# Tutorial Week 4

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Read about expert reviews and IoT provided in the previous lectures and answer the following questions:

1. Use your notes from last week’s tutorials to illustrate a cognitive walkthrough of the bicycle rental company system
2. Research and use your creativity about IoT in this system and explain how you can provide a pleasant experience for people who are hiring your bicycle, refer to UX concepts

Refer your notes from assignment 1 and explore the following question in your group:

1. Discuss your assignment 1 and explain what you have learnt and how you might improve your work in the future

# Solution:

**Part 1: Cognitive walkthrough**

* **Step 1: Open the app.** Users will open the app and be prompted to log in or sign up if they have not made an account. The UI should be intuitive and easy to navigate with clear labels.
* **Step 2: User search for available bicycles.** The app should pull GPS data to locate the user location and available bikes in their vicinity. The icons for available bikes should be clear for users to easily locate the closest bikes.
* **Step 3: User selects a bike.** When the user selects a certain bike, the app should display all relevant information regarding said bike including price and availability. If this information is not available, then the user might hesitate to rent out the bike.
* **Step 4: User unlocks the bicycle.** When the user decides to rent out a bike, the app should prompt the user to either scan the QR code located on the bike or enter the bike’s ID. This process should be quick to ensure a smooth process and thus prevent frustration in cases where the app is slow to contact the server.
* **Step 5: User starts the ride.** Once the unlocking process is complete, the app will automatically track the time that the bike is in use and display the rental cost. The app will also display information on traffic and offer alternative paths if needed.
* **Step 6: User finishes the ride.** The app will alert the user to a valid parking space nearest to their relative destination. Once the bike is parked, the app will prompt the user to confirm that the bike is parked and allow users to select multiple payment methods. This process should be relatively easy yet also secure, or the user might feel anxious with the payment process.

**Part 2: Incorporating IoT and UX into the rental system**

* **IoT elements:**
  + **Real-time tracking:** GPS and sensors will track the bike location and condition
  + **Dynamic pricing:** Prices can adjust in real time depending on the condition of the bike and the weather conditions
* **UX elements:**
  + **User-centered design:** The UI should be simple and easy to navigate to avoid confusion
  + **Personalization:** The app should offer suggestions based on the user preferences, namely on bikes location and prices
  + **Secure payment system:** The payment should go through a third-party payment gate and should be seamless

**Part 3: Reflection on assignment 1**

After some discussion, we arrived at the conclusion that accessibility and useability are one the most important aspects when designing an application or a system for multiple users. In future assignments we will read reviews about applications that are noteworthy and identify points that makes the application a pleasant experience, and those that pose a bad experience for the user.