Individual Reflection 1

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1 Role

Given that we are still in the very early stages of development, my role has not yet been well defined. However, my role seems to converge towards back-end development, primarily. This may include database design and implementation, as well as development of the API through which the software module on the web server must interface with in order to access the database.

I have tried to contribute by focusing on what is a realistic solution, what can be implemented, and how it can be implemented, concretely. At this point, I have contributed to the various group assignments that we are obliged to complete. I have helped by formulating the problem statement, creating a mockup idea for a potential dashboard GUI, and by providing a rudimentary ER-diagram, that may or may not be used as a starting point or reference for future discussion concerning our database.

I intend to make direct code contributions, depending on what tools we collectively decide to use. I intend to help our group in deciding what solution might be appropriate given our limited time and capabilities. I want to be engaged in the group and do the best I can to push us in the direction of a solution to whatever problem is at hand.

The specific modules I am responsible for is not yet well established. As previously mentioned, however, it will most likely be back-end software modules and similar concepts.

2 Knowledge

I have learned more about the digital signage industry - what it is, and why it is important. I have learned the importance of communication and asking questions. When it comes to technical skills, I intend to apply the expertise we have acquired in previous courses, including database design and web programming. More specifically, I intend to further enhance my skills in React, Node.js, and the database management system we choose, for example MariaDB.

3 Course Objectives

The following is an outline of the course objectives, and whether or not I have fulfilled them as of this reflection, 17/09/23:

- **Apply and extend knowledge from previous courses in the discipline, including courses in programming, in an industry-related problem.**

  I have applied and extended knowledge from previous courses. Thus far, it has mostly been database modeling and the beginnings of backend web development.

- **In cooperation with others identify the need for products and services.**

  Together with my group and our client, I have been a part of the conversation when it comes to identifying the need. I have brought my own insights depending on the situation, and we have further discussed the issue together in the group.

- **In cooperation with others suggest products and develop services based on users precondition and needs**

  In my group, we have started this process. Naturally, I am cooperating with my team members to try to pinpoint what the fundamental problem and need is, in order to formulate a commercially viable product or service that we can provide to our clients. We have slowly started to conceptualize our software solution, hence it's still at a very early stage of development.

- **Participate in requirements capturing and in the formulation of requirement specifications**

  We have essentially completed this step. I have been an active participant in this process. The requirements have been based on the needs of our client. The web has been searched to gain further insight into what kind of solutions science centers and museums require when it comes to digital signage as opposed to traditional physical informative text.

- **Follow a motivated project management model**

  All members of our group are following the Agile project management model called SCRUM. Hence, we intend to have regular meetings and sprints every second week with our client.

- **Plan and participate in a project within given time frames**

  We are still in the process of completing this course, which means that we are keeping track of deadlines, deliverables and other important dates within our given time frame. We work diligently to ensure we complete our tasks when they are due, and naturally we plan ahead in order to finish our assignments in time.

  All of us, myself included, participate in planning, staying up to date, and reminding each other of important milestones throughout the course, and what we need to do about it.

- **Show an understanding about the expected future possibilities and limitations of technology**

  While fully understanding the future expectations and limitations of digital signage technology is difficult, we still possess a general apprehension regarding this issue.

  To meet future expectations, our solution needs to be scalable. It needs to be good enough for clients to use today as well as 10 years from now. We take technological trends and innovations seriously, and we recognize the potential they have. A good example is the integration of AI into our modern digital signage solution.

  It's difficult to foresee what the main limitations of the technology associated with digital signage will be in the future, but I'm certain we will learn more about this as we gain more experience and industrial insight.

- **Present the product idea orally and in writing.**

  This goal has been fulfilled. I have contributed in presenting the product both through my writing in the project plan, and by taking part in our oral NABC-pitch presentation.

- **Make some ethical considerations**

  I suspect we might have more dealings with ethical concerns in the future, as our project grows. However, at this stage of development I have nevertheless pondered on this subject in relation to our product. The ethical concerns inevitably arise when AI becomes a part of our technological solution.

But, considering the fact that we have opted not to incorporate AI algorithms for face recognition, we have essentially avoided what would otherwise be a major ethical concern. This is a good example of an early ethical issue we have considered, that we have chosen to not implement into our project, for ethical reasons.

4 Team Methods

4.1 Tools

The following are the tools I plan to use for the development of our product. This list may change during the course of our project:

- **Trello:** for keeping track of what needs to be done, what we are working on, and what has been finished.

- **MariaDB:** For database development and maintenance.

- **Webstorm:** An IDE for developing web applications

- **REACT:** The Javascript library which facilitates modular, clean code

- **Node.js** For seemless database interaction and API development

I intend to discusss with my group members what tools they would like to use, and what tools are appropriate for the market and customer needs. Naturally, the tools we choose have to be compatible with each other, and we all have to be on the same page.

4.2 Suggestions for the next sprint

My only suggestion for the next sprint is that we make sure that we all have started on the development process. This means we have begun coding conforming to an overarching technological infrastructure that let us integrate the different software modules; from front-end to back-end, with relative ease. Essentially what I'm getting at is that we should have a more advanced prototype in the making, such that we can show it to our clients and get their feedback as soon as possible.

4.3 Generative AI

I have leveraged the power of Generative AI extensively in this course. However, I make sure that I use it responsibly. What I mean by this is that, I don't think it's acceptable to copy and paste a wall of code (or text) from ChatGPT4 without further analysis. I like to examine the contents of what the AI chat bot has said.

If I don't understand what the AI has given me, I make further inquiries. I have a dialog with the AI, with the intent of learning throughout this discussion. I come with questions, assumptions, code snippets, general observations and my own ideas. Then, I carefully read the chat bot's response, and I determine which pieces of information are relevant to our problem area. Naturally, this includes testing and verifying the information or code that the AI has provided.

5 Attendance

As of this reflection, on the 17th of September, 2023, I have attended all group meetings thus far. I have also attended all mandatory course lectures and exercises. Regrettably, I will be gone for 10 days for a family reunion. It's a trip which was planned well before I knew that I would participate in this course. Nevertheless, I intend to compensate my absence through any means necessary.

Leading up to this 10 day trip, I will of course do my best to contribute while I am able to meet up at the campus. Once I am gone, I will stay in touch with the group via Zoom, Discord, Trello, and Github. By utilizing these remote software technologies, I intend to contribute as much as I can to the project, both in terms of code and in terms of client meetings and general discussions.

I will talk to my fellow group members such that we are on the same page. If I feel like I want to contribute more, I will explore possible ways that I can do that. Any additional assignments I will be completely open to. Ideally, I would want us all to have a clear image of what each of us need to do code-wise, such that I can simply do the work remotely, upload it to github, and discuss relevant matters on discord or zoom.