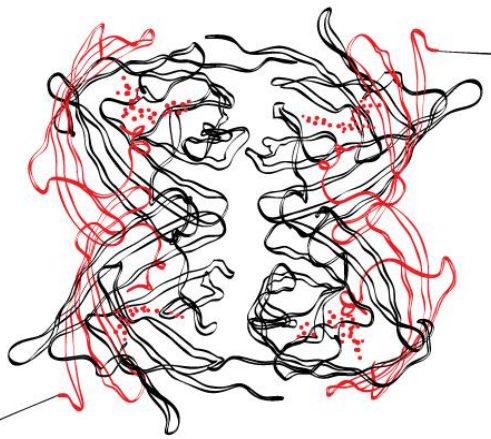
# HCI DESIGN AND DESIGN

**Assignments 2021 – Hi-fi Prototype**

Module ID: 202001032
Bachelor Technical Computer Science / Business & IT
December 2021



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## Goal

We learned some lessons from our lo-fi prototype and test. This will help us with moving forward for the hi-fi prototype. Your hi-fi prototype is suitable for smooth(er) (usability) testing of key aspects of the system. Smooth(er) (usability) testing means close to real-time, better look-and-feel and key user interactions can be tested (see below). Your hi-fi prototype *is* "intelligent", or at least *acts "*intelligent". That means you can use techniques from the Artificial Intelligent & Cyber Security course, integrate (remember, it is ok to have the "hackers mentality") an SDK, API or framework (such as IBM Watson, Google's Dialogflow or Google places API) or develop your own computational intelligence to demonstrate and prototype how this "intelligence" can be used in the final version of your future product.

Note: discuss with your tutorial leader your ideas for your hi-fi prototype(s) before you start making your hi-fi prototype!

## Objectives

- **Key interaction:** Must include a user interface and/or user interactions with system. It should provide a smooth interaction for participants.
- **Real-time:** Prototype communicates the interactions that participants would have with the key aspects of the system as a real-time interactive demo.
- **Look & feel:** Prototype presents one possibility for the look (beyond wireframes) and feel (material treatment beyond cardboard) of the key aspects of the system.
- **Intelligent:** The prototype should be "intelligent". Techniques from the Artificial Intelligent & Cyber Security course and/or SDKs, APIs or frameworks (such as IBM Watson, Google's Dialogflow or Tensorflow) can be used to demonstrate and prototype how this "intelligence" can be used in the final version of your future product. You can also simulate intelligence by any other mean, the goal is to give the user the impression of interacting with an intelligent system.
- Degree of technical implementation is significantly higher than a lo-fi prototype but **lower** than a full functional prototype.

## What to deliver

A report that presents and explains:

- The design of your hi-fi prototype. Add pictures of your hi-fi prototype.
- The interactions with key aspect of the system. Add pictures that illustrate the interactions.
- A high-level technical description, including the integration and motivation for techniques, tools or frameworks of your hi-fi prototype.
- (you are also allowed to add a small video that helps to explain your hi-fi prototype and the user interaction)

## Useful links

These links might be useful for your hi-fi prototype.

**IBM Watson** - https://cloud.ibm.com/catalog#services
**Google Dialogflow** - https://cloud.google.com/solutions/building-chatbot-agent-dialogflow
**Tensorflow -** https://www.tensorflow.org/lite/examples , https://www.tensorflow.org/lite/guide
**Tensorflow model maker -** https://www.tensorflow.org/lite/tutorials/model_maker_object_detection
**OpenCV** – e.g. https://www.youtube.com/watch?v=NZde8Xt78Iw

**Peer-review**

The feedback from the peer-reviews is given by students who do an alternative assignment for the project. If you have questions or doubts on the reviews, please contact your tutorial leader to discuss the review.

Review criteria:

| Area | Formative Feedback |
|---|---|
| Is the design of the hi-fi prototype well described and clear? Are pictures of your hi-fi prototype added and are they well explained? | |
| Is the interaction with the key aspect of the system well described? Are pictures that illustrate the interaction added and well explained? | |
| Is the high-level technical description of the hi-fi prototype given? Is the description clear? | |
| Is it clear what services are implemented to make the hi-fi prototype intelligent? Is the choice well explained and logical? | |