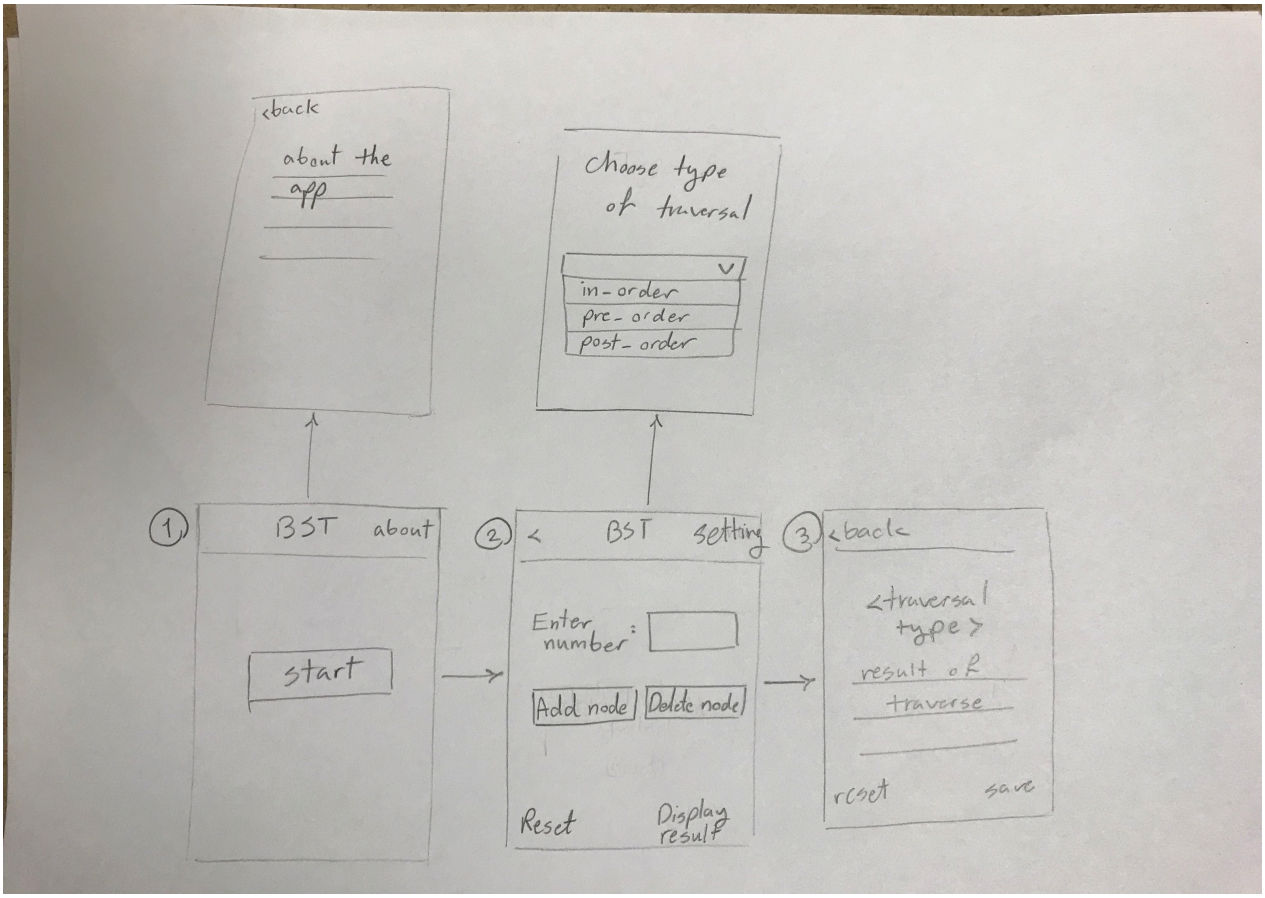
Parsa Bagheri
CIS 399 Final Project Proposal

The app that I want to develop as my final project is a binary search tree. In CIS 313, we learned about data structures and trees and as one of our projects, we were supposed to design a binary search tree in java that had the functionalities of adding a node, deleting a node and resetting the tree; and it could traverse the tree in three different traversal modes: pre-order, in-order, and post-order.

My plan is to make an app comprised of 5 scenes, 2 modal views and 3 main views. As depicted below, the first scene has only a start button and an about bar button. The about button will modally transition into a second screen that tells the user about the app and a binary search tree. The start button will transition into another screen that provides the user with an edit-text element that only takes whole digits, if otherwise entered, it gives the user a message saying that they have to enter whole numbers. Afterwards they can add the number to the tree or delete it from the tree. In case of a delete, if the number doesn't exist, it will give the user a message saying that the number doesn't exist, or in case of adding, if the number already exists, it will tell user that the number is a duplicate. The settings bar button will modally transition into a scene where the user can choose their desired traversal between pre-order, in-order, and post-order. The reset button will reset the tree and starts again. The "Display Result" button will transition into another scene. In this last scene, the result of the specified traversal is shown. At this stage, through buttons of save and reset, the user has the ability to either save or reset the tree or go back to the previous screen and modify the tree.

Optional Criteria:

- Give the user the ability to save the traversal of the tree in their phone
- Utilize the device's motion sensor or swiping capabilities to go back and forward between scenes


<back
about the app
Choose type of traversal
in-order
pre-order
post-order
1
BST about
start
2
< BST setting
Enter number :
Add node
Delete node
Reset
Display result
3
<back
<traversal type>
result of traverse
reset
save