

# Human Computer Interaction

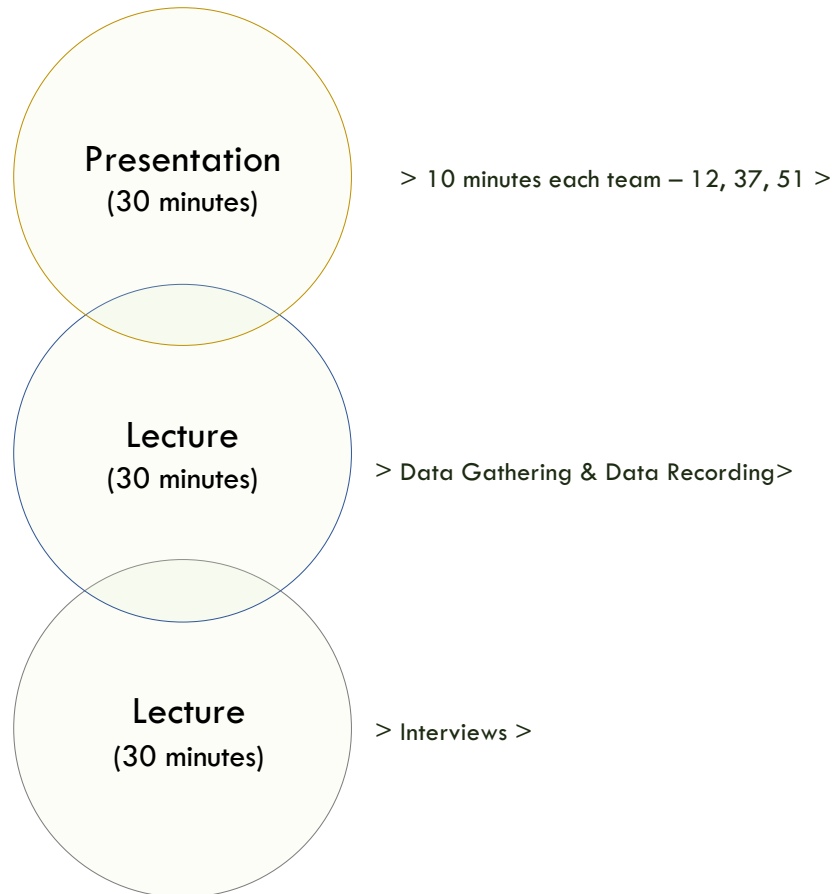


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## Agenda – 07 February



This week – 07 & 9 February

**Monday 07 February**

TEAMS - 12, 37, 51

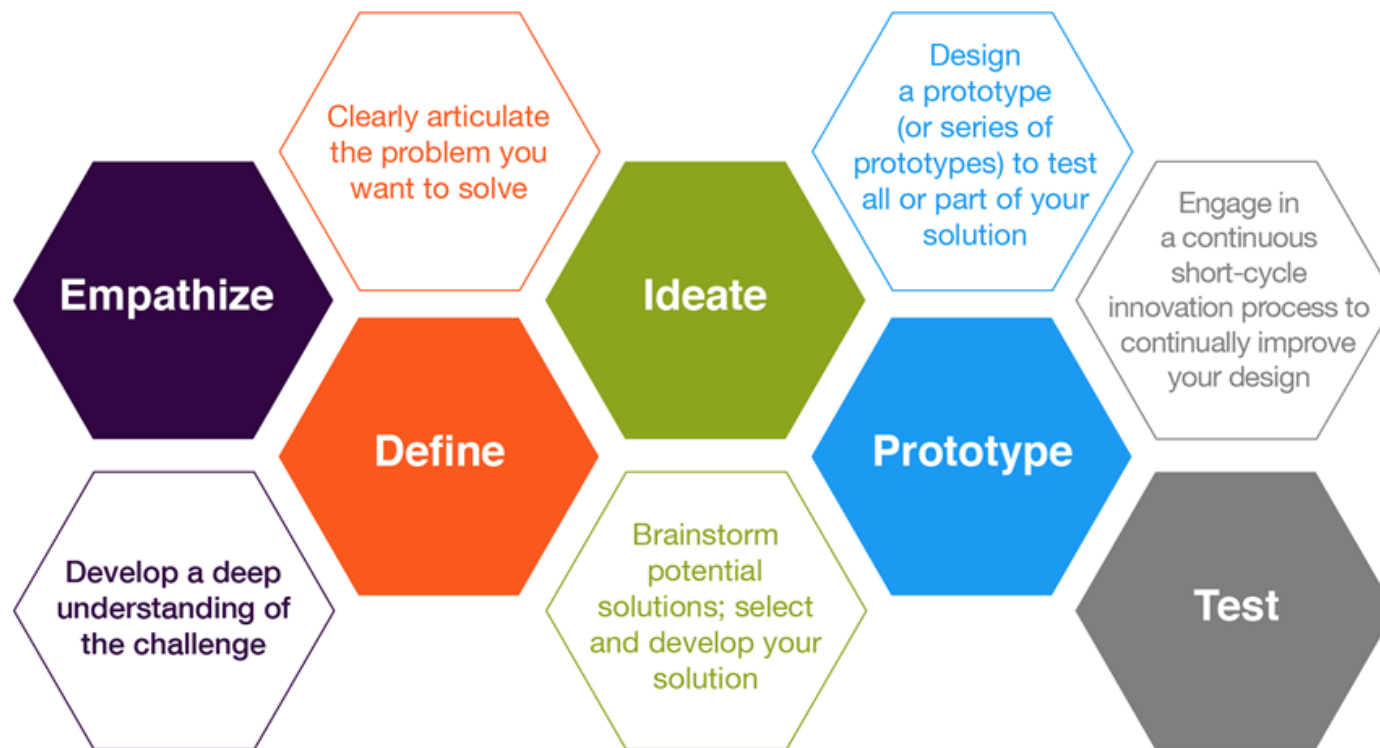
**Wednesday 09 February**

TEAMS - 25, 43, 53

## Your project process

- **DEFINE**
  - Problem space
    - write a summary of the technology domain
- **EMPATHIZE**
  - Market insight (competitor analysis, interviews)
  - Audience insight (personas, user scenarios storyboards)
- **IDEATE**
  - User journey/scenario (goal-based journey)
  - Lo-Fi Sketching (interface & user flow)
- **PROTOTYPE**
  - Digital prototype (Med-fi & Hi-fi digital)
- **EVALUATE**
  - User testing (set-up & results)
  - Iterative design (incorporating feedback)

## Design Thinking Process



## Your project process

- **DEFINE**
  - Problem space
    - write a summary of the technology domain
- **EMPATHIZE**
  - Market insight (competitor analysis, interviews, surveys, questionnaires, etc)
  - Audience insight (personas, user scenarios storyboards)
- **IDEATE**
  - User journey/scenario (goal-based journey)
  - Lo-fi Sketching (interface & user flow)
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## Learning about what people want from technology

1. **Ask** them about their problems - e.g. an interview
2. **Observe** their problems - e.g. go on location

## Techniques of gathering data – Qualitative & Quantitative Methods

### 1) Interview (Structured or Unstructured)

- **Ask** them about their problems - Involves an interviewer asking the interviewee a set of question in the presence of the investigator.

### 2) Questionnaires & Surveys

- **Enquire** about their problems - Series of questions designed to be answered without the presence of the investigator.

### 3) Contextual Inquiry

- **Observe** their problems (e.g. go on location)



## Informed Consent

- Obtaining explicit permission to conduct research with participants
  - Written or Verbal consent
  - Describe the purpose of your study

## Informed Consent

1. I confirm that the **purpose of the study** has been explained to me and that I have had the opportunity to **ask questions** about the research and have had these answered satisfactorily.
2. I understand that my participation is **voluntary**, and that I am **free to withdraw** at any time **without giving any reason**.
3. I am allowing the researcher to **audio-video record** me as part of the study. The recordings will be transcribed. I understand that **anonymized images** and quotes may be used in presentations or **publications** stemming from the research but not in any way that might allow for identification of individual participants.
4. I understand the data will be kept **confidential** at all times.
5. I understand that if I have any concerns or difficulties **I can contact** a member of the project team.
6. **I agree** to take part in this study.

## Data gathering - Five key issues

1. **Setting goals**
  - Decide what you want to know about
2. **Identifying participants**
  - Decide who to gather data from
3. **Relationship with participants**
  - Clear and professional
  - Informed consent
4. **Triangulation**
  - Look at data from more than one perspective
  - Collect more than one type of data
5. **Pilot studies**
  - Small trial of main study

## Data recording

- Notes, audio, video, photographs can be used individually or in combination:
  - Notes plus/minus photographs
  - Audio plus/minus photographs
  - Video
- Different challenges and advantages with each combination

## Interviews

- Qualitative method involving questions and answers.
- Different types.
  - Formality level : are questions prepared in advance or is it a conversation?
  - Structure : are questions asked in the same order you reorder them?
  - Response types : a fixed set of responses or are answers open-ended?

## Conducting an Interview

- **Introduction** – introduce yourself, explain the goals of the interview, reassure about the ethical issues, ask to record, present the informed consent form
- **Warm-up** – make first questions easy and non-threatening
- **Main body** – present questions in a simple to complex order
- **Wind down** – include a few easy questions for positive ending
- **Closure** – thank interviewee, e.g. switch recorder off

Let's try a **informal**, open-ended interview

- **No prepared questions**
  - Welcome participant , thank them for helping, explain the purpose of the interview
  - Nothing prepared in advance
    - Topic: Coronavirus



## Let's try a semi-structured interview

- Prepared questions, optional follow-up questions
  - Welcome participant, thank them for helping, explain the purpose of the interview
  - Q: There is a C virus alert. Can you tell me how you or if you preparing for this





## Let's try a formal, fixed-response interview

- Prepared questions, optional follow-up questions
  - Welcome participant , thank them for helping, explain the purpose of the interview
  - Q: There is a C virus alert. Can you tell me how you or if you preparing for this
  - Q: Do you buy and use mask?
  - Q: What do you do when you hear someone cough or sneeze?



## Each interview has its own benefits

- **Formal** interviews guarantee you learn specific things
  - Difficult to learn about unanticipated topics
- **Structured** questions will be easier to combine responses
  - Difficult to ask questions that come to your mind during the interview
- **Fixed** responses will be easier to compare the responses
  - Difficult to learn unanticipated answers

## Asking good questions

- Ask specific, concrete things your participant will know about
- Not leading, suggesting a desired answer
  - “is there any part of bus riding you actually enjoy?”
  - vs. “tell me about your experiences on buses”
- Not loaded, containing implicit assumptions
  - “have you stopped riding the bus?” (assumes that a person rides the bus)
- Avoid double negatives
  - “are you not dissatisfied with your transportation options?”

## Good interviewers

- Listen, then ask follow-up questions
  - The interviewee should talk more than the interviewer
- Make participants comfortable
- Establish rapport with participants, earning their trust
  - starting with informal conversation first

## Good interviewers

Start with:

Tell me about \_\_\_\_\_

Follow up with:

Why? How? What? Where? When? Who? \_\_\_\_\_

## Things to consider about interviews

- Requires participants to recall experiences and memory is not always accurate
- Out of context, you only learn about design opportunities that a person can remember
- Conduct anytime, anywhere, including over the phone or e-mail

## Enriching the interview process

### Props - devices for prompting interviewee



## Assignment 4

Submission Date: Saturday, 12th March 2022

### Interview:

#### GROUP PROJECT:

#### Objectives:

- Plan and conduct a data gathering activity - Set a goal to what you need to inquire or investigate for your Final Project

#### 4. Data Gathering/Collection:

- **Participant List**  
1) Make a list of potential participants for the interviews, questionnaires, surveys, etc.
- **Consent Form**  
2) Draft an appropriate Consent Form for the participants
- **Draft Questions**  
3) Plan & develop the Interview Questions, Questionnaire Questions, Survey Questions, etc.
- **Conduct & Record the Data**  
4) Conduct the different types of data collection methods and record it, ready for analysis

#### Create a PDF



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