# Team 1 BAAAAM Use Cases - Ride Request and Assignment System

# Overview

Use cases detail descriptions of how users will interact with the system to achieve specific goals. These help in understanding the functional requirements by providing scenarios of user interactions. Use cases are comprised of four components:

* The primary actors are the roles interacting with the defined use case.
* Preconditions list prerequisite information that must be true for the use case.
* The basic flow of events is listed in order as they would occur.
* Alternative flows are deviations from the expected basic flow, and have an identifier before the bullet point which correlates to a basic flow step (e.g. alternative flow steps 4a, 4b, etc would correlate to basic flow step 4).

## 

## USE CASE #1 - Client requests ride and dispatcher matches client with driver

Primary Actors

* Client, driver, organization staff, administrator

Preconditions

* Client must have a phone
* Organization staff have an intended date, time, pickup, and drop-off points for a client appointment
* The client’s disability needs are known

Basic Flow of Events

1. Client calls the organization and requests a time for a ride.
2. Staff member navigates to the scheduling page
3. Staff member clicks to create a new appointment
4. Staff member searches for client and selects them
5. Staff member inserts requested date, time, and locations for the ride, as well as filtering by ability to accommodate client needs
6. Staff member looks at calendar view of suggested drivers for that date and time
7. Staff member selects an available driver for the time slot
8. Staff member confirms appointment with client and driver
9. Once confirmed, submit form to schedule ride in calendar
10. Confirm with client
11. Notify/remind Driver of upcoming ride.

Alternative Flows

* 4a. Client does not exist in the system
  + 4a1. Organization staff works to add the new client to the system
* 7a. No drivers are available
  + 7a1. Organization staff notifies the client that no rider is available; the client cannot be helped at this time
* 10a. Email confirmation system is inaccessible
  + 10a1. Driver receives phone call confirmation
* 11a. Email confirmation system is inaccessible
  + 11a1. Driver and client receive phone call confirmation
* 11b. Driver cancels
  + 11b1. Organization staff works with client to locate a new driver

## USE CASE EXAMPLE #2 – Driver reports hours and mileage

Primary Actors

* Driver, Organization Staff

Preconditions

* Driver has kept records of their hours and mileage for every trip (starting point to destination = 1 trip), as well as the type of trip (round-trip, one-way to, one-way from, or cancelled)

Basic Flow of Events

1. Driver makes a phone call to the organization
2. Staff member navigates to the data entry page
3. Staff member selects the driver
4. Staff member records the driver’s mileage and trip information
5. Staff member submits the records
6. Data validation occurs to ensure the data is valid and formatted properly
7. The data is stored in the database

Alternative Flows

* 1a. Driver prefers to enter records into the system themselves
  + 1a1. Driver logs in to the system
  + 1a2. Driver enters their records into the system
* 3a. Driver does not exist in the system
  + 3a1. If the staff member has permission to do so, they work to add the driver to the system
  + 3a2. If the staff member doesn’t have permission to add a new driver, they redirect the driver to another staff member that does
* 6a. Data validation process rejects a logged trip
  + 6a1. Organization staff must review the record and correct any errors.
* 7a. Database is inaccessible (or otherwise a write failure occurs)
  + 7a1. Organization staff manually record mileage and trip information
  + 7a2. When the database becomes accessible again, manual records are entered into the database

## USE CASE EXAMPLE #3 – Managing system data into different formats (graphical, CSV, tables, etc.)

Primary Actors

* Staff member with reporting/data permissions

Preconditions

* Data exists on which to generate statistical reports or to export

Basic Flow of Events

1. Staff member navigates to the reporting screen of the system.
2. Staff member chooses the data to report on or export
3. Staff member chooses a format for data export
4. Staff member clicks confirm and generates the report or exports data

Alternative Flows

* 4a. Export file fails to be generated (possible reasons below)
  + Server is unresponsive
  + Query takes too long and is unresponsive
  + 4a1. Report to system administrator

## USE CASE EXAMPLE #4 – Administrator manages user roles and permissions

Primary Actors

* Administrator

Preconditions

* There is a defined set of permissions with which roles can be created

Basic Flow of Events

1. Administrator navigates to the roles and permissions page of the system
2. Administrator clicks to create a new role or clicks the edit button for an existing role
3. Administrator checks or unchecks permissions for the selected role
4. Administrator confirms changes

Alternative Flows

* 3a. Administrator gives permissions to role that shouldn’t have them
  + 3a1. Administrator re-edits role permissions
  + 3a2. Evaluate any changes made by users with the mistakenly granted permissions to ensure the system is not compromised

## USE CASE EXAMPLE #5 – Driver and/or Coordinator set weekly schedules

Primary Actors

* Driver, Organization Staff

Preconditions

* Driver knows their available hours by day.

Basic Flow of Events

1. Driver makes a phone call to the organization
2. Staff member navigates to the Driver scheduling page
3. Staff member selects the Driver
4. Staff member records the requested schedule as well as ability to accommodate disability needs
5. Staff member submits the schedule

Alternative Flows

* 1a. Driver prefers to enter their schedule into the system themselves
  + 1a1. Driver logs in to the system
  + 1a2. Driver enters their schedule and ability to accommodate disability needs into the system
* 3a. Driver does not exist in the system
  + 3a1. Staff member works to add the Driver to the system
* 4a. Driver does not know their ability to accommodate disability needs
  + 4a1. Staff member explains the actions required to accommodate various needs
  + 4a2. Driver determines their ability to perform these actions
  + 4a3. Staff member records these determinations in the system
* 5a. Database is inaccessible (or otherwise a write failure occurs)
  + 5a1. Organization staff manually records the Driver’s schedule
  + 5a2. When the database becomes accessible again, schedules are entered into the database

## USE CASE EXAMPLE #6 – Client Profile & Preferences Management

Primary Actors

* Client, Administrator

Preconditions

* Client must be registered in the system
* Client must have supplied preferences

Basic Flow of Events

1. Client calls the organization and requests to change their preferences
2. Administrator navigates to their profile page
3. Administrator updates accessibility needs, preferred ride times, and contact preferences
4. System validates the changes and updates the profile

Alternative Flows

* 3a. System validation fails
  + 3a1. Administrator is prompted to correct errors

## USE CASE EXAMPLE #7 – Ride Cancellation & Rescheduling

Primary Actors

* Client, Driver, Organization Staff

Preconditions

* Ride is already scheduled.

Basic Flow of Events

1. User requests a cancellation or rescheduling
2. Staff member navigates to the scheduling page
3. Staff member selects and cancels or reschedules that ride
4. System updates the ride status and notifies all relevant parties
5. If the ride was rescheduled, the staff member selects a new driver for the new time

Alternative Flows

* 1a. Client cancels last minute
  + 1a1. Notification sent to dispatcher for quick reassignment
* 1b. Driver cancels
  + 1b1. System notifies dispatcher and suggests alternative drivers
* 1c. Driver cancels, and there are no other drivers available for the ride
  + 1c1. Client is offered new day/time slots
* 5a. No drivers available for the new time
  + 5a1. Organization staff notifies the client that no rider is available; the client cannot be helped at this time

## USE CASE EXAMPLE #8- System Maintenance & Backup

Primary Actors

* Administrator

Preconditions

* A maintenance schedule must be established

Basic Flow of Events

1. Administrator schedules system maintenance
2. System notifies users of downtime in advance
3. Maintenance and backup is performed
4. System logs maintenance activities

Alternative Flows

* 2a. Unexpected downtime occurs
  + 2a1. System sends real-time alerts to users
* 3a. Backup failure
  + 3a1. Report to system administrator