Problem 2: Design an App for Calling Taxis

Objects and behaviors:

Internet Service:
- Data: Name, phoneNumber
- Behaviors: connect

App:
- Data: listOfCar, listOfDriver, map
- Behaviors:

User:
- Data: Name, Phone, userLocation, Destination, numberOfPassager, tripTime
- Behaviors: logInToApp, callTaxi, reviews, cancel, contactDriver

Taxi Driver:
- Data: Name, driverPhoto, driverLicence, Phone, driverLocation
- Behaviors: confirmUserOrder, contactUser, pickUpUser

Traffic System:
- Data: roadCondition
- Behaviors: getRoadCondition

Vehicles:
- Data: numberOfVehicles
- Behaviors: Boolean isMetWithAccident()

Map System:
- Data: Road
- Behaviors: locateUser, locateDriver, askTrafficSystem, selectBestRoad

Credit Card:
- Data: Name, bankName, cardNumber, address, securityCode, expiry
- Behaviors:

Bank:
- Data:
- Behaviors: authorizedTransaction

Help Service:
- Data: servicePhoneNumber
- Behaviors: chatOnLine, Question, Answer

Sequence of invoking behaviors on objects

callingTaxiInApp

```
User kai;
taxiDriver driver;
App uber;

if the Internet. isAvailable
kai.loginToApp -> userName, pin: connected
if calling taxi now
    kai.callTaxi -> location, destination: nearbyTaxi
    if nearbyTaxi.isAvailable
        kai.findDesirebleCar -> listOfCar : Car
        kai.placeTheOrder -> creditCard, address : confirmation
        trafficSystem.getRoadCondition -> roadName : roadCondition
        Loop
        if numberOfVehicles < 5
            return roadConditionIsGood
        else
            mapSystem.changeRoad
        end
    else
        App.askKaiChangeLocation
    end
else
    kai.setTimeToUseCar -> date, time : listOfCar
    kai.findDesirableCar -> listOfCar : Car
    kai.placeTheOrder -> creditCard, address : confirmation
end
bank.authorizeTransaction
```