

D.Eco



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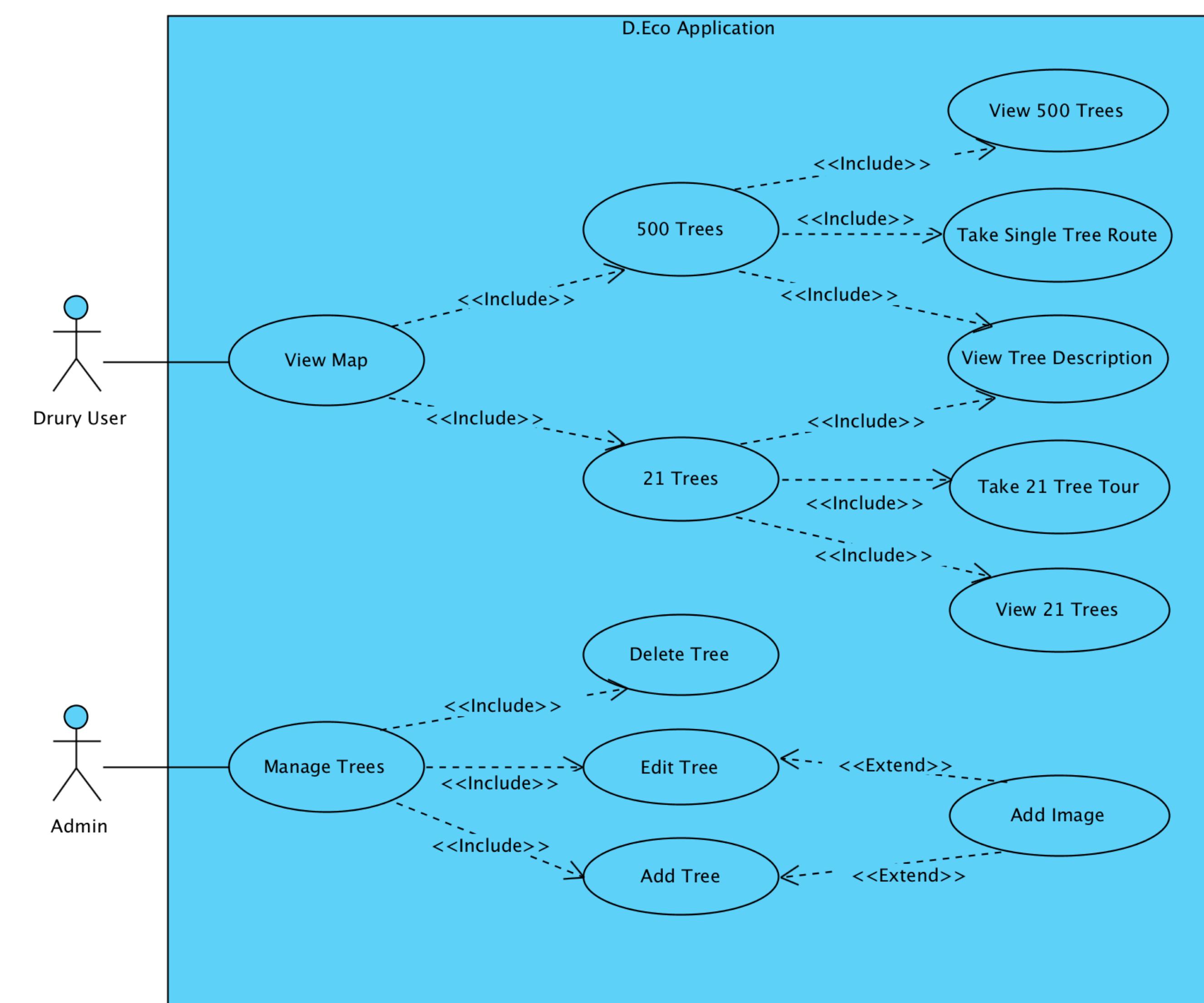
Purpose

- Android and iOS application that allows students, faculty, and visitors to tour the trees on Drury University's campus
- Educate and engage users by providing an interactive way to learn about the trees on campus

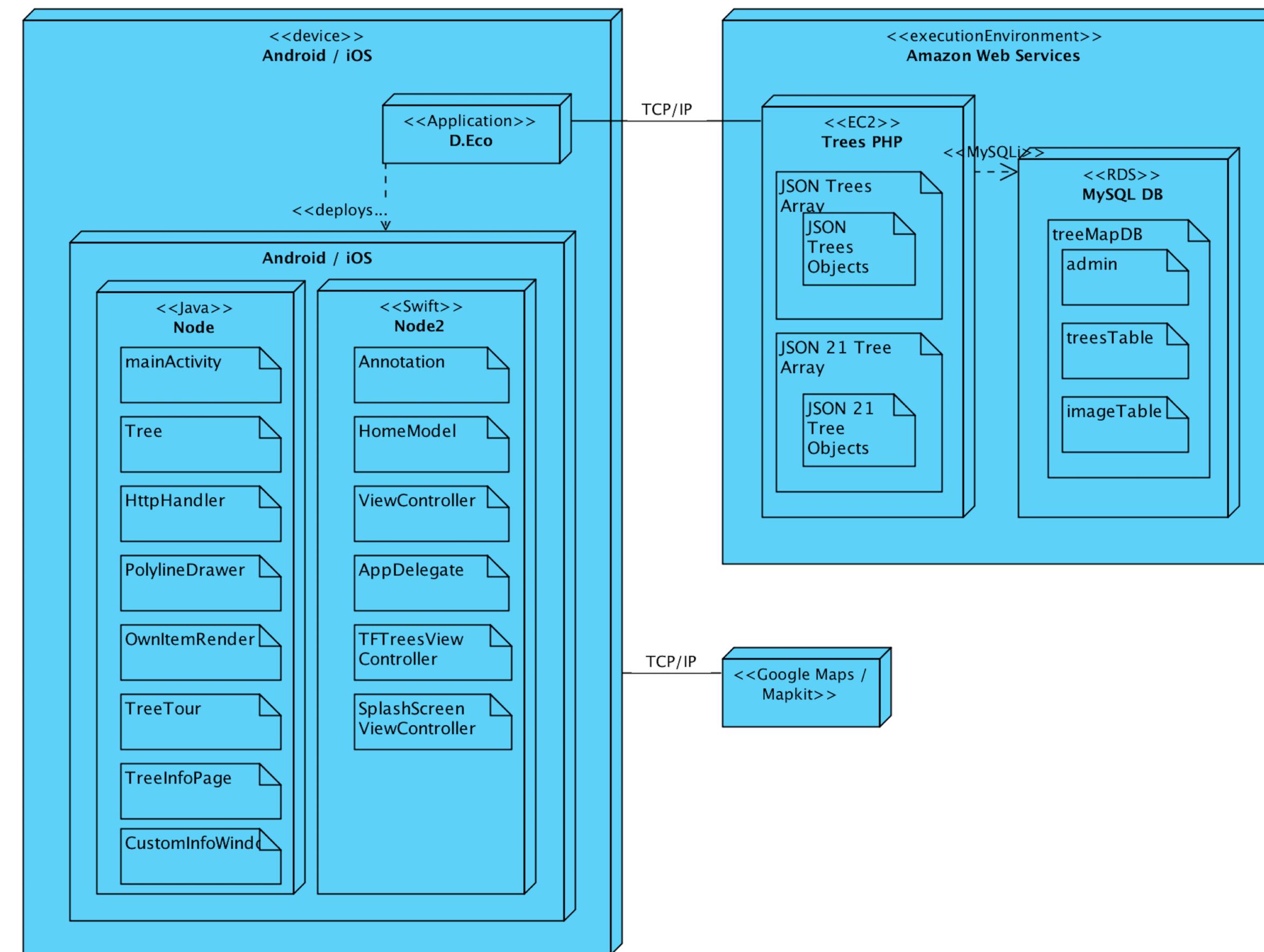
Features

- A user can view a map of the campus with the 500+ annotation points that represent every tree currently documented on campus
- A user can take a specific tour of the campus' 21 unique tree species
- While on the 21 Tree Tour, the user can view a specific tree's description page which includes the common name, scientific name, short description, and an image of the tree

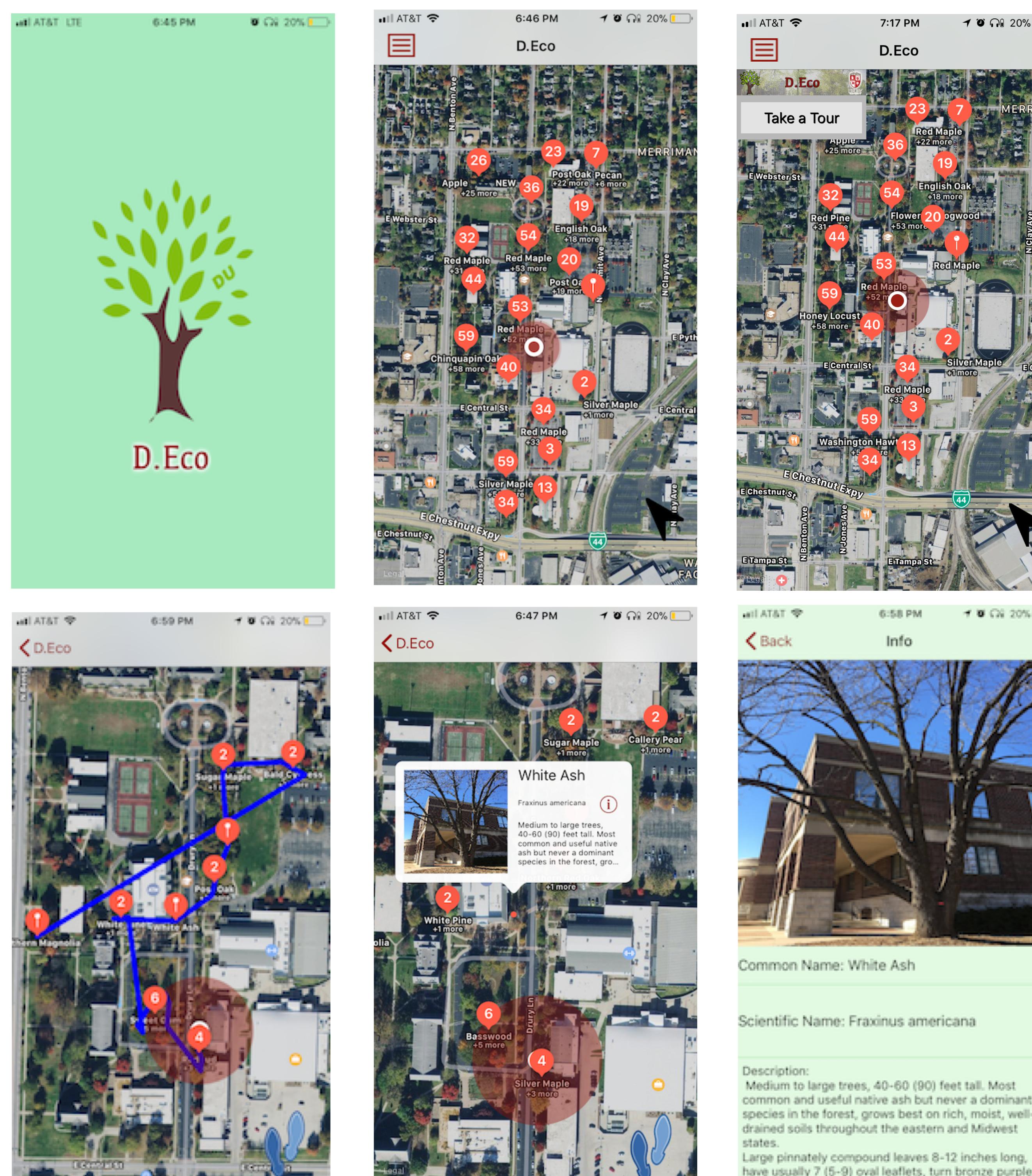
Requirements



Architecture



Interface – iOS/Android



Web Based Administration

| Manage Trees | | | | | | | | | |
|--------------|--------------|------------------|-----------|------------|--|-------|--------------|---------------|--|
| LOGOUT | | | | | | | | | |
| ADD TREES | | | | | | | | | |
| TreeID | Common Name | Scientific Name | Latitude | Longitude | Description | Image | 21 Tree Tour | Manage | |
| 175 | Siberian Elm | Ulmus pumila | 37.220716 | -93.285385 | Asiatic Elm, Dwarf Elm Medium size tree 30-50 (70) feet tall, with delicate 1-2 inch elliptical leaves, slightly uneven at the top. Native to northern and central Asia in eastern Siberia, Mongolia, Tibet. | | 1 | Edit Delete | |
| 187 | Post Oak | Quercus stellata | 37.219623 | -93.285517 | Medium size tree 30-50 (70) feet tall, abundant throughout the southeastern and southern United States. Large, pure stands in the prairie transition area; slow growing, drought | | 1 | Edit Delete | |

Technologies

- iOS
 - Swift - Xcode
 - Map Kit
- Android
 - Java - Android Studio
 - Google Maps
- Web Development
 - PHP - Apache
 - Amazon Web Services
- Database
 - MySQL - Workbench

Testing

- Deployed both versions of the app onto Biology students phones
- Students use the app to report issues in the software or tree data

Future Direction

- A user can view a list of the 21 trees, tree species, and memorial trees
- A user can create their own tour from the specified list of trees and view the description page for individual trees
- A user can view trees, buildings, and grasses on Drury's campus