# BTS435 Lab 3: Enrich AC and Finding Business Information

## 1. Acceptance Criteria (AC)

### User Story 1

As a driver, I want to self-check in once I arrive at the test center for my road test by scanning my driver license, so I will be added into the waiting list for being called to take my road test.

#### Acceptance Criteria:

- The system must allow drivers to scan their driver’s license upon arrival at the test center.  
- The system must validate the scanned license to ensure its authenticity and correctness.  
- The system must confirm the driver’s appointment for the road test before adding them to the waiting list.  
- If the driver does not have an appointment or the license is invalid, the system must display an error message with appropriate next steps.  
- The system must update the waiting list in real-time upon successful check-in.  
- The system must display a confirmation message on successful self-check-in.

### User Story 2

As a test center front desk employee, I want to upgrade drivers’ licenses, either from G1 to G2 or from G2 to G, after verifying the driver’s corresponding road test results.

#### Acceptance Criteria:

- The system must allow employees to search for and retrieve a driver’s record using their driver’s license number.  
- The system must display the driver’s road test history, including test dates, results, and any relevant notes.  
- Employees must verify that the driver passed the corresponding road test before upgrading their license.  
- If the test result is not valid (e.g., failed, incomplete, or missing), the system must prevent the license upgrade and display an error message.  
- Once the license upgrade is approved, the system must update the driver’s record and generate a new digital license.  
- The system must print a confirmation receipt for the driver upon successful license upgrade.

## 2. Important Business Information

From the acceptance criteria, the following business information can be extracted:

1. Driver Information:  
 - Driver’s license number  
 - Current license type (G1, G2, or G)  
 - Road test history (test date, result, and notes)  
 - Appointment details (date, time, and test type)  
  
2. Road Test Information:  
 - Test type (e.g., G1-to-G2, G2-to-G)  
 - Test result (pass, fail, or incomplete)  
 - Test center location  
  
3. System Requirements:  
 - Real-time waiting list management  
 - Driver license validation (authenticity and appointment confirmation)  
 - Ability to search and retrieve driver records  
 - License upgrade process (verification and record update)  
 - Error handling for invalid inputs (e.g., invalid license, failed test)  
  
4. Employee Actions:  
 - Verify road test results  
 - Approve or deny license upgrades  
 - Generate and print confirmation receipts

## 3. Optional: Organizing Business Information into Classes

Below is a proposed structure for organizing the information into classes with attributes:

### Class: Driver

- Attributes:  
 - driverLicenseNumber (String)  
 - currentLicenseType (String)  
 - roadTestHistory (List<RoadTest>)  
 - appointmentDetails (Appointment)

### Class: RoadTest

- Attributes:  
 - testDate (Date)  
 - testType (String)  
 - result (String)  
 - notes (String)

### Class: Appointment

- Attributes:  
 - appointmentDate (Date)  
 - appointmentTime (Time)  
 - testType (String)

### Class: TestCenterSystem

- Attributes:  
 - waitingList (List<Driver>)  
- Methods:  
 - validateLicense(driverLicenseNumber: String): Boolean  
 - addToWaitingList(driver: Driver): void  
 - upgradeLicense(driver: Driver, newLicenseType: String): void