UX Design Phase 3

KU2.2

Phase three (3) you will design an interactive UX design for AR with specific requirements. You are asked to create an AR prototype, which indicates important location for a healthcare center.

Identify various graphical elements where and when are more appropriate to be applied.

a) Describe at least three (3) various ways the audience will use the UX/UI to get AR. Give at least two (2) justifications for your decision to opt for this accessibility.

The UX/UI in today's trends can provide users with Augmented Reality in several different ways. Spatial Computing: Users can interact with AR content via spatial computing devices such as smart speakers or smart displays. These devices interact with digital content through voice commands and expressions that feel natural and instinctive. Head-Mounted Displays (HMDs) are another alternative: Users can wear HMDs such as VR headsets or AR glasses to see and interact with digital content that appears to just be part of the real world. Web-Based AR is one of the most common: users can access AR experiences via a web browser on their mobile device. The developers would include online markers to display the data at that position. This allows for easy access to AR content without the need to download a specific app.

I ended up choosing Web-Based AR because it is one of the most common methods that a varied selection of online web applications use. Of course, I'll be able to implement online markers and present the information I want when the user points the camera at the UX/UI web - based application and use this AR technology. I also ended up choosing this type of AR technology because it is simple and straight forward to implement and simple to use.

b) What information will be available to the audience when they access the UX/UI using augmented reality, and why.

In my UX/UI web applications I decided to implement Augmented Reality in my landing page, where the user has the option the choose medial or non-medical services. In my web application UX/UI will be display underneath the medical and non-medicals services cards. With this the user will have the accessibility and the comfort of pointing the phone camera through my web application on the mobile. When the user points the camera to the marker the user will get the desired information. With this technology the user has the comfort of just pointing a camera to the marker and the content will be display, and does not have to navigate through pages to get necessary information.

The reason I am showing this kind of information is because the content that I am showing is one of the most important of on the website. Some patients would only like to know what services does my health kiosk offers and the types of clinics there are in service. So I will put this information on the landing page so that the user has the opportunity to get the desired information straightforward from the UX/UI web application landing page.

KU2.3

Present a project including a set of milestones, aims and objectives. 5 Marks

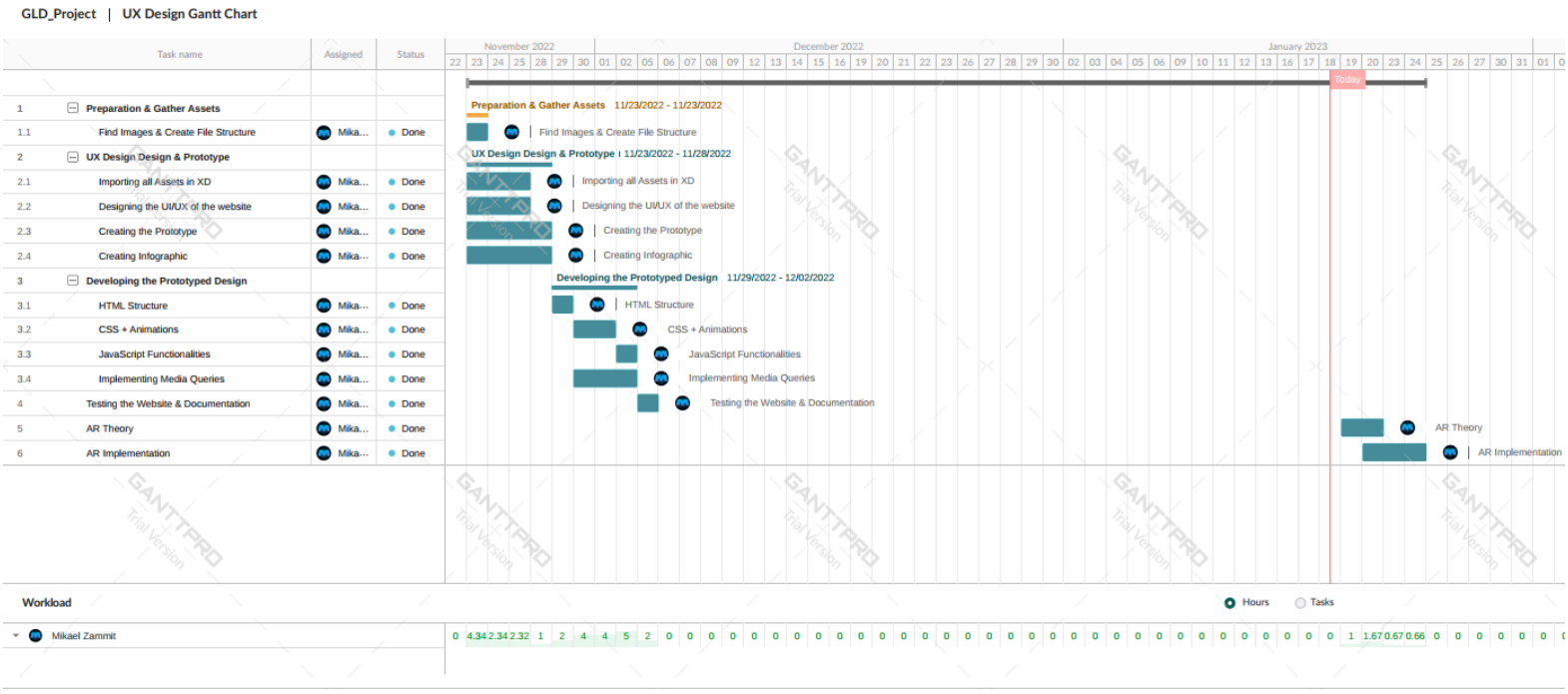
The design of the AR information requires you to give a project milestone that demonstrates time management organization with target dates that represent progression phases and deadlines.

a) Organized design and information

b) Provide Clear information and realistic dates

c) Respecting target dates and deadlines

Gantt Chart is Below & also in the zipped folder



KU4.3

Phase three (3) you will design an interactive UX design for AR with specific requirements. You are asked to create an AR prototype, which indicates important location for a healthcare center.

How has UX/UI changed as technology advanced? List at least four (4) new technologies that have an impact on user experience and user interface designers.

Technology, such as UX/UI, is constantly evolving. As per [1], UX is a rapidly changing topic, and the discipline has evolved significantly in the past decades. It can be challenging to keep up at times even though our deliverables have changed and evolved over time - desktop and mobile, mouse and touch, web and native, and so on. UX/UI principles vary substantially as technology advances. Design is always changing because UX/UI Designers are always looking for ways to enhance their design concepts based on different user requirements, and the design changes its concept based on various trends that are released on a regular basis.

1. 1. According to [2] Motion-Sensing Technology can help the user navigate through a series of steps necessary to complete a task. Visual feedback, animation, and even visual images can enhance the user's experience and direct interactions. These new motion sensing technologies are setting a higher standard. Users may eventually be able to respond to calls from more than 50 feet away by twitching or raising their eyebrows.

2. A better understanding of AR-driven features by designers could make user interactions straightforward and more precise [2] explained. AR Technologies allow for close-up viewing of real-world occurrences such as ocean waves, cats chasing leaves, or children playing basketball while digitally enhancing them. Augmented reality is an existing technology trend (AR). Designers have been trying to incorporate augmented reality into UI designs for some time now, and this trend is predicted to continue for many years.

3. More Connecting Devices. Users can connect several smart devices together, gather their data, and carry out automated tasks. [2] Also states that a UX designer can easily create wireframes or a prototype, then send them to teammates for feedback. How do these changes impact UX designers? UX designers can easily create wireframes, send a working prototype to a research participant, receive quick feedback, then make design changes.

4. Data and Cloud Computing. With cloud-based tools, UX designers can share their work across the majority of platforms. The cloud makes it possible for us to escape the confines of our individual workstations and encourages us to collaborate according to [2].

What are the challenges that UI/UX designers are facing? Name at least four (4) different challenges that UX/UI designers can or will face.

Tight budgets and deadlines, undervalued UX design, juggling design solutions and business, and aligning with development are all common challenges for UX designers. [3] indicated that a limited budget and tight deadlines can have a significant impact on design and the entire product development cycle. Many UX designers care about their projects and advocate for the needs of their users, especially when the project speaks to them. As a result, many designers find it difficult to squeeze as much value into a project's budget as possible. As a result of Undervalued UX Design, experience designers can spend a significant amount of time educating senior leaders and managers on the importance of proper product research and workflow with users. Juggling between design solutions can be a concern for UX Designers, they should always run concurrently with the company's business goals. However, in order for this couple to be happily married, experience designers must be willing to make compromises. In line with the development Developers and designers are both important, but their mindsets can be very different. UX designers may even believe they speak a foreign language to engineers. This is because designers consider the product from the user's point of view, whereas developers consider technical solutions. However, a product created solely by engineers may be unusable, and the design.

References

[1] C. M. O. 1, C. Murphy, Words by Christopher Murphy Christopher Murphy is a writer, W. by C. Murphy, C. M. is a writer, A. Santos, N. Babich, J. Kushins, and J. Morales, "The evolution of user experience design: Adobe XD ideas," *Ideas*, 01-Oct-2019. [Online]. Available: https://xd.adobe.com/ideas/guides/evolution-user-experience-design-intro/#:~:text=UX%20is%20an%20ever%2Dchanging,and%20the%20list%20goes%20on. [Accessed: 23-Jan-2023].

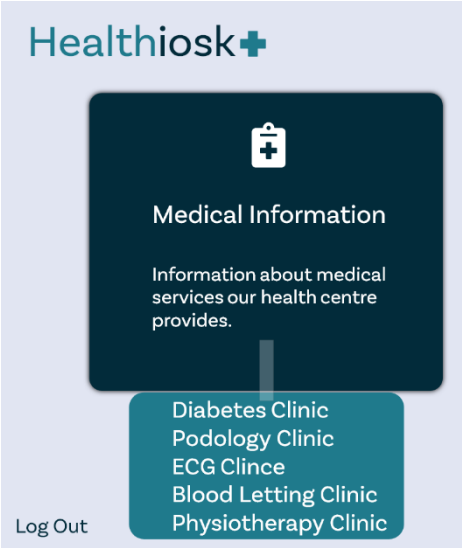
[2] K. Shailaja, "Top 5 technology trends in UX Design," *UXmatters*, 05-Sep-2022. [Online]. Available: https://www.uxmatters.com/mt/archives/2022/09/top-5-technology-trends-in-ux-design.php. [Accessed: 23-Jan-2023].

[3] A. Sienkiewicz, "7 common UX designer challenges," *BigPicture.one*, 12-Apr-2022. [Online]. Available: https://bigpicture.one/7-biggest-ux-designer-challenges/. [Accessed: 23-Jan-2023].

SE4.1

To complete SE4.1, you must provide a tutorial on how you created the AR simulation, mentioning at least two animation functionalities and how they were applied, as well as two interactive functionalities and how and why they were applied, as well as whether or not any plugins were used and why.

In this tutorial I will be demonstrating my AR functionality in my Adobe XD prototype and also the UX/UI web application created in phase 2. To start with in my Adobe XD prototype I created how the data will be displayed and I made the entire card as a component. After I did a hover state so that when the card is hovered on the data will be displayed accordingly as shown below.



In the development part firstly exported the Image of the data I want to display on the user's phone when pointing at the HIRO marker. After this I created 2 scripts of code one called index.html and the other one ani3d.html. These represents the mobile application that will contain the camera that is capable to read the HIRO marker. In the index.html I imported the a-frame library as well as the a-frame AR library. As you can see in the image below in the a-scene and the a-assets tag I declared the data.png image which represents the data I will display on the user phone when pointing to the Web Application UX/UI, as well as calling it in an a-image tag further down in the code, in that line I gave the position, scale and rotation of that particular image that contains the data, I used these properties to assure that the image of the data will be displayed accordingly and right where I want it to be. Further down I declared my a-marker-camera which represents the camera that detects the HIRO marker on the UX/UI web application.

```
<html>
<head>
<script src="https://aframe.io/releases/1.0.4/aframe.min.js"></script>
<script src="https://jeromeetienne.github.io/AR.js/aframe/build/aframe-ar.js"></script>
<body style='margin : 0px; overflow: hidden;'>

</head>

<a-scene embedded arjs renderer="colorManagement: true">
  <a-assets>
    <img id="data" src="/images/data.png">

    <!-- <a-assets>
      <a-asset-item id="model1" src="scene.gltf"></a-asset-item>
    </a-assets> -->
  </a-assets>
  <!-- create your content here. just a box for now -->
  <!--<a-box color="red" position='0 2 0' material='opacity: 0.5;' animation="property:rotation; from:0 360 0;
  <a-image src="#data" scale="2 2 2" position="0 0 0" rotation="-90 0 0"><a-image>

    <!-- <a-entity gltf-model="#model1"  animation-mixer scale="1 1 1" position="0 0 0" rotation="-90 0 0"></a

  <!-- define a camera which will move according to the marker position -->
  <a-marker-camera preset='hiro'></a-marker-camera>
</a-scene>


</html>
```

As well I tried to include animation-mixer and properties by experimenting with rotations and scale, also you can see them commented out, but I decided not to include them because the final result was not to my liking.

```
46      <img style="width: 15%; margin-top: 620px; margin-left: -850px;" src="Assets/images/HIRO.jpeg" alt="hiro marker">
```

Here in my UX/UI web application I implemented the Hiro image underneath the medical card in the landing page.

SE4.2

Create a document and critically outline issues, solutions and improvements of the prototype you have designed and developed. The document must include:

a) Method for delivering HTML, CSS, and JS prototypes to developers for implementation.

There are various types of methods of how HTML, CSS, JS and prototype can be forwarded for developers. Some of them are Using a version control system such as Git to track changes and collaborate on the code, also exporting the prototype as a ZIP file and sharing it with the development team and utilizing an internet browsing web pages, some examples could be: CodePen, JsFiddle, or CodeSandbox to share the prototype with developers. The one method I find very efficient is using a version control system like Git. Programs like GitHub, GitHub Desktop can help UX Designers and Developers with this issue. By using these version control systems UX Designers and Developers could upload and download resources and code from each other by adding each other as collaborators. A benefit of this method is that not only resources can be shared in an organized manner, but also a track of changes can be kept and monitored. For example if the designer is working on a task and the designer uploads with certain commits and organizing them by name and description, then the development team can track and monitor the progress that is being done. As per [1] GitHub is an increasingly popular programming resource for code sharing. It is a social networking site for programmers that is used by many businesses and organizations to help with project management and collaboration. However as mentioned above there are other methods that can be very productive, such as simply organizing the file structure and zipping the main folder and sharing with the development team. Also in regards to internet browsing web pages, a very popular method is using a website like CodePen. CodePen is a web-based code editor and development environment that allows developers and designers to create, share, and test examples and prototypes in HTML, CSS, and JavaScript. It has a "Export" feature that enables the developer to export the code in a zip file that includes all of the necessary files, such as HTML, CSS, and JavaScript. Developers can then use the exported code to keep developing on the prototype in their development platform. Moreover, CodePen has a feature called "Collab Mode" that essentially allows developers to be working on the same prototype at the same time, which can be beneficial for team collaboration. Furthermore, CodePen allows you to share the prototype by sharing the pen's link, which is a unique URL for each pen. This can process and communication with collaborators. After all this research personally I chose to keep it simple and I just organized my file structure so I can simply share them with the development team.

b) Enhancements for any design changes; if no changes were required, provide a credible explanation.

Overall, I believe I did a good job with the UX/UI of the Web Application I created. Overall, if I used enhancements to change some things in my web application. To begin, I would devote more time to improving the responsiveness of my website and ensuring that the design adapts to different screen sizes and devices. I used a lot of media queries in my web application to accommodate different screen sizes and view ports, but there are still some bugs that can be fixed and improved for specific custom devices. Also, consider the overall UX/UI of the web application. I would change the UI to present a neater and more professional navigation menu. This is because a navigation menu will make the website appear much more professional. As it stands, it appears more like a slide show, with clicking on content bringing up the next page. In this case, a navigational menu at the top of the page would look far more professional. Regarding the Medical and Non-Medical cards on the landing page, the read more button on the back of the card should be in front. Hide such important buttons or links that redirect you to the next page is bad user experience. If I can implement these enhancements it believe that the web application will be more according to the UX/UI principles and heuristics.

c) Usability enhancements, if no changes are required, provide a credible reason why.

In terms of the usability in my UX/UI web - based application, I managed to give it a considerable amount of thought, so my web application is very usable from any type of user, from young to old ages. It is usable because I created and utilized a perfectly matched and suitable color palette in my Adobe XD infographic, in addition to oversimplified and straightforward to comprehend iconography, which implies that the icons utilized in the Web Application UX/UI allow the user to clearly understand what the icon symbolizes, and the structure and design of the web application provides a simple and visual appeal look to the web page. Besides that, the images used, in addition to the site maps designed for the health Centre, are simple and straightforward to understand what type of clinic services the image represents. Also, information is presented in brief, to-the-point text, ensuring that the user can understand whatever the clinics provided have to offer.

References

[1] I. Gaba, “What is github and how to use it? [updated],” *Simplilearn.com*, 23-Nov-2022. [Online]. Available: https://www.simplilearn.com/tutorials/git-tutorial/what-is-github. [Accessed: 25-Jan-2023].