

Use Case Diagram Documentation: Morocco InDrive

1. Actors:

1. **User (U):**
 - Represents the general user who can register, log in, request rides, view profiles, verify payments, and cancel rides.
2. **Driver (D):**
 - Represents the driver who logs in, accepts ride requests, starts and completes rides, views profiles, and verifies payments.
3. **Admin (A):**
 - Represents the system administrator who manages users and drivers and can also log in and view profiles.

2. Use Cases:

1. Register (UC1)

- **Actors Involved:** User
- **Description:** Allows a user to create an account in the system by providing personal information (email and password).

2. Login (UC2)

- **Actors Involved:** User, Driver, Admin
- **Description:** Allows all types of actors to log in to the system to access their respective functionalities.

3. Request Ride (UC3)

- **Actors Involved:** User
- **Description:** Enables users to request a ride by specifying their pickup and drop-off locations.
- **Includes:**
 - Assign Driver (S2): A driver is assigned to the requested ride.
 - Calculate Fare (S1): Fare is calculated after the ride is completed.
- **Excludes:**
 - Cancel Ride (UC7): If the user cancels the ride, the request process stops.
 - Verify Payment (UC9): Payment is not involved during ride request creation.

4. Accept Ride (UC4)

- **Actors Involved:** Driver
- **Description:** Allows a driver to accept a ride request assigned to them.

- **Includes:**
 - Start Ride (UC5): After acceptance, the ride progresses to the start phase.

5. Start Ride (UC5)

- **Actors Involved:** Driver
- **Description:** Marks the beginning of a ride after acceptance.
- **Includes:**
 - Validate Ride OTP (S3): The system verifies the user's OTP before the ride starts.
 - Complete Ride (UC6): After starting the ride, it transitions to completion.

6. Complete Ride (UC6)

- **Actors Involved:** Driver
- **Description:** Finalizes the ride, indicating that the user has reached their destination.
- **Includes:**
 - Calculate Fare (S1): The fare is calculated at the end of the ride.

7. Cancel Ride (UC7)

- **Actors Involved:** User
- **Description:** Allows a user to cancel an ongoing or requested ride.
- **Excludes:**
 - Request Ride (UC3): Cancelling the ride halts the request process.

8. Verify Payment (UC9)

- **Actors Involved:** User, Driver
- **Description:** Confirms that the payment for a completed ride is successful.
- **Includes:**
 - Calculate Fare (S1): The calculated fare is verified as part of the payment process.

9. View Profile (UC10)

- **Actors Involved:** User, Driver, Admin
- **Description:** Allows all actors to view their own profiles, including personal and account-related details.

10. Manage Users (UC11)

- **Actors Involved:** Admin
- **Description:** Enables the admin to add, edit, or remove user accounts.

11. Manage Drivers (UC12)

- **Actors Involved:** Admin

- **Description:** Enables the admin to manage driver accounts, including assigning roles and handling disputes.

3. System Services:

1. Assign Driver (S2)

- **Description:** Automatically assigns an available driver to the user requesting a ride.
- **Included In:** Request Ride (UC3)

2. Calculate Fare (S1)

- **Description:** Calculates the fare for a completed ride based on distance and duration.
- **Included In:**
 - Complete Ride (UC6)
 - Verify Payment (UC9)

3. Validate Ride OTP (S3)

- **Description:** Verifies the OTP provided by the user before starting the ride.
- **Included In:** Start Ride (UC5)

4. Relationships:

Includes <<include>>

- Ensures that essential system services and functionalities are triggered as part of the main use cases:
 - Request Ride **includes** Assign Driver **and** Calculate Fare.
 - Complete Ride **includes** Calculate Fare.
 - Verify Payment **includes** Calculate Fare.
 - Start Ride **includes** Validate Ride OTP **and** Complete Ride.

Excludes <<exclude>>

- Indicates alternative paths or mutually exclusive functionalities:
 - Request Ride **excludes** Cancel Ride **and** Verify Payment.
 - Accept Ride **excludes** Start Ride