RIDE SHARING SYSTEM UML CLASS DIAGRAM

User
- □ userId: String
- □ name: String
- □ email: String
- □ phone: String
- □ password: String

Driver
- □ licenseNo: String
- □ status: String
- □ rating: Float
- □ currentLocation: Location
- □ vehicle: Vehicle
- ● acceptRide(rideId: String): Boolean
- ● updateStatus(status: String): void
- ● updateLocation(): void
- ● completeRide(): void

Notification
- □ notificationId: String
- □ userId: String
- □ message: String
- □ type: String
- □ timestamp: DateTime
- ● sendNotification(): void
- ● scheduleNotification(): void

1 receives 0..*

Rider
- □ currentLocation: Location
- □ rideHistory: List<Ride>
- ● requestRide(pickup, dropoff): Ride
- ● viewRideHistory(): List<Ride>

1 requests 0..*
accepts 0..* 1
owns 1

Ride
- □ rideId: String
- □ riderId: String
- □ driverId: String
- □ pickup: Location
- □ dropoff: Location
- □ fare: Float
- □ status: String
- □ startTime: DateTime
- □ endTime: DateTime
- ● updateStatus(newStatus: String): void
- ■ calculateFare(): Float
- ● assignDriver(): void

Vehicle
- □ vehicleId: String
- □ driverId: String
- □ model: String
- □ licensePlate: String
- □ color: String
- ● registerVehicle(): void
- ● updateVehicleInfo(): void

1 generates 1
1 receives 0..*
1 involves 0..*

Payment
- □ paymentId: String
- □ rideId: String
- □ riderId: String
- □ method: String
- □ amount: Float
- □ timestamp: DateTime
- ● processPayment(): Boolean
- ● verifyPayment(): Boolean

Rating
- □ ratingId: String
- □ rideId: String
- □ fromUserId: String
- □ toUserId: String
- □ score: Integer
- □ comments: String
- ● submitRating(): void
- ● viewRatings(): void

Location
- □ locationId: String
- □ latitude: Double
- □ longitude: Double
- □ address: String
- □ city: String
- ● getDistanceTo(location): Float
- ● validateCoordinates(): Boolean