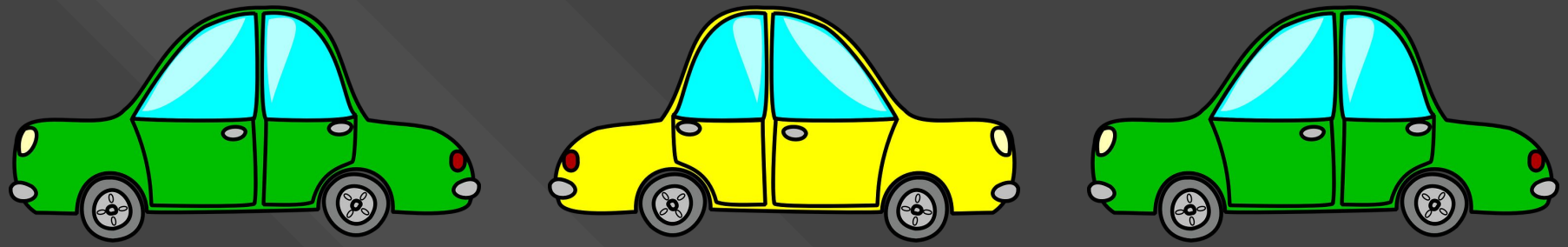
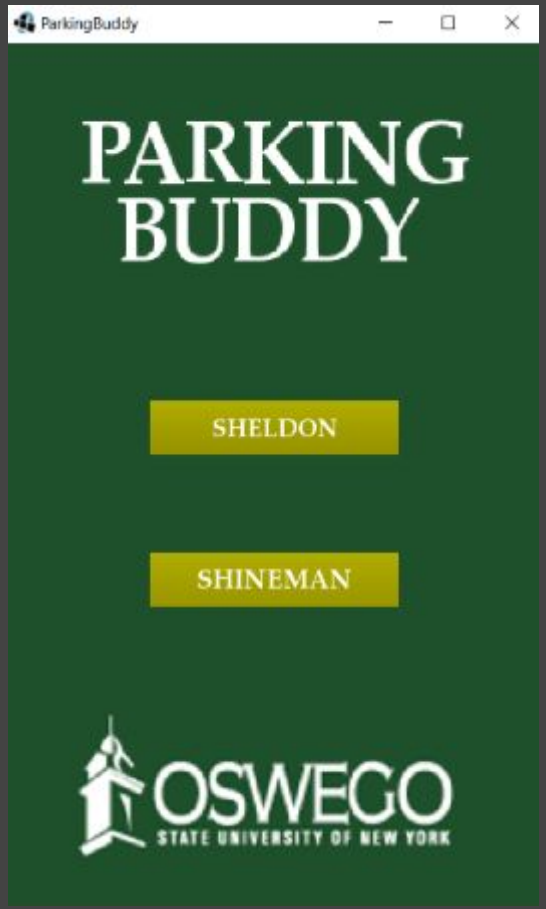
Parking Buddy

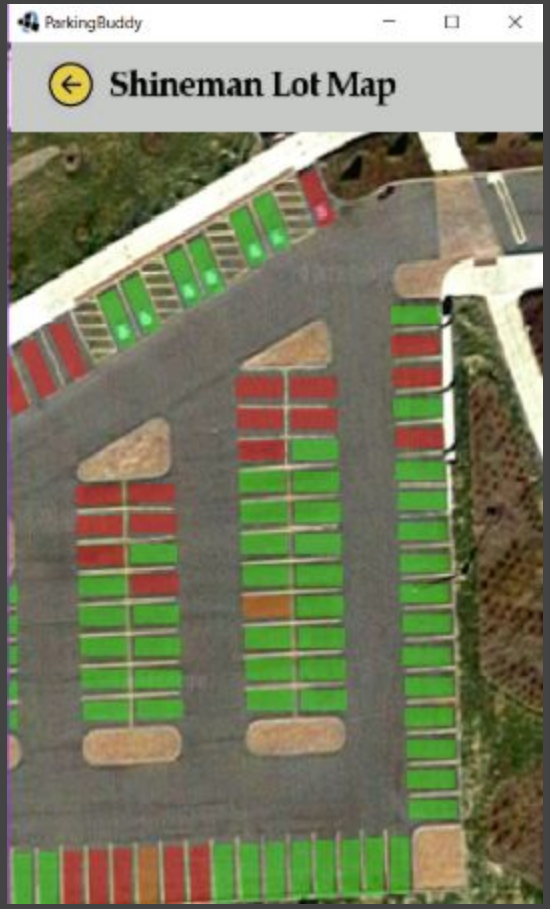
Emma Brunell, Mike Doran, Andrew Smith

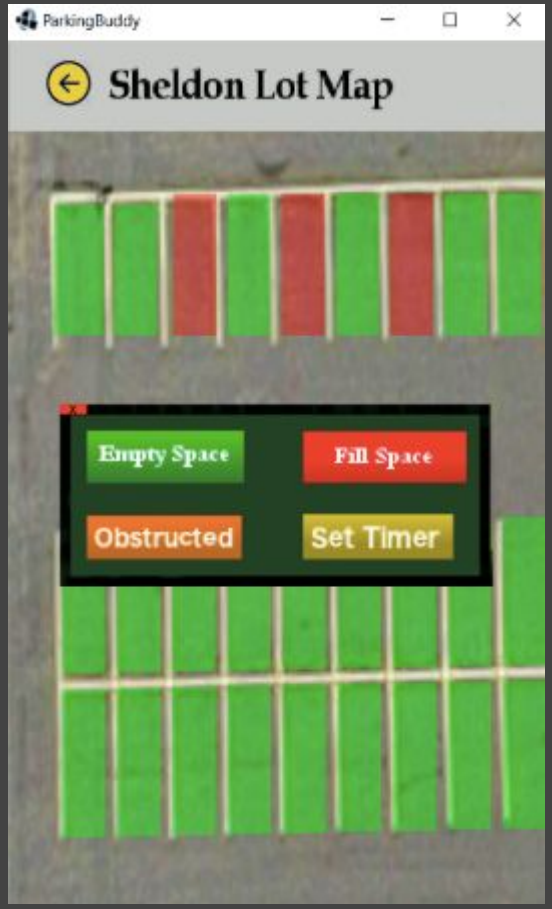


Project Description

- A desktop app that allows SUNY Oswego commuter students to find parking spots more easily in the Sheldon and Shineman parking lots.
- Features:
  - Users can check in and out of parking spaces
  - Users can set a timer for how long a parking space will be filled
  - Users can set parking spaces as “obstructed” if there is construction/ emergency vehicles/ etc.
  - Scrollable interface
  - Multithreaded server to handle multiple clients at once
  - Parking data is persistent on client-side


ParkingBuddy
PARKING BUDDY
SHELDON
SHINEMAN
OSWEGO
STATE UNIVERSITY OF NEW YORK


ParkingBuddy
Shineman Lot Map


ParkingBuddy
Sheldon Lot Map
Empty Space
Fill Space
Obstructed
Set Timer

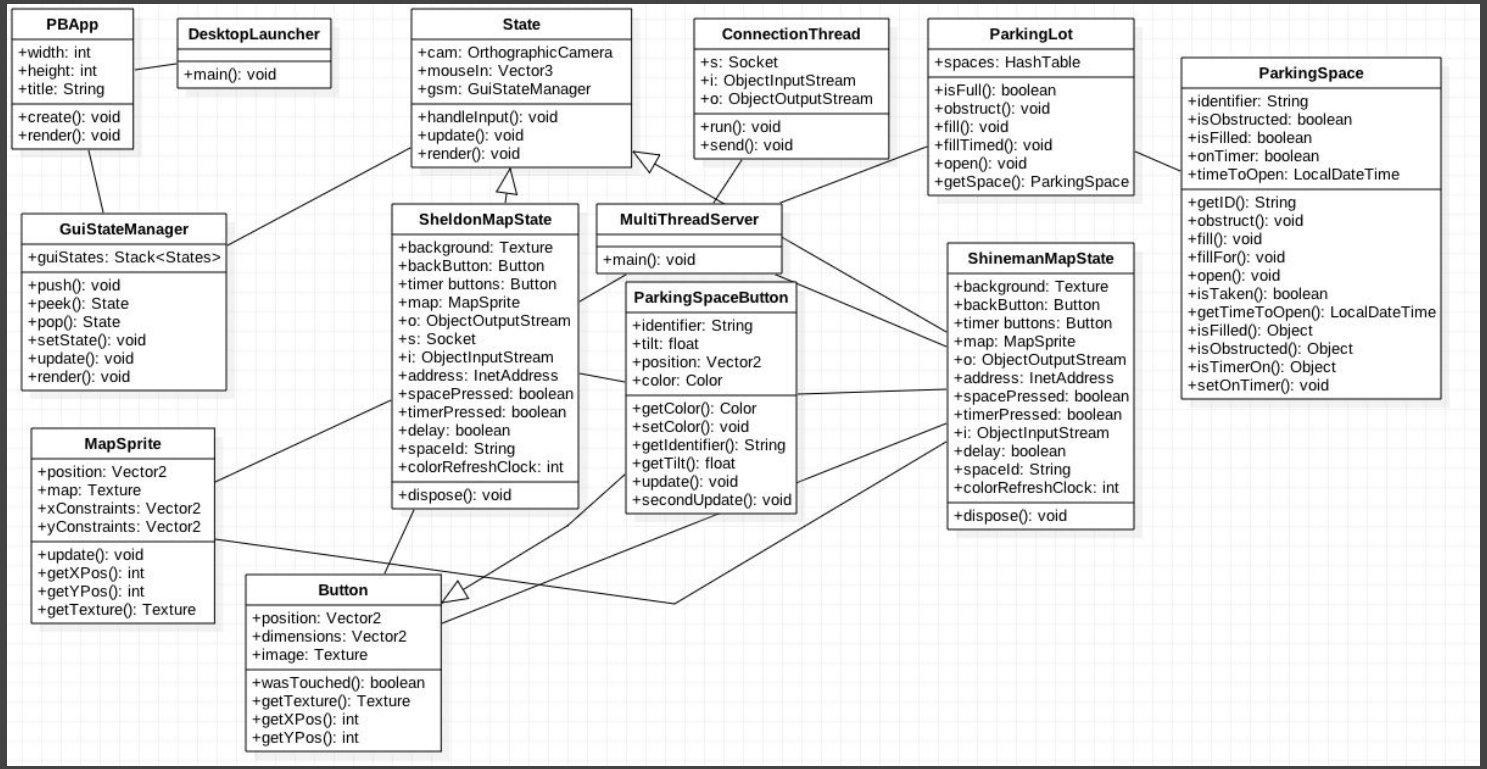
System Requirements

Identifier	Priority	Requirement
REQ1	5	The information on parking spots maintained by the system, should be available to all instances of the app
REQ2	2	The system allows users to mark a spot as “obstructed” if unavailable for a reason other than the spot being taken (snow, construction, etc.).
REQ3	5	The app has a GUI that provides an overhead view of the Shineman and Sheldon parking lots.
REQ4	5	The app allows users to “check out” parking spots and be able to mark them as “available” or “taken”.
REQ5	2	The system allows the user to set a timer for how long they plan on being parked, after which the spot becomes available again.

The Code Base

- Two projects function simultaneously: the server and the client.
  - The client displays the interface using libGDX.
  - Messages are sent from the client, based off what actions a user takes, to the server.
  - The server processes the messages, stores and edits data on the parking lots, and sends the information back to the client in JSON to display to the user.
- The user is able to interact with the interface via the implementation of buttons, textures, backgrounds, and shapes which render appropriately, based on the detection of clicks.

Classes Diagram



Checking In/Out - Sequence Diagram