

CS5800 Homework-02

Subham Panda

017314921

Part 1 Use Cases (OOA)

1) Navigation

- **Actor:** User
- **Title:** Get Directions (Navigation)
- **Success Story:** The user opens CPP Maps and inputs their current location and desired destination. The application calculates the most efficient route considering traffic and road conditions. The user views the step-by-step directions and follows the highlighted path on the map to reach their destination successfully.

2) Search

- **Actor:** User
- **Title:** Place Search by Name (Search)
- **Success Story:** The user searches for a specific place, such as "Nordstrom," by typing its name into the search bar. CPP Maps accesses its extensive database to find and display the location on the map, along with essential details like address, operating hours, and reviews. The user finds the information they need with ease.

3) Explore

- **Actor:** User
- **Title:** Discover Places by Category (Explore)
- **Success Story:** The user wants to explore new restaurants in their vicinity. They select the 'Restaurant' category in the Explore feature. The app uses their current location to identify and display nearby dining options on the map. The user selects a restaurant from the list to see more details and decides to visit one based on the information provided.

4) Share Location

- **Actor:** User
- **Title:** Share Current Location (Share Location)
- **Success Story:** The user wants to share their current location with a friend. They use the Share Location feature, which retrieves their exact coordinates and creates a shareable link. The user selects their friend's contact and sends the link through their preferred messaging app. The friend receives the link and can view the user's location on their own device.

5) Share Rideshare

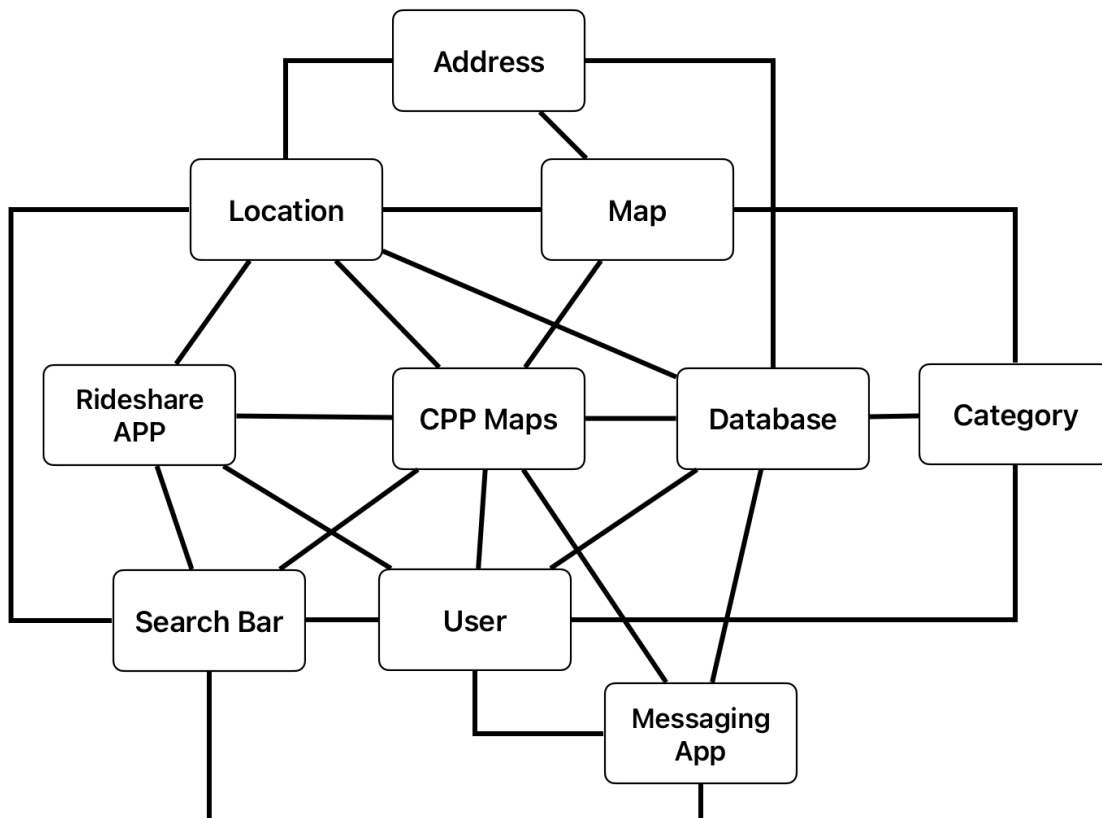
- **Actor:** User
- **Title:** Integrate with Rideshare Apps (Share Rideshare)
- **Success Story:** The user needs a ride and decides to use a rideshare service. They select the Share Rideshare feature, which identifies their current location. The app presents options to share this location with popular rideshare apps like Uber or Lyft. The user chooses one, and their location is sent to the selected app, where they can book a ride directly, ensuring a seamless transition from CPP Maps to getting a ride.

Part 2 (OOA)

a) The nouns are highlighted in yellow, being part of the Part 1 use cases to determine possible potential classes.

b) The verbs and verb phrases are highlighted in blue being part of Part 1 use cases to determine possible methods and relationships.

c) Below is the rough diagram



Part 3 (OOD)

a) CRC Tables

1.

User	
Responsibilities	Collaborators
Initiate searches select navigation options share locations choose ride services	CPP Maps Location Database Map Messaging App Rideshare App Categories

2.

CPP Maps	
Responsibilities	Collaborators
Provide navigation search functionality display map	User Location Database Map Rideshare App

3. Class Name: Location

Location	
Responsibilities	Collaborators
Store and provide location details Set coordinates and address	User CPP Maps Database Map Rideshare App

4.

Map	
Responsibilities	Collaborators
Display current location Directions Routes Searched places	CPP Maps User Location Categories

5.

Database	
Responsibilities	Collaborators
Store & retrieve location data user preferences app settings	CPP Maps Location Categories

6.

Messaging App	
Responsibilities	Collaborators
Send and receive location links or messages	User CPP Maps

7.

Rideshare App	
Responsibilities	Collaborators
Book rides to user-defined locations provide ride options and estimates	User CPP Maps Location

8.

Categories	
Responsibilities	Collaborators
List available categories Filter places by selected category Provide category-specific information to other classes	Map Database User

b) Final graph connecting all classes (removing God classes & adding functionalities)

