Agile Software Development 2020: Project Completeness Checklist

1. User Management
   1.1. The system must allow users to self-register
      - **BDD**: 2 scenarios, user providing valid and invalid input data.
      - **TDD**: Checking registration in the system if the user provides a name, email, license plate, and unique email in the system. The system does not accept/register users with incorrect/incomplete data.
   1.2. The system must allow users to login.
      - **BDD**: 2 scenarios, including the user with valid and invalid credentials.
      - **TDD**: No test required.
   1.3. The system must allow users to logout.
      - **BDD**: 1 scenario illustrating the result of a user logging out.
      - **TDD**: No test required.

2. Interactive search for parking space
   2.1. When you enter a destination address, the system must present a list of available parking spaces around that address (i.e., around a given radius, and not all the parking spaces in the database).
      - **BDD**: 1 scenario illustrating the transition from providing an address to displaying the list of available parking spaces.
      - **TDD**: Verify that only available spaces are retrieved, and not available are discarded. Verify that only spots in a radius are returned and available places out of that radius discarded.
   2.2. The system shows the space availability and information about the price that applies (Zone A vs. B). Note that the prices depend and must be calculated from zones A or B. Thus, it is not correct to add random costs to parking spaces.
      - **BDD**: 1 scenario illustrating the space availability and prices are shown to the user.
      - **TDD**: Verify the availability for retrieved spots is always >= 1, and the price corresponds to the parking spot zone (A or B).
   2.3. The system estimates the fee in hourly payment (if the user enters the intended leaving hour).
      - **BDD**: 1 scenario illustrating that if leaving hour is provided, the fee is calculated.
      - **TDD**: Verify if the fee calculated is correct for a given distance under hourly payment restrictions.
   2.4. The system provides an estimation of the fee in real-time payment (if the user enters the intended leaving hour).
      - **BDD**: Same as for requirement 2.4 but under real-time payment.
      - **TDD**: Same as for requirement 2.3 but under real-time payment.

3. Parking payment
   3.1. The system allows a car driver to select between hourly or real-time payment
      - **BDD**: 2 scenarios illustrating a booking in which the user selects hourly and real-time payment.
      - **TDD**: Verify the system/database is updated accordingly.
   3.2. The system allows a car driver to submit a start and end of parking time.
      - **BDD**: 1 scenario illustrating the selection of the start and end of parking.
- **TDD**: Verify that the system does not allow invalid times/dates and that the start always occurs before the end time.

3.3. The system blocks the corresponding parking space and updates the availability of the parking space (after a booking).
  - **BDD**: Not required
  - **TDD**: Verify a user cannot book a parking space if it is already booked. Verify the parking availability was updated correctly after booking in the system.

3.4. If the car driver selected an hourly payment scheme, the system must notify the driver 10 minutes before the end of the period.
  - **BDD**: Not required
  - **TDD**: Not required

3.5. The driver can extend the parking period.
  - **BDD**: 1 scenario illustrating the parking extension.
  - **TDD**: Verify that the system does not allow invalid times/dates, and the extension time is not earlier than the original end. Verify the system is updated correctly and that the new fee is calculated accordingly.

3.6. If the driver does not extend the period, the system will start advertising the parking space 2 minutes before the end of the period.
  - **BDD**: Not required
  - **TDD**: Not required

4. **Billing/Invoicing**

4.1. (On hourly-based payment) The system allows the driver to pay before starting the parking period.
  - **BDD**: 1 scenario illustrating the payment before starting the parking period.
  - **TDD**: Verify the balance of the user is updated correctly after payment.

4.2. (On hourly-based payment) The system allows the driver to pay when extending the parking period.
  - **BDD**: 1 scenario illustrating the payment after extending the parking period.
  - **TDD**: Verify the balance of the user is updated correctly after payment.

4.3. (On real-time payment) The system allows the driver to pay at the end of the parking period.
  - **BDD**: 1 scenario illustrating the payment after the end of the parking period.
  - **TDD**: Verify the balance of the user is updated correctly after payment.

4.4. (On real-time payment) The system allows the driver to configure the option of paying at the end of the month.
  - **BDD**: 1 scenario illustrating how the user selects paying at the end of the month.
  - **TDD**: Verify the system is updated accordingly.

4.5. (On real-time payment) The system allows the user to pay at the end of the month (if the option is enabled).
  - **BDD**: Not required
  - **TDD**: Not required