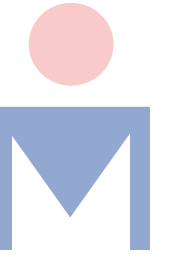
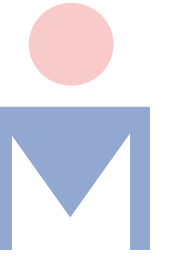


Perigo



# 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 Other alternatives like Craigslist are outdated and don't work well within a tight knit community like USC

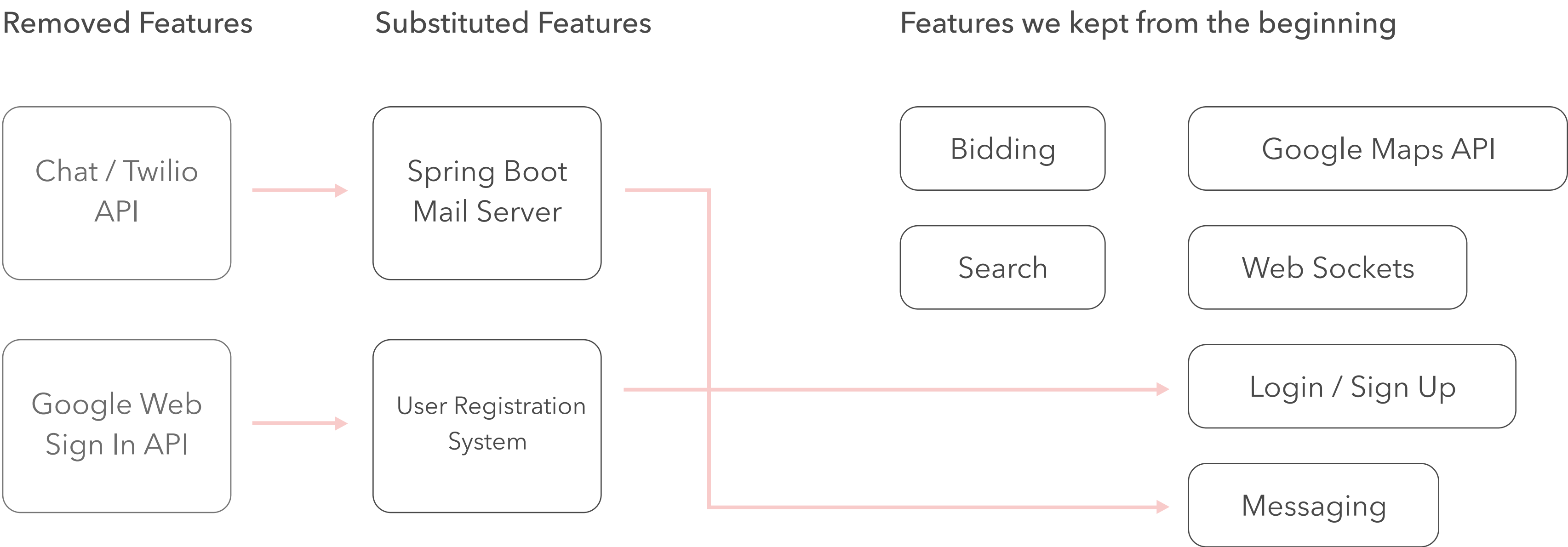


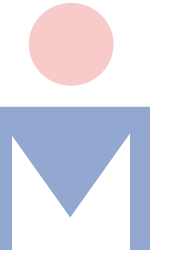
# Solution

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





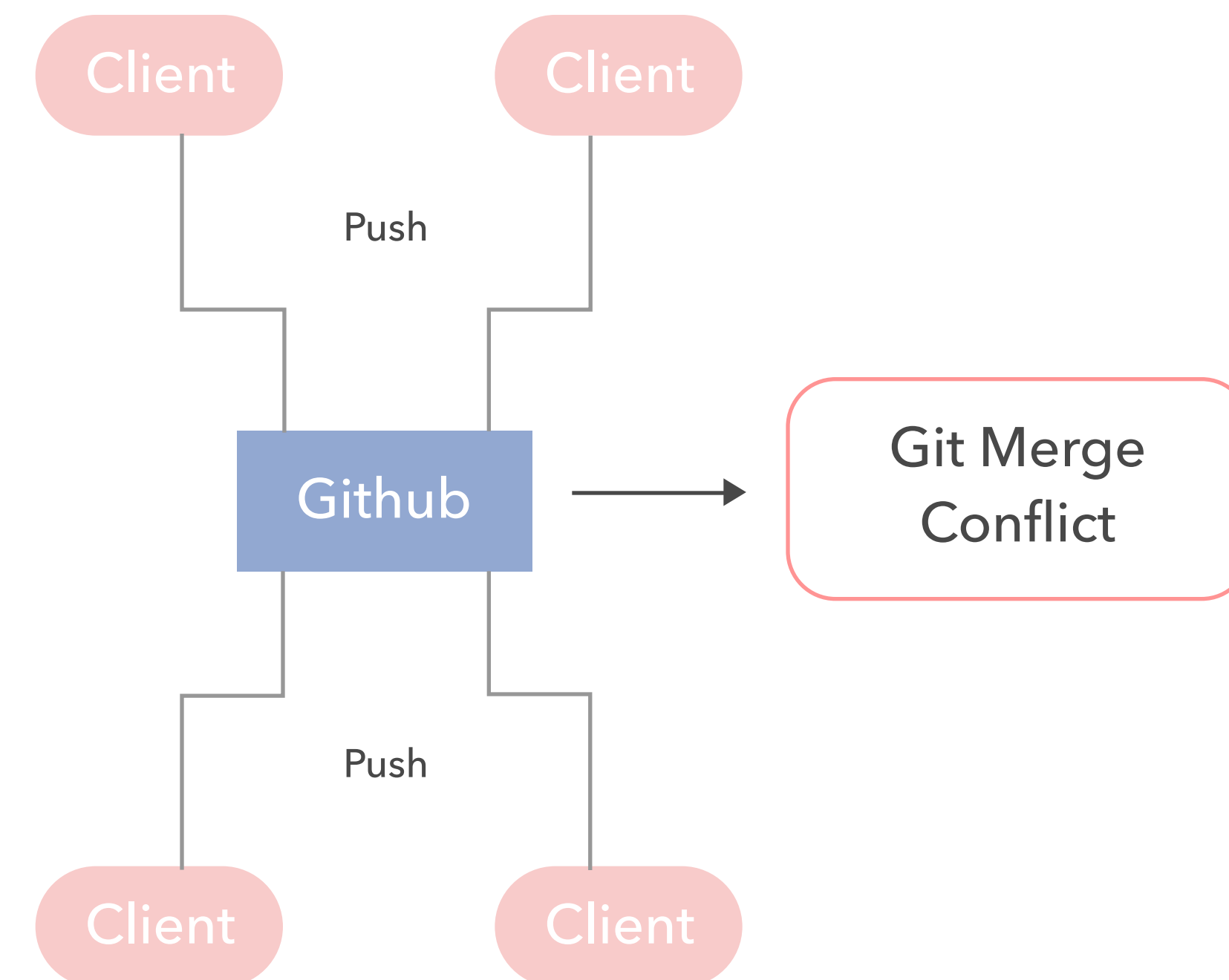
# Teamwork

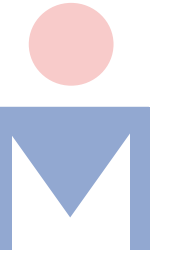
## What worked

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)

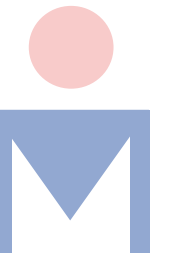
EE 250

ITP 104 (web dev)

## Data Structures

Sets  
Hashmaps  
Lists  
Queues  
Multimap





# Multithreading and Networking

## Multiple threads

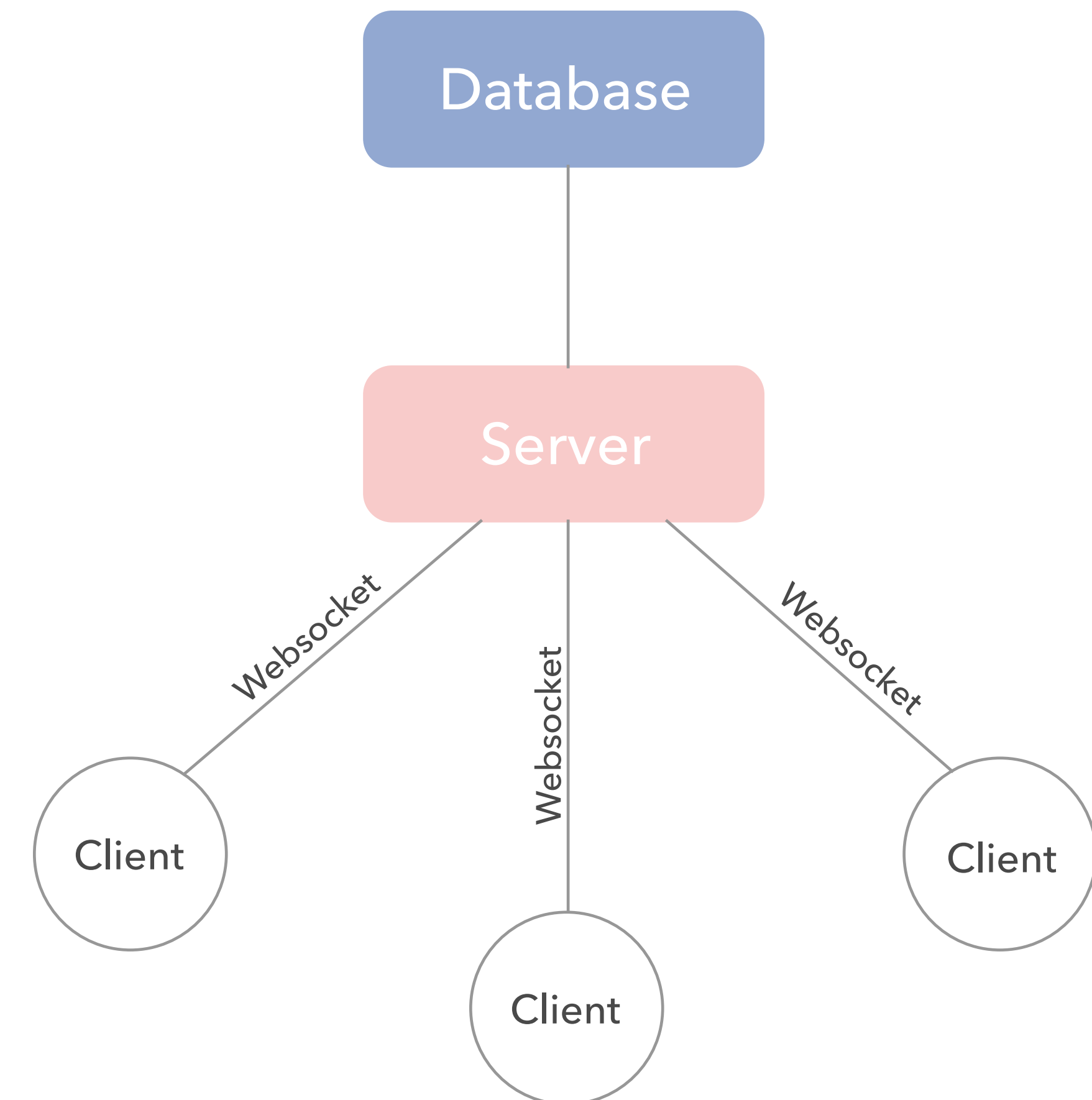
Asynchronous AJAX calls to backend

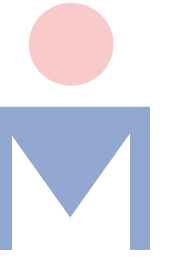
A thread loops through the database to check if any bidding is expiring in 5 minutes or less

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

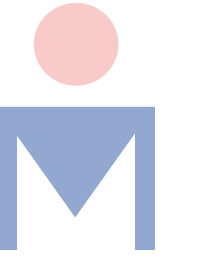
Version Control

## 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		✓