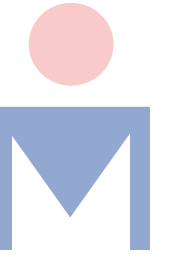
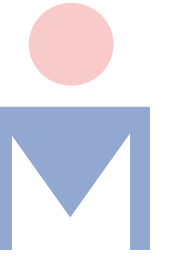


Perigo



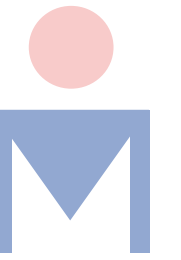
Problem

1. Facebook Marketplace and sub groups like Free and For Sale are not great interfaces for buying and selling of used items
2. Other alternatives like Craigslist are outdated and don't work well within a tight knit community like USC



Solution

Create an intuitive and easy to use web interface that allows members of the USC community to trade, sell, and buy goods from / with one another



Design and Development Decisions

Project Design

Removed Features

Chat / Twilio
API

Google Web
Sign In API

Substituted Features

Spring Boot
Mail Server

User Registration
System

Features we kept from the beginning

Bidding

Search

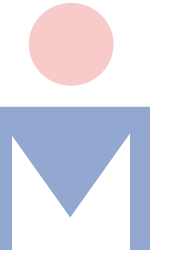
Google Maps API

Web Sockets

Login / Sign Up

Messaging





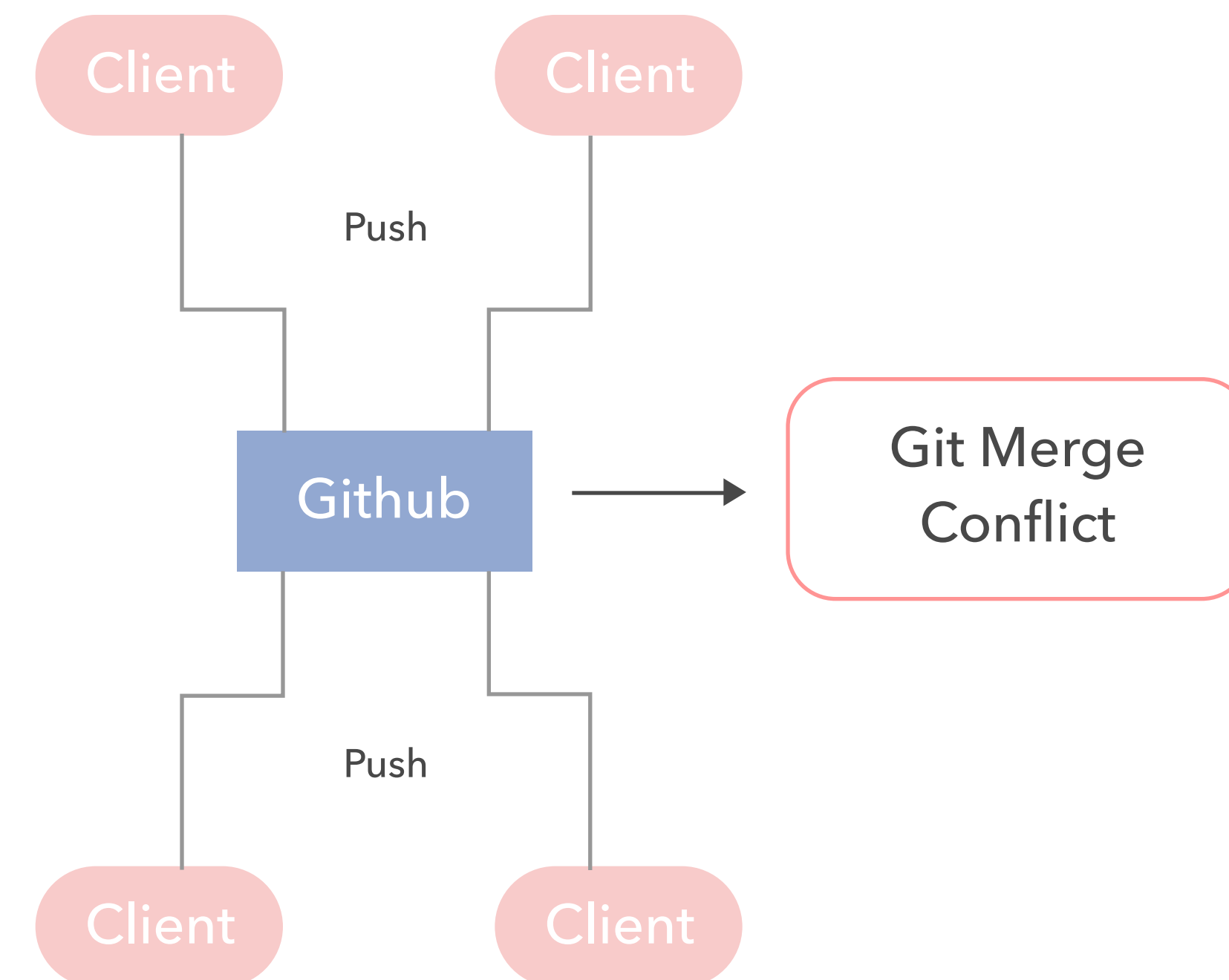
Teamwork

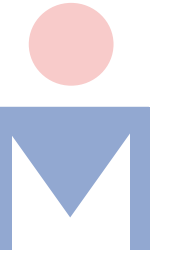
What worked

Coding as a Group
Half Frontend - Half Backend
Organizing the work on GitHub
Slack Channels

What didn't work

Splitting the work
Version control, Merge Conflicts





Outside Classes and Data Structures

Classes

DES 323 (design theory)

CSCI 104

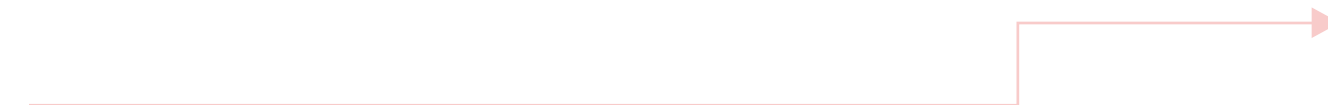
GESM 111 (painting)

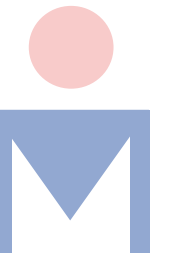
EE 250

ITP 104 (web dev)

Data Structures

Sets
Hashmaps
Lists
Queues
Multimap





Multithreading and Networking

Multiple threads

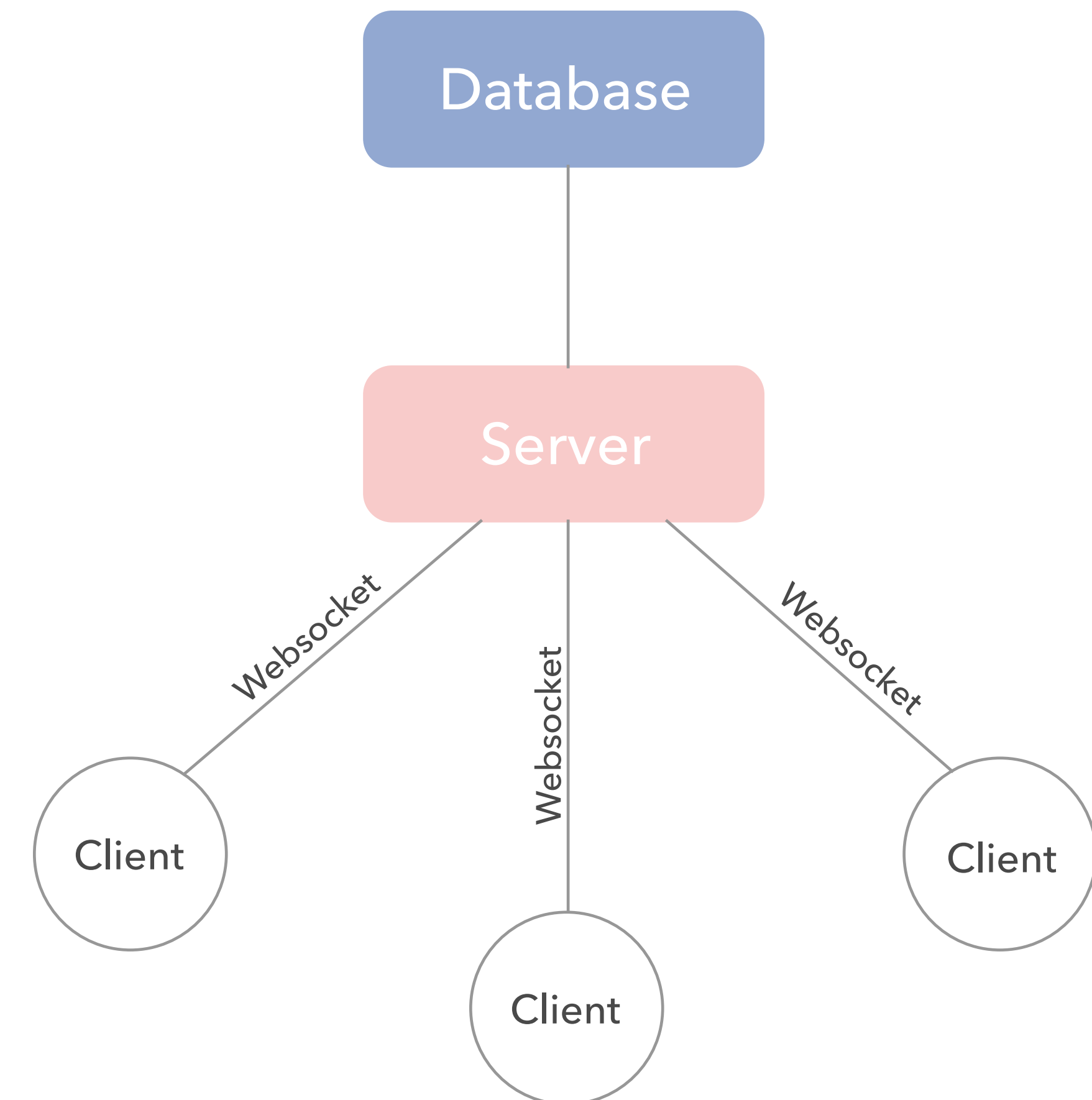
Asynchronous AJAX calls to backend

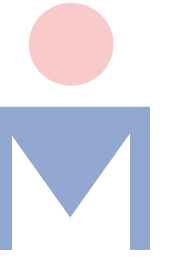
A thread loops through the database to check if any bidding is expiring in 5 minutes or less

Another thread alerts users if any biddings are soon to expire

Networking and WebSockets

New thread for every new logged in user websocket connection





Tools Used

Software and Programs

Icon Design, Page Layout, Prototyping



Testing AJAX, track merges, frontend / pair programming (teletype), communication



Outside Topics

Non-Relational Databases (mongoDB)

REST API

Password Hashing

Cookies

Image Encoding

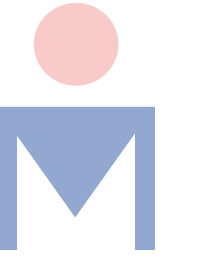
User Registration

Version Control

APIs Used

Google Maps

Firebase



User Login Functionality

Functionality	Guest	Authenticated User
Viewing / Searching items	✓	✓
Bidding / Purchasing items		✓
Listing an item		✓
Adding item to saved list		✓
Notifications on bid items		✓
Messaging seller		✓