# Bar Hopper C4 Architectural Model

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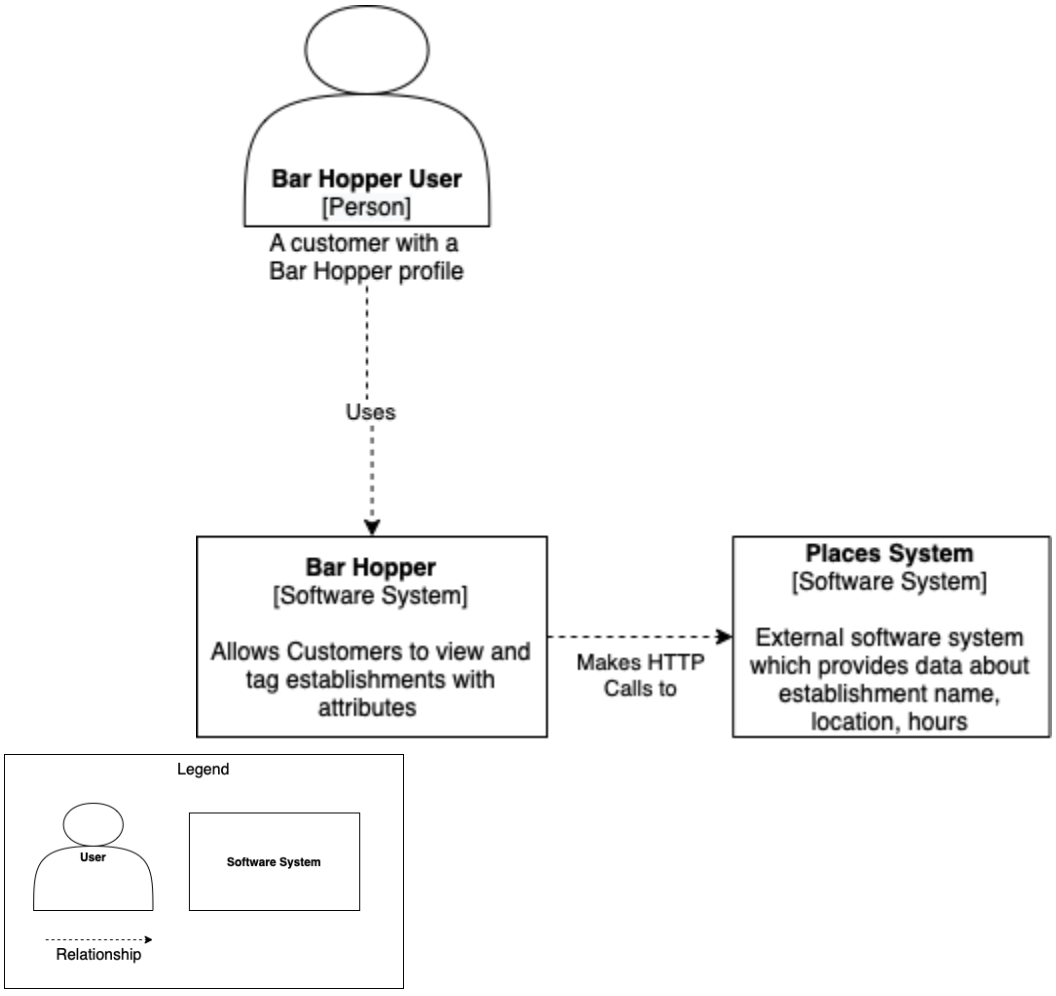
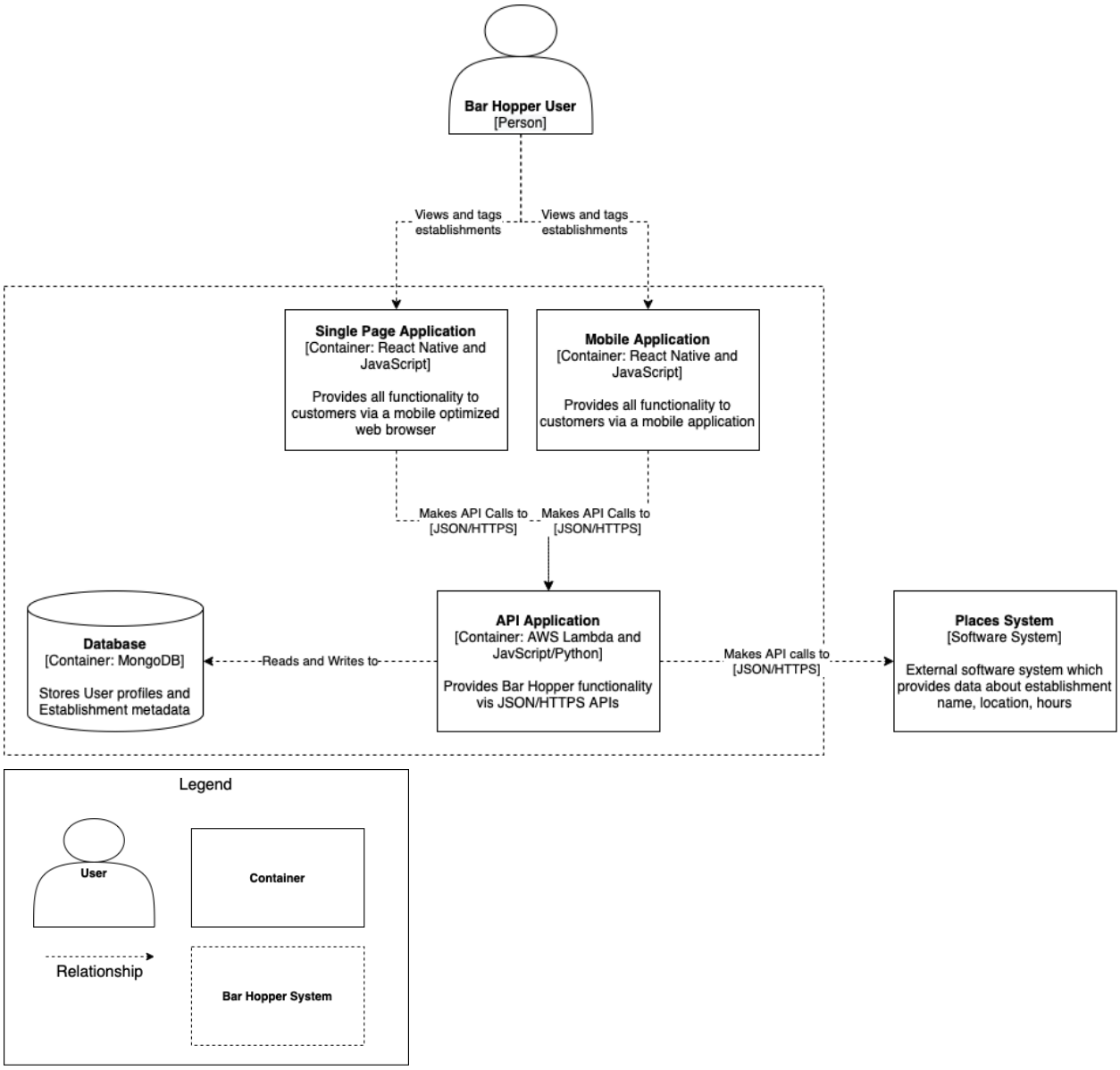
September 29, 2021 Version 1
October 6, 2021 Version 2

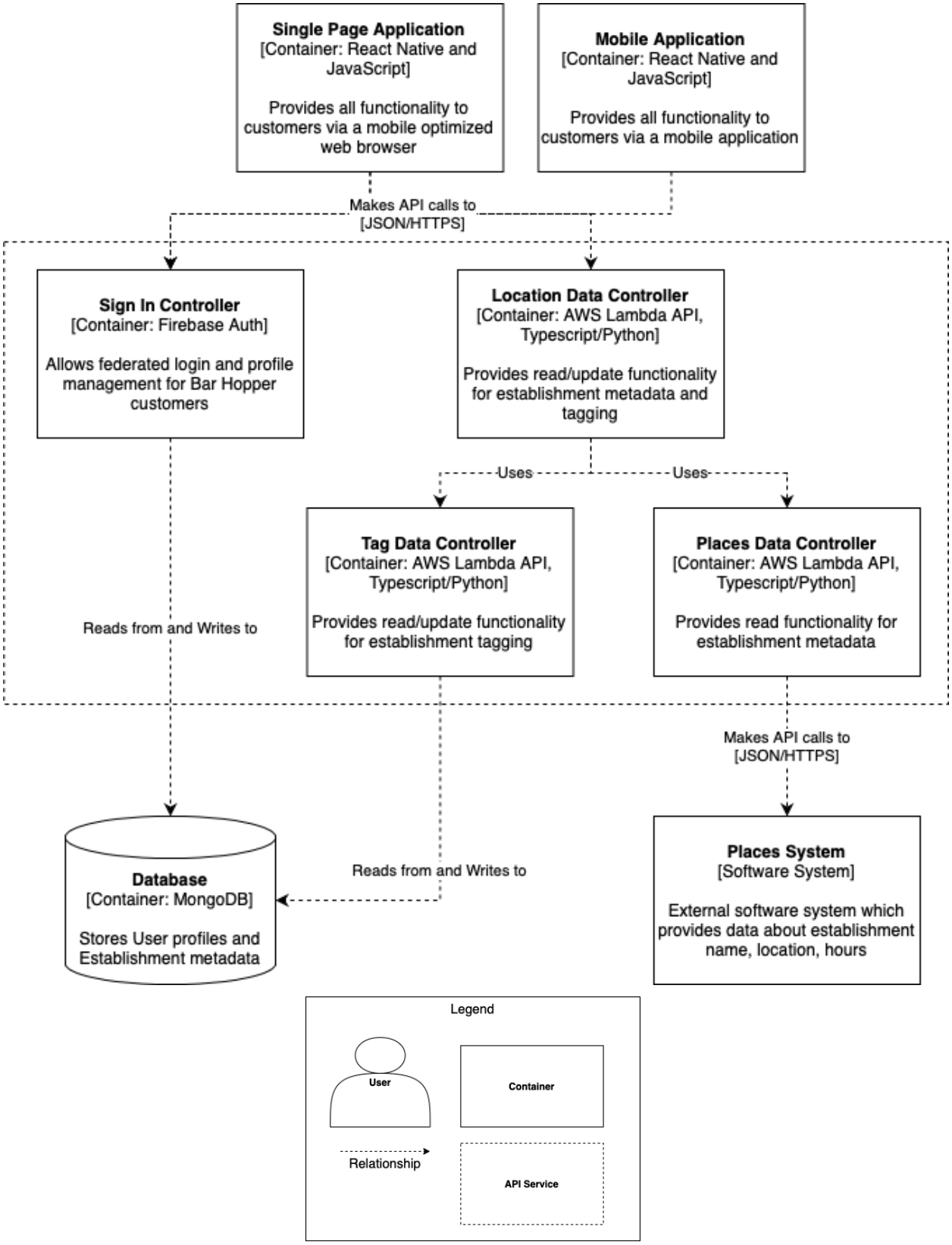
## Level 1: System Context Diagram



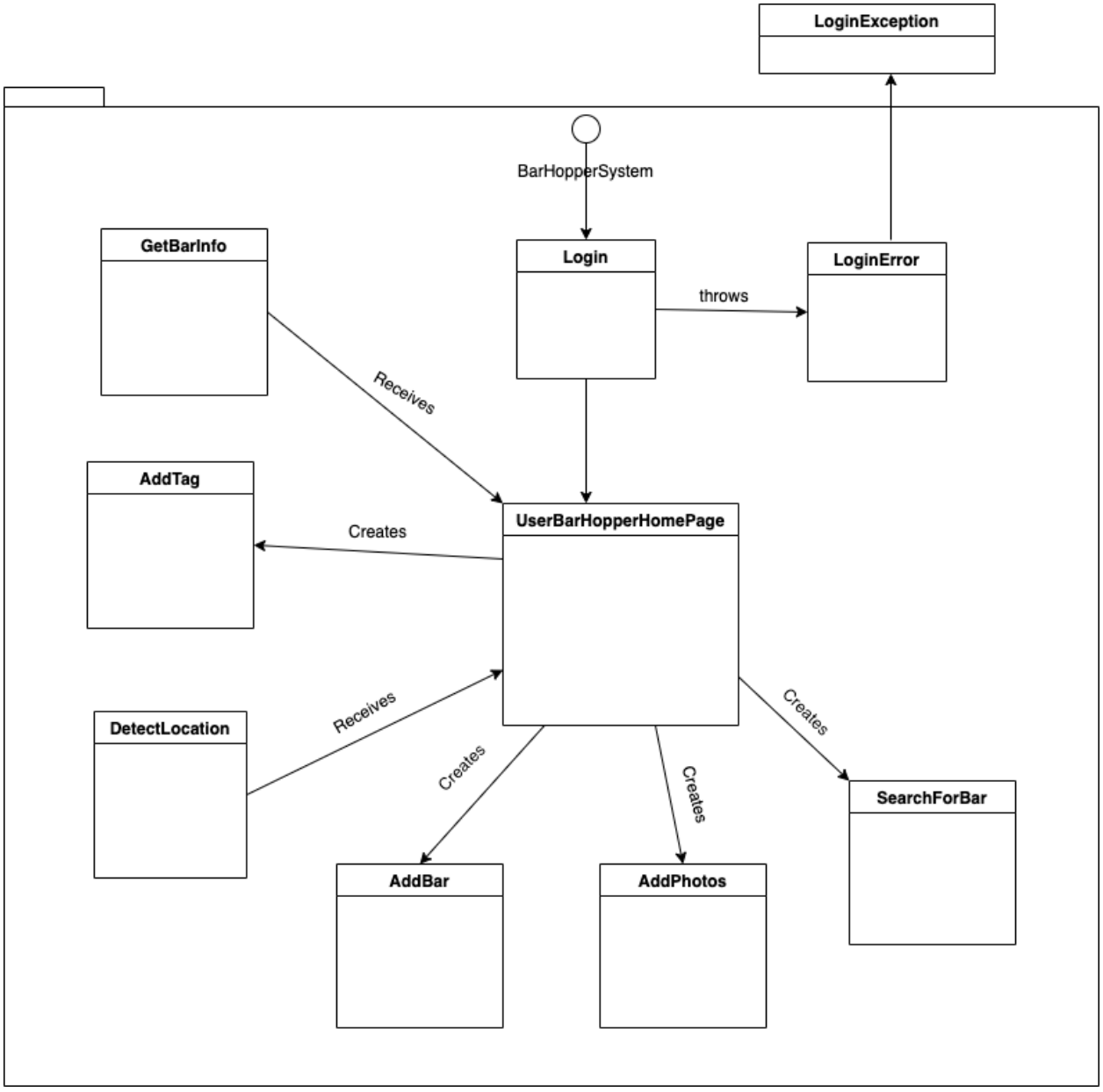
# Level 2: Container Diagram



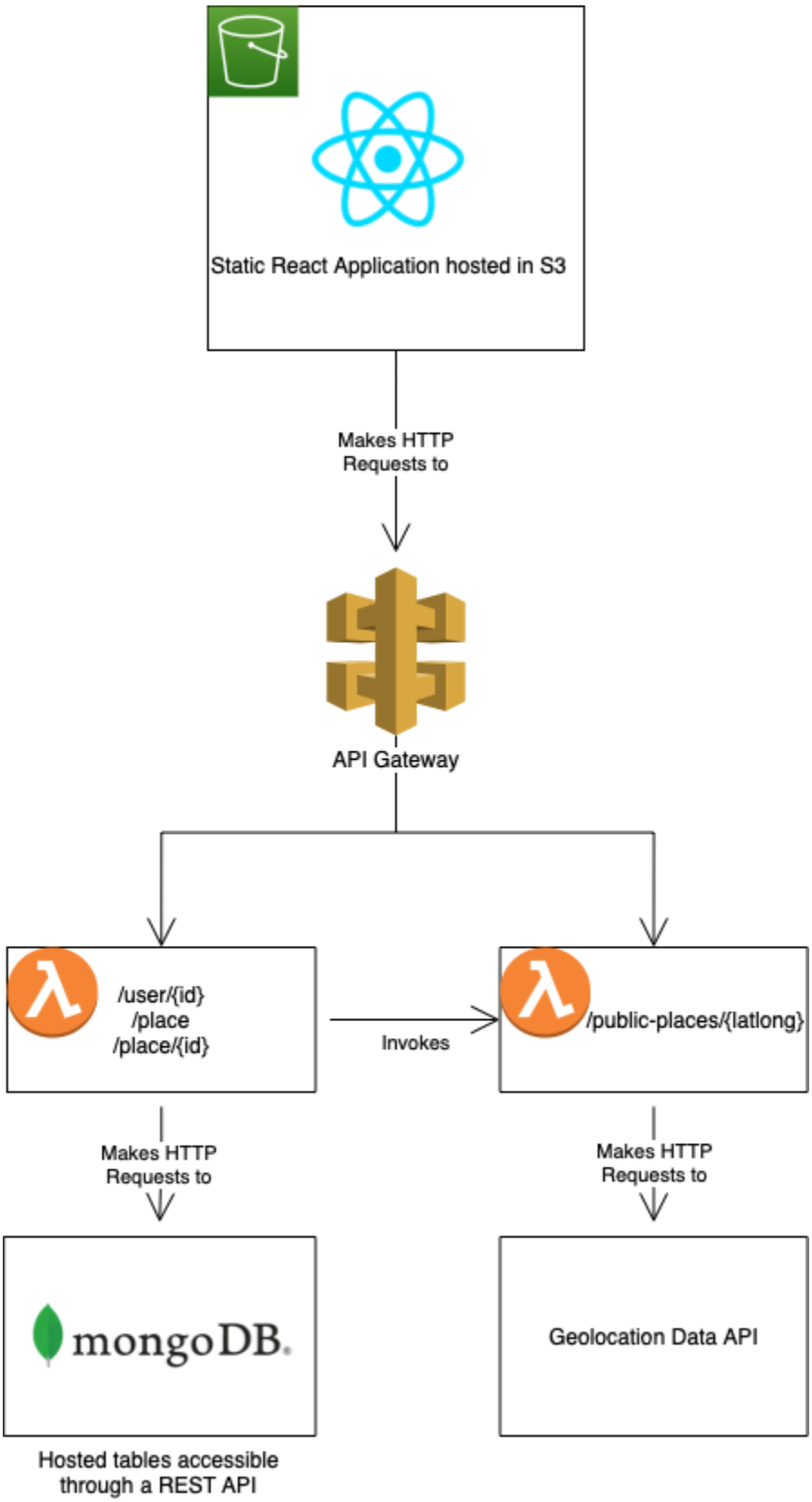
Level 3: Component Diagram


Single Page Application
[Container: React Native and JavaScript]
Provides all functionality to customers via a mobile optimized web browser
Mobile Application
[Container: React Native and JavaScript]
Provides all functionality to customers via a mobile application
Makes API calls to
[JSON/HTTPS]
Sign In Controller
[Container: Firebase Auth]
Allows federated login and profile management for Bar Hopper customers
Location Data Controller
[Container: AWS Lambda API, Typescript/Python]
Provides read/update functionality for establishment metadata and tagging
Uses
Uses
Tag Data Controller
[Container: AWS Lambda API, Typescript/Python]
Provides read/update functionality for establishment tagging
Places Data Controller
[Container: AWS Lambda API, Typescript/Python]
Provides read functionality for establishment metadata
Reads from and Writes to
Makes API calls to
[JSON/HTTPS]
Database
[Container: MongoDB]
Stores User profiles and Establishment metadata
Reads from and Writes to
Places System
[Software System]
External software system which provides data about establishment name, location, hours
Legend
User
Container
Relationship
API Service

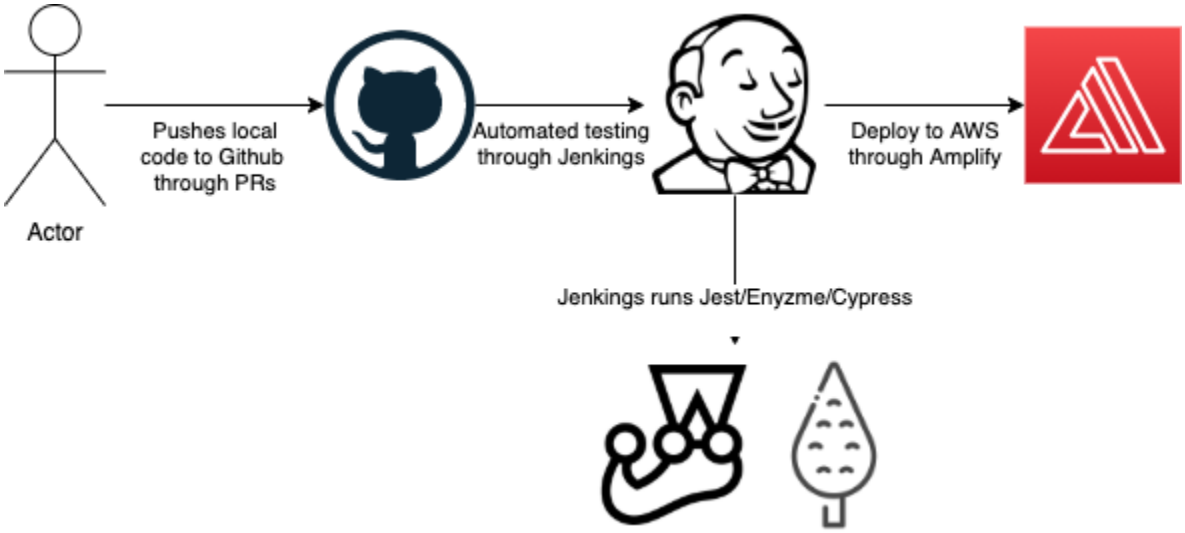
# Level 4: Code


LoginException
BarHopperSystem
GetBarInfo
Login
LoginError
throws
Receives
AddTag
Creates
UserBarHopperHomePage
DetectLocation
Receives
Creates
Creates
Creates
SearchForBar
AddBar
AddPhotos

Physical View



## Development/Deployment View




## Database schema

| User | Establishment |
|---|---|
| {<br>"_id": ObjectID,<br>"first_name": String,<br>"last_name": String,<br>"email": String,<br>} | {<br>"_id": ObjectID,<br>"name": String,<br>"location": Point,<br>"address": String,<br>"phone_number": String<br>"open_time": String,<br>"close_time": String,<br>"vaccination_protocols": String<br>"ratings": [<br>{<br>"user_id": ObjectID,<br>"line_attribute": Enum,<br>"vibe_attribute": Enum,<br>"tag_time": Date<br>}<br>]<br>} |