# Designing Human Computer Interaction

# Tutorial Week 6

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Consider the case of the E – Scooter company from week 3 and answer the following:

1. Create a rich picture in which you include all stakeholders and consider IoT (including all services, devices, sensors, people and their relationships). Also clarify the automated activity

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1. Explain how stakeholders can communicate with their devices to rent a scooter and return it

When the user wants to start a ride, they open the renting app which will fetch scooter data from the server like location using GPS. The user will then be able to select a scooter to view its detail from distance to current location, price, battery and performance status. If the user wishes to choose said scooter, they can scan the QR code available on the bike which will send a request to the cloud server to authenticate and unlock the scooter.

When the user wants to end the ride, they can click on a button to end the ride which will send the request to the cloud server and in return the cloud server will send back the payment owned. The scooter will also send a message to the server saying it is available for booking.

1. Identify the primary and secondary devices of stakeholders who are renting the scooter and explain how those devices can use data from each other

User devices:

|  |  |  |
| --- | --- | --- |
| **Device** | **Device type** | **Purpose** |
| Smartphone | Primary | Find and book scooter, track ride progress, initiate payment |
| Smartwatch | Secondary | Display ride status and health monitoring |

Scooter IoT devices:

|  |  |  |
| --- | --- | --- |
| **Device** | **Device type** | **Purpose** |
| IoT module | Primary | Real time tracking using GPS, speedometer, battery sensors, connection module |
| Display panel | Secondary | Display essential information like speed, battery |

Cloud and network:

|  |  |  |
| --- | --- | --- |
| **Device** | **Device type** | **Purpose** |
| Cloud server | Primary | Store user and scooter information, payment processing |
| Computer devices | Secondary | Parking zone sensors |

1. Using developed scenarios from previous tutorials; create a table of an object and action analysis (at least 3 different activities) and develop a diagrammatic model that represents these activities. Explain what other models you can use to represent activities?

|  |  |  |
| --- | --- | --- |
| **Object** | **Action** | **Automated** |
| User | Locate and rent scooter | No |
| E – Scooter | Send real-time data | Yes |
| Cloud server | Process payment | Yes |

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Users locate e-scooter

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E-scooter sends data

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Processing payment