

**This exercise sheet will be discussed in tutorials
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AI: Internet Computing

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Exercise Sheet 6

Exercise 1: Future Vision: Life Simplified with Connected Devices

Watch the video: <https://www.youtube.com/watch?v=NjYTzvAVozo>

- Where can you see the 9 core characteristics of the Internet of Things? (choose one specific scene or describe them on a general level in regard to the video)
- Name examples for smart devices, smart objects, and smart environments in this video. Please name at least three of each.
- In regard to existing challenges of Internet of Things: Which challenges are relevant in the use cases of the video and why?
- How could future work counteract these challenges?

Exercise 2: Internet of Things in the Application area: E-Commerce / Shipping

Imagine you order your toothpaste online at Amazon and it will be delivered to your home via DHL.

- Do you know Internet of Things applications/processes that currently support this kind of use cases?
- What could be changed or implemented to improve this use case by the Internet of Things in the near future?

Exercise 3: CIIs in our day-to-day lives

- a) Name four CIIIs that most people are in contact with in their everyday lives. Which properties of CIIIs do these examples have? / What makes them critical?
- b) Discuss two of the above systems regarding critical magnitude, critical breadth, and critical duration.
- c) Try to find arguments for and against the criticality of the systems.

Exercise 4: Common properties of CIIIs

In the lecture, we presented ten properties of CIIIs. Choose five properties and discuss each using GPS as an example.

Exercise 5: Challenges in the operation of CIIIs

In the lecture, we also presented eleven challenges of CIIIs. Name them and choose six challenges and discuss each using Facebook as an example.