Block Diagram

Group MC_2

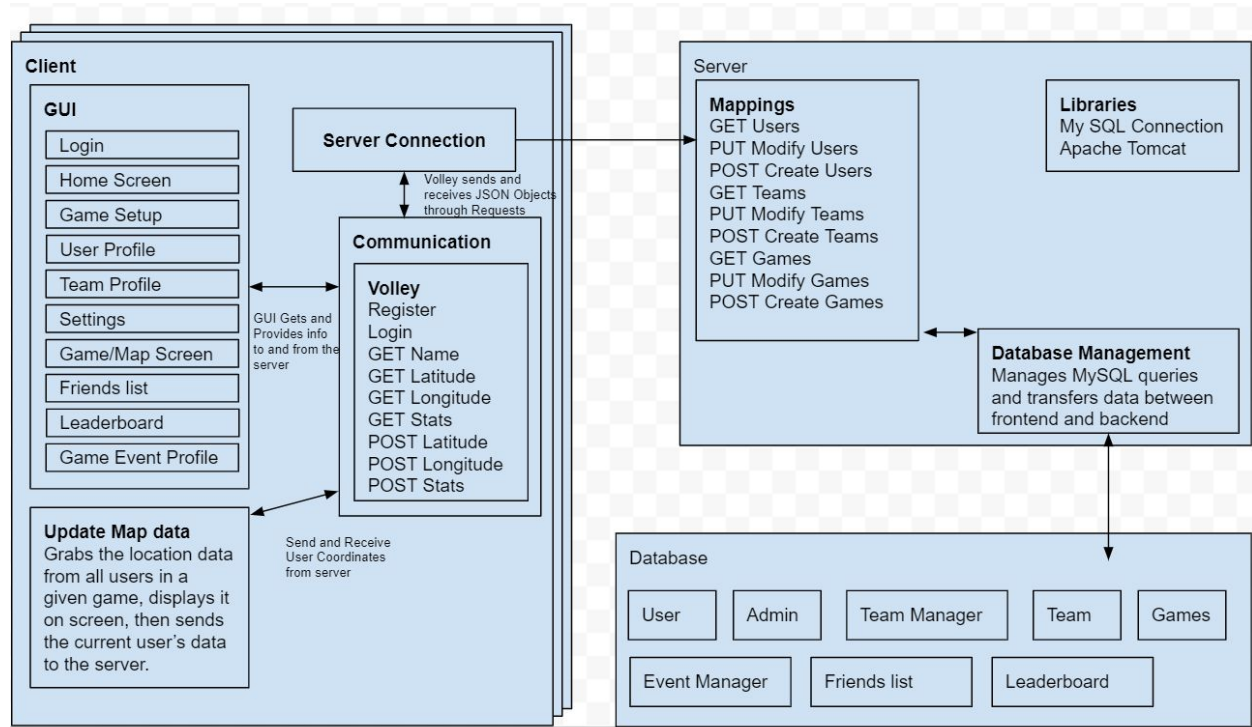Anthony Nuss

Christian Pinta

Ben Dunkerton

Austin Buller

Ktag Lazertag Companion App

Block Diagram

Client

GUI

- Login
- Home Screen
- Game Setup
- User Profile
- Team Profile
- Settings
- Game/Map Screen
- Friends list
- Leaderboard
- Game Event Profile

GUI Gets and Provides info to and from the server

Server Connection

Volley sends and receives JSON Objects through Requests

Communication

Volley
Register
Login
GET Name
GET Latitude
GET Longitude
GET Stats
POST Latitude
POST Longitude
POST Stats

Send and Receive User Coordinates from server

Update Map data
Grabs the location data from all users in a given game, displays it on screen, then sends the current user's data to the server.

Server

Mappings
GET Users
PUT Modify Users
POST Create Users
GET Teams
PUT Modify Teams
POST Create Teams
GET Games
PUT Modify Games
POST Create Games

Libraries
My SQL Connection
Apache Tomcat

Database Management
Manages MySQL queries and transfers data between frontend and backend

Database

- User
- Admin
- Team Manager
- Team
- Games
- Event Manager
- Friends list
- Leaderboard

Functional Description:

Map data module: This module uses Volley to send the users name and coordinates to the server. It then uses volley to receive all other player names and coordinates to post to the map. Once the player data is received from the server via the GET volley call it parses out each individual user's coordinates and creates a unique player pin to post on the map. We use the fused location service provider API to implement our GPS functionality with a location request.

Server PUT method: We have our PUT method implemented to search for a user via the given username to edit that specific user's data. From the front end, using a Volley PUT method with the user name at the end of the url, we will then be able to access a specific user on the Server. If no user with the given name exists the PUT method will create a new user in the user database.

organizer
- ◇ joining_date DATE
- 🔑 organizerID INT
- ◇ name VARCHAR(20)
- ◇ password VARCHAR(20)
- Indexes ▶

teams
- ◇ manager INT
- ◇ member1 INT
- ◇ member2 VARCHAR(20)
- ◇ member3 VARCHAR(20)
- ◇ member4 VARCHAR(20)
- Indexes ▶

user
- 🔑 id INT
- ◇ lat DOUBLE
- ◇ lng DOUBLE
- ◇ name VARCHAR(255)
- ◇ password VARCHAR(255)
- Indexes ▶

events
- 🔑 eventID INT
- ◇ location VARCHAR(30)
- ◇ date DATE
- ◇ time TIME
- ◇ organizer VARCHAR(30)
- ◇ team1 VARCHAR(20)
- ◇ team2 VARCHAR(20)
- Indexes ▶

admin
- 🔑 id INT
- ◇ joining_date DATETIME(6)
- ◇ name VARCHAR(255)
- ◇ password VARCHAR(255)
- Indexes ▶