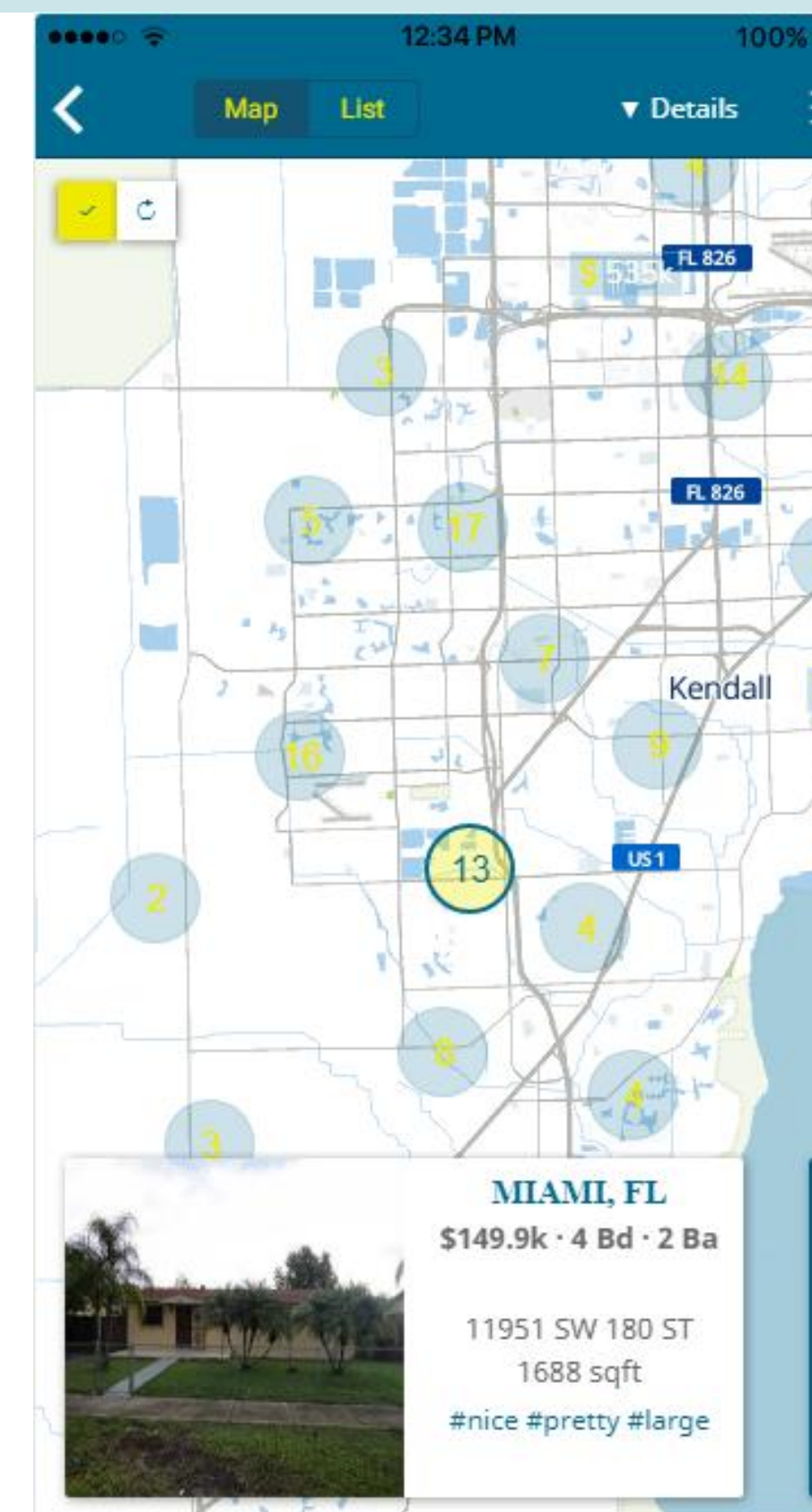


Figure 4

Figure 1 – Map view when first loaded.

Figure 2 – Map view when a property is selected.

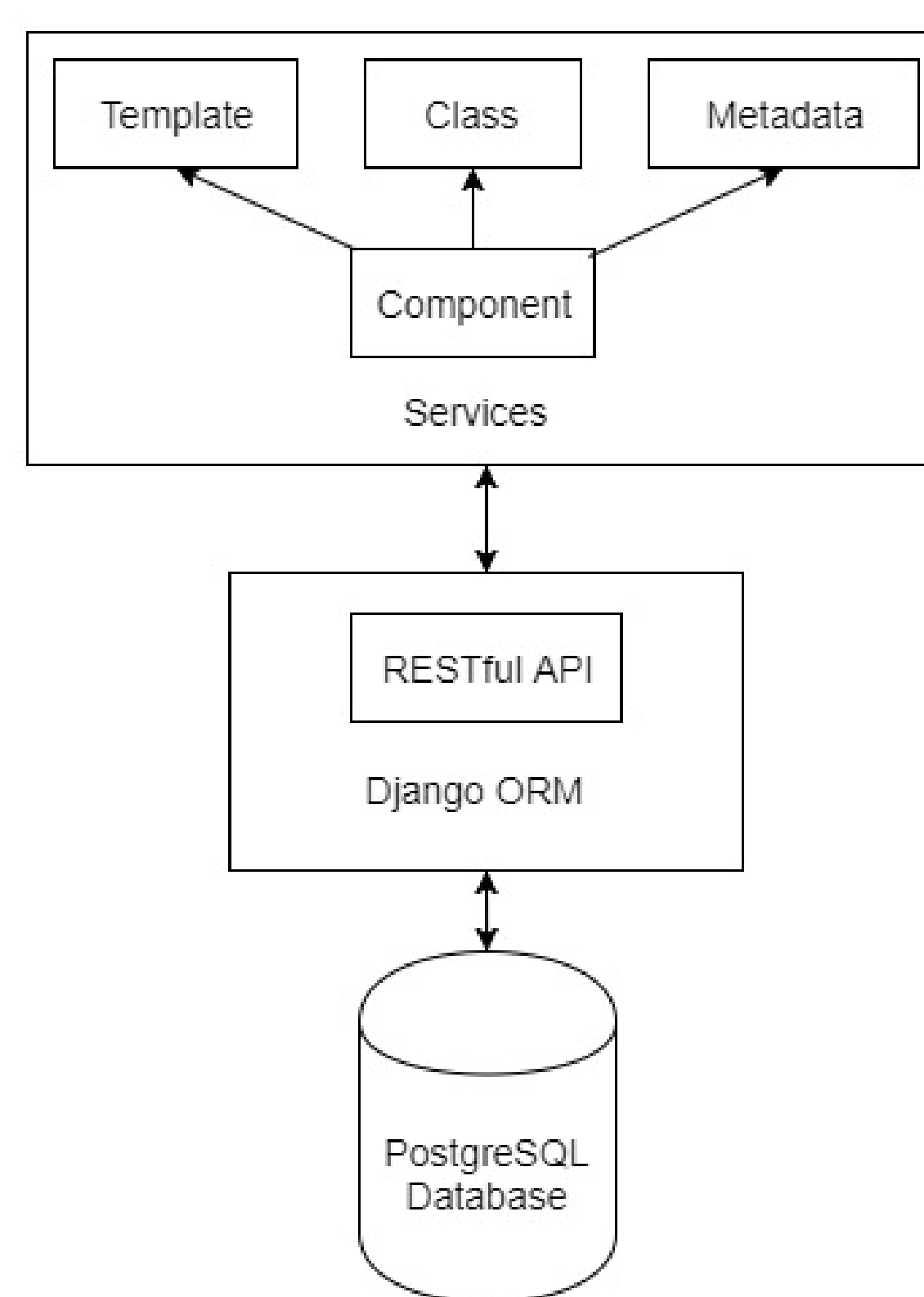
Figure 3 – Map view when a cluster is selected.

Figure 4 – Map view when sliding properties in the cluster.

Requirements

- View clusters of properties on the map.
- When a property is selected, it shows a card with basic information.
- Highlight selected properties or cluster to fade other markers for a clean view.
- Form property clusters for a less busy interface and to improve performance.
- Access cluster information as well as properties inside the clusters.

System Design



- Front end using Ionic, TypeScript, HTML and SASS.
- RESTful API using Django framework.
- Database uses PostgreSQL.

Implementation

- Map property clusters created using Leaflet.markercluster plugin.
- Usage of the Ionic framework for availability on mobile platforms.
- Creation of Ionic cards when properties or clusters are selected.
- Easily swipe property cards from a cluster.

Verification

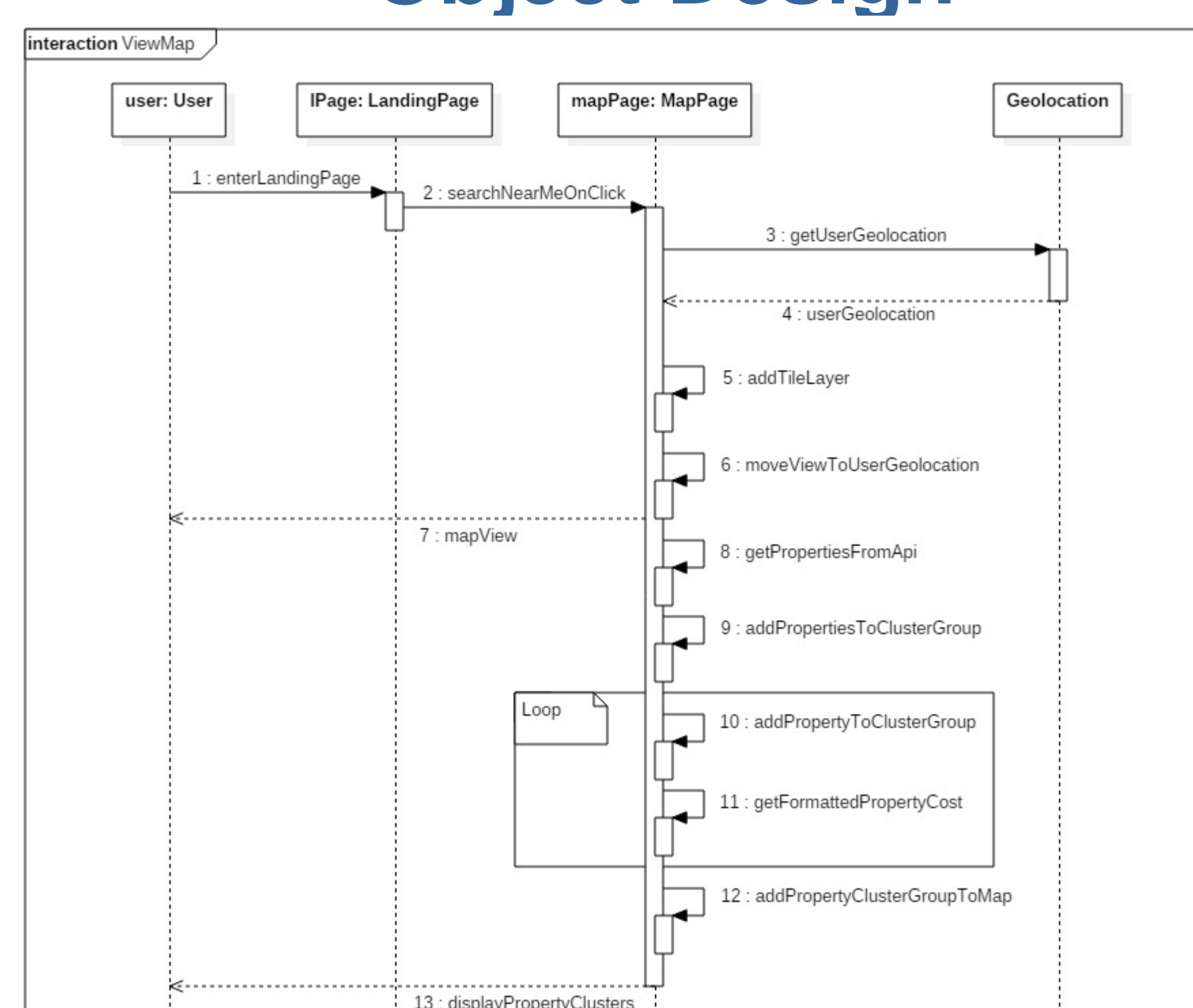
- Verification done through Ionic Lab.

clusters_on_properties_proximity

clusters_readjustment_on_zoom_in

clusters_readjustment_on_zoom_out

Object Design



Sequence Diagram for creating property clusters

Summary & Verification

- Performance improvement for clusters of properties.
- Breazehome availability on mobile platforms.
- Show geolocations for properties on the map.
- View basic property and cluster information.

Acknowledgement

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