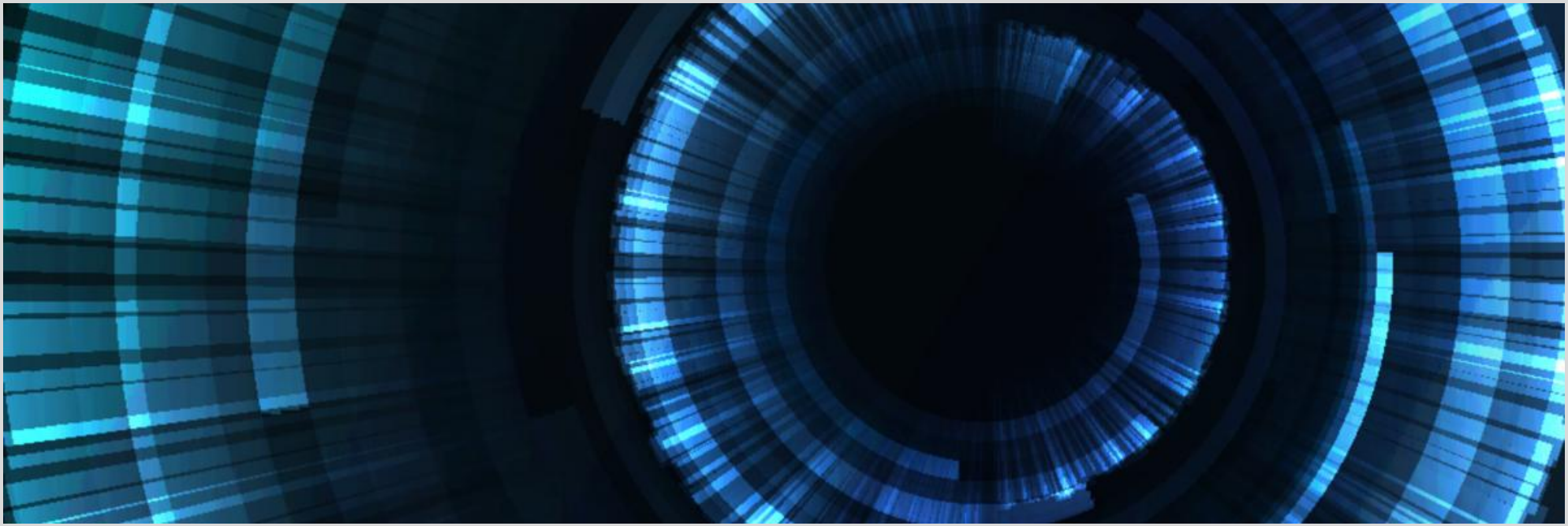
Human Computer Interaction



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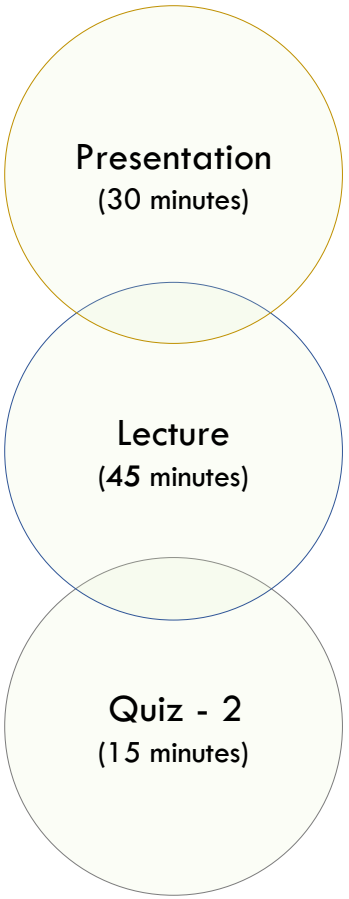
HUMAN CENTERED DESIGN

Agenda – 02 February



> 10 minutes each team – 23, 39, 55 >

> Scenarios >

> MCQ >

This week – 31 January & 02 February

Monday 31 January

TEAMS - 6, 18, 32

Wednesday 02 February

TEAMS - 23, 39, 55

Next week – 08 & 11 February

Monday 07 February

TEAMS - 12, 37, 51

Wednesday 09 February

TEAMS - 25, 43, 53

Scenarios

Scenarios: definition

A scenario is an 'informal narrative description' (Carroll, 2000). It describes human activities or tasks in a story that allows exploration and discussion of contexts, needs, and requirements. It does not necessarily describe the use of software or other technological support to achieve a task. Using the vocabulary and phrasing of users means that scenarios can be understood by the stakeholders, and they are able to participate fully in the development process. In fact, the construction of scenarios by stakeholders is often the first step in establishing requirements.

- Scenarios are stories:
  - informal narrative descriptions that detail activities and tasks
  - facilitate exploration of practices
  - focuses on understanding what people are trying to achieve

- Elements of a scenario:
  - agents or actors with
  - goals or objectives that include
  - sequences of actions and events

Scenarios: characteristics

- Use **personas** to develop the story
- Describe what **motivates** the user to use the product and their expectations upon arrival
- Describe **what the user wants** and what the product must have for them to achieve their goals
- **How can they achieve their goals** with your product? Describe the various possibilities and any potential barriers.

Scenarios: examples

- A parent is worried about a ten-year old refusing to drink milk and wants to know if it really makes a difference that the child is getting very little calcium ….

- You are traveling to Pune for your job next week and you want to check on the amount you can be reimbursed for meals and other expenses ….

Step 1: scenarios: examples – airline check-in

What happens now?

"I ***call*** the next customer in line. When he gets to my desk, I ask for a **ticket**. If the passenger is using **an e-ticket**, I need the **booking record locator**. Most of the passengers are not organized enough to have it written down, so I ask them their name and the flight they are on. Most people don't know the **flight number**, so I usually ask for their **destination**. They must know that!

"I make sure I have the right passenger and the right flight. It would be pretty embarrassing to give away someone else's seat or to send a passenger to the wrong destination. Anyway, somehow I ***locate*** the **passenger's flight record** in the computer. If he has not already given it to me, I ask for the passenger's **passport**. I ***check*** that the **picture** looks like the passenger and that the passport is still **valid**.

"If there is no **frequent-flyer number** showing against the booking, I ***ask*** the passenger if he belongs to our **mileage scheme**. Either he hands me the plastic **card** with the FF number, or I ask him and if he wishes to join I give him the sign-up **form**. We can put temporary FF numbers against the flight record so the passenger is credited for that trip.

Step 1: scenarios: examples – airline check-in

What happens now?

"If the computer has not already ***assigned*** a **seat,** I find one. This usually means I ask if the passenger prefers a **window** or an **aisle** seat, or, if the plane is already almost full, I tell him what I have available. Of course, if the computer has assigned one, I always ask if it is okay. Somehow we settle on a seat and I ***confirm*** it with the computer system. *I can print the boarding pass at this stage, but I usually do the bags first.*

"I ***ask*** how many **bags** the passenger is checking and, at the same time, ***verify*** that he is not exceeding the **carry-on limit**. Some people are unbelievable with what they want to carry into a fairly space-restricted aircraft cabin. I ***ask*** the **security questions** about the bags and get the passenger's responses. I ***print*** out the **bag tags** and securely attach them to the bags, and then I send the bags on their way down the conveyor belt.

"Next I ***print*** the **boarding pass**. This means that I have everything done as far as the computer is concerned. But there is one more thing to do: I have to **make sure that everything *agrees* with the passenger's understanding**. I ***read*** out from the boarding pass where he is going, what time the flight is, and what time it will board. I also read out how many bags have been checked and confirm that their destination matches the passenger's destination. I ***hand over*** the documents, and wish the passenger a good flight."

Step 1: scenarios: examples – airline check-in

What happens now?

Sketch out the scenario. Break the story down to the steps that you consider to be the best ones to capture the normal path through the story

1. Get the passenger's ticket or record locator.
2. Is this the right passenger, flight, and destination?
3. Check the passport is valid and belongs to the passenger.
4. Record the frequent-flyer number.
5. Find a seat.
6. Ask security questions.
7. Check the baggage onto the flight.
8. Print and hand over the boarding pass and bag tags.
9. "Have a nice flight."

Confirm this scenario with the interested stakeholders

Stakeholders are invited to participate and revise the scenario until it represents a consensus view of what the work should be.

Step 2: scenarios: mapping

https://www.justinmind.com/blog/user-personas-scenarios-user-stories-and-storyboards-whats-the-difference/

Scenarios: benefits

- Help designers understand what motivates users when they interact with a design
- Visualize how a user will use a product or service will help generate design ideas
- Identify which steps of the process would require additional help to users

Scenarios: disadvantages

- Narrative is linear, doesn't reveal alternatives
- Does not reveal potential errors

Scenarios: multiple purposes

- Requirements elicitation:

  current work activities are described in detail (e.g. university admissions)
  "This is where the admission forms arrive. We receive about 50 a day during the peak application period. Brian opens the forms and checks that they are complete, that is, that all the documentation has been included. We require copies of relevant school exam results or evidence of work experience before we can process the application. Depending on the result of this initial inspection, the forms get passed to..." - (Preece et al, 2002)

- Design specification:

  cause-and-effect relationships to guide the development of functionality (e.g. shared calendar system)
  "The user types in the names of meeting participants together with the time and duration of the meeting and where it will take place. The system then checks against each individual's calendar and presents the user with a series of dates where individuals are free all at the same time. Perhaps the system could email each individual and ask them to confirm..." - (Preece et al, 2002)

- Prototype evaluation:

  validate the system by conducting usability tests to compare how well it matches key scenarios

NARRATIVE ELEMENTS	NARRATIVE ELEMENTS IN A SCENARIO
Character(s): a protagonist as well as minor characters. A character can be any entity that has agency, that is, involved in the action.	In scenarios, the persona is the protagonist. (In scenario-based design, the main character and protagonist is the IT system.)
Time: both the time in which the actions take place, e.g. the future, and the story development over time - beginning, middle, and end.	Most scenarios are set in present time, but they can also concern a distant future. The story time can last minutes, days, months, etc.
Problem: a loss, a need, a lack of something, an obstacle to overcome, a conflict.	The persona has a problem.
Setting: presentation of characters, location, problems, and time.	The scenario begins with a presentation of the persona, his or her problems, the place where the action takes place and the time (present time/distant future).
Opening episode: the character reacts to the problem, sets a goal, and outlines a path to the goal.	The persona defines the goal and starts to act.
•**Episodes**: development toward the goal. Episodes consist of: Beginning •Attempts •Events (accidents, obstacles, happenings, deliberate human actions) •Development	The scenario develops through a sequence of episodes that concern the problem, the goal and the attempts to reach the goal, the events involved in these attempts, and the obstacles hindering fulfilment of the goal.
Resolution: the problem is solved and the goal is reached - or it is not.	There are two types of scenarios - one where the problem is solved and the goal is reached, and one where they are not.
Plot: the linkage and order of the episodes.	Most scenarios are presented in a linear manner, without deviations from the story line.
Overall story: starts with a beginning, goes through a middle, and arrives at the end. The overall story is sensitive towards what is considered ordinary social practice within a given culture and explains deviations from accepted social practice.	Each episode links to and has to be meaningful in relation to the overall story. The scenario has to explain why non-routine actions and events happen and how they are dealt with.
Narrator's perspective: The narrative is told by someone.	Most scenarios are told in third person allowing the narrator to guide the story

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Exploring Persona-Scenarios - Using Storytelling to Create Design Ideas Madsen & Nielsen, 2010

Summary

- Conceptual Models
- Interface Metaphors
- Interaction types
- Personas
- Scenarios

Assignment 3 & Tutorial exercise

Submission Date: Saturday, 12th February 2022

Scenario:

GROUP PROJECT:

- **Scenario: 1)** Create a story that describes how a persona would use **your product, service or system** within a specific context. **2)** Include a numbered sequence of actions that the user would need to perform to achieve their goals.
- **Scenario Map:** Create one scenario map of all the steps a user will take to complete their goals using your product, service or system. Map out steps for main tasks horizontally from left to right. And vertically, underneath each step, add detail such as comments, questions, ideas and suggestions for features and functionality.

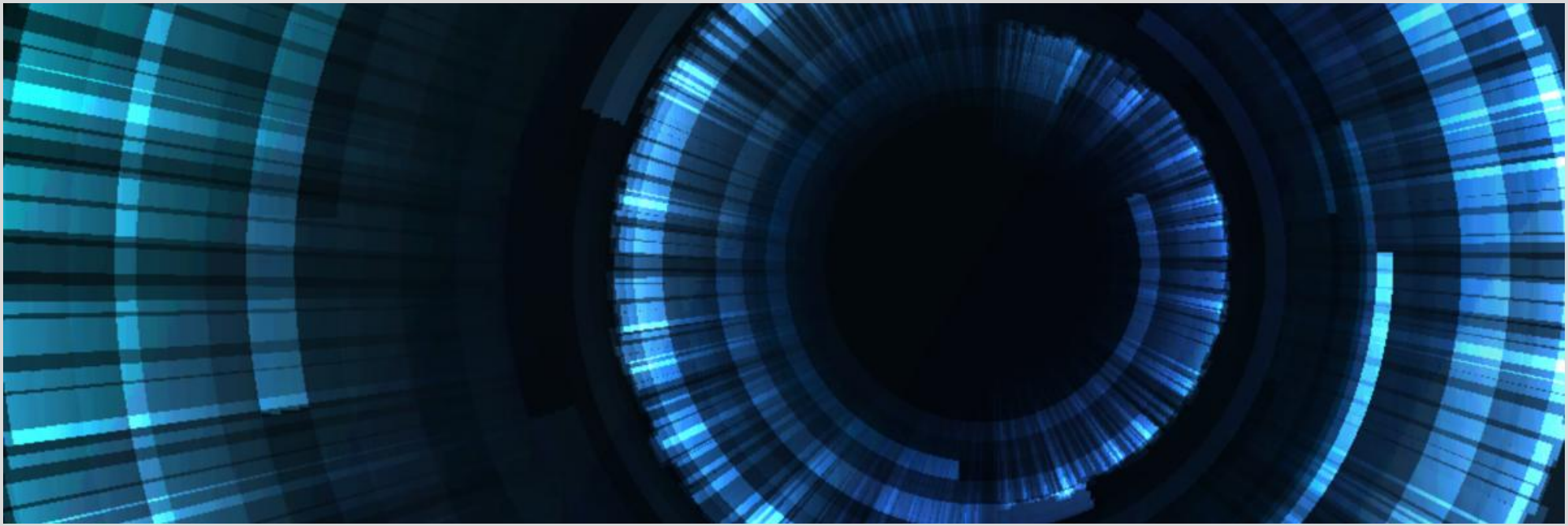
Objectives:

- Decide what tasks your prototype will support, identfy requirements, generate design ideas

Create a PDF and/or Link to a Miro Board:

- Submit
  - 1) a story,
  - 2) the sequence of steps to complete as task
  - 3) a photo of your scenario map

Human Computer Interaction



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HUMAN CENTERED DESIGN