

GNG 1103
FALL 2024
October 27, 2024

DELIVERABLE E

PROJECT PLAN AND COST ESTIMATE

Team DISMISS

GABRIELLE CHÉNIER
RUSAFI KAMAL
DARRIEN CHEN
HANNAH KNIPE
QUAN LUU

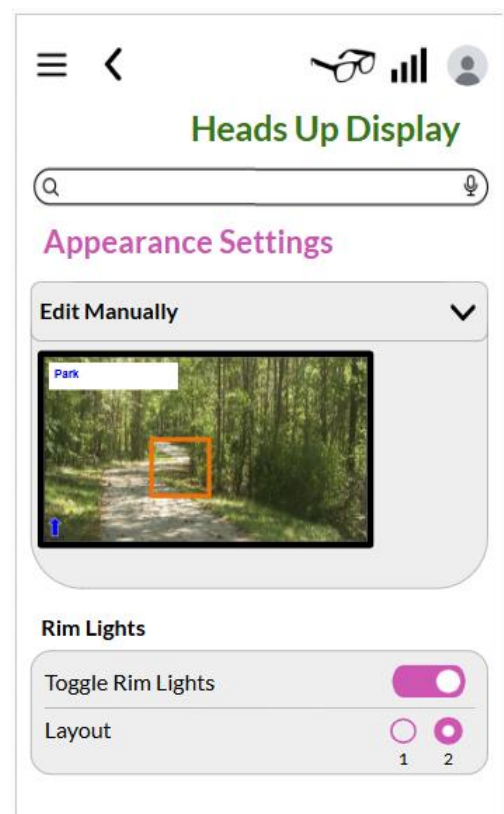
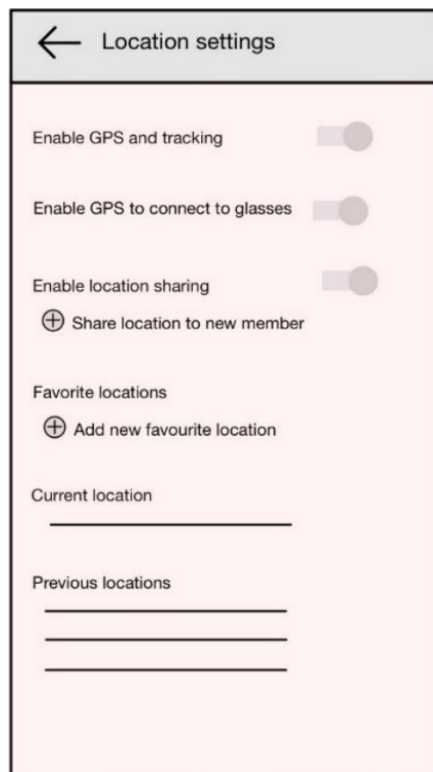
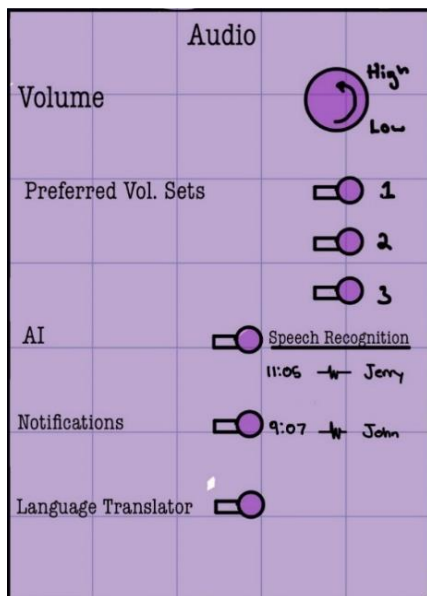
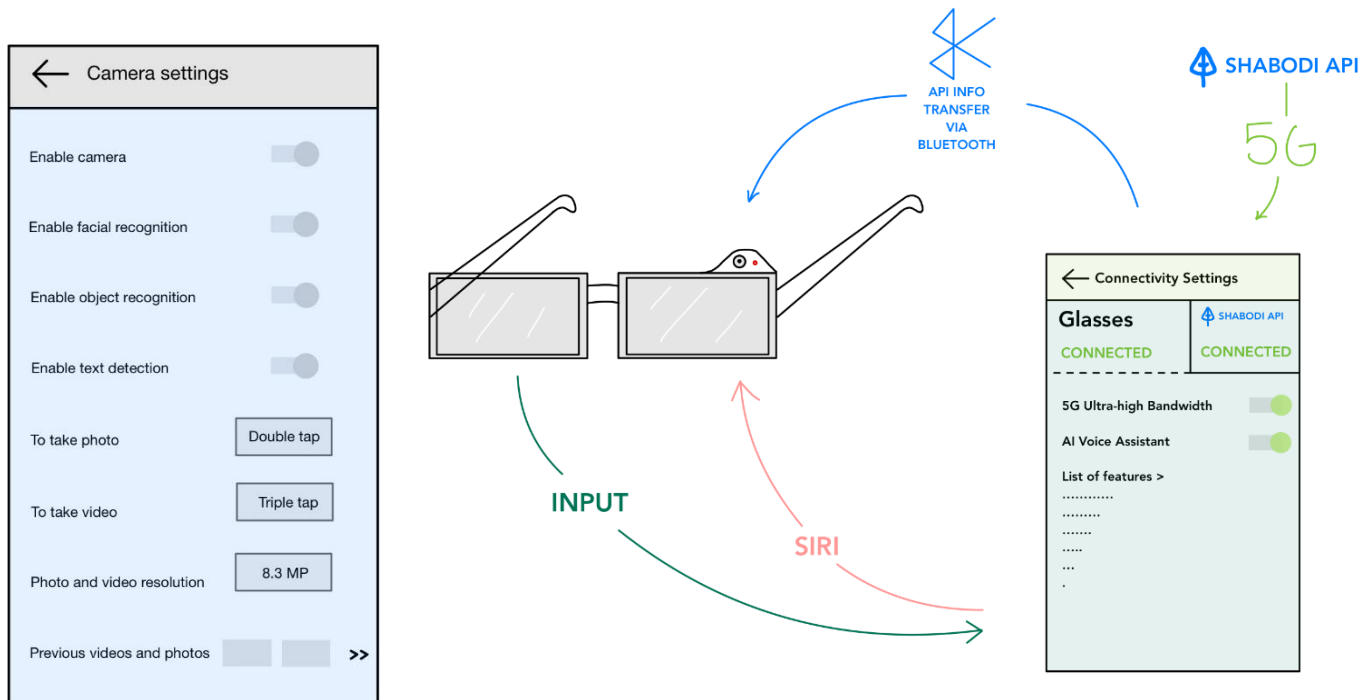
Table of Contents

.....	1
Table of Contents	2
1- INTRODUCTION	3
2- DESIGN DRAWING OF CHOSEN CONCEPT.....	4
3- TASKS TO BE COMPLETED.....	6
4- PROJECT RISKS	8
5- CONTIGENCY PLANS	9
6- BUDGET	10
7- LIST OF EQUIPMENT	13
8- PROTOTYPING TEST PLAN	14
9- CONCLUSION.....	15

1-INTRODUCTION

In our previous deliverables, we summarized our empathize, define and ideate stages of the design process. It gave us a better understanding of the project, and prepared us for the final concept, which is discussed in this deliverable. This deliverable specializes one is about our prototyping techniques, prototype tests, budget planning, strategies, and a list of materials for everything that will be required to finish our prototypes as well as the project. It also showcases our final design drawing for each subsystem.

2-DESIGN DRAWING OF CHOSEN CONCEPT



3-TASKS TO BE COMPLETED

Tasks	Estimated duration	Who	Due date
Deliverable E - Project plan and cost estimate	1 week	All team members	October 27
Design prototype 1	2 days	Rusafi Kamal & Gabrielle Chénier	November 3
Build prototype 1	2 days	Darrien Chen & Hannah Knipe	November 3
Test prototype 1 and receive feedback	1 day	Quan Luu	November 3
Interpret feedback	1 day	Quan Luu & Hannah Knipe	November 3
Deliverable F - Prototype 1 and Customer Feedback	1 week	All team members	November 3
Design prototype 2	2 days	Quan Luu & Gabrielle Chénier	November 10
Build prototype 2	2 days	Rusafi Kamal & Gabrielle Chénier	November 10
Test prototype 2 and receive feedback	1 day	Darrien Chen	November 10
Interpret feedback	1 day	Quan Luu & Hannah Knipe	November 10
Deliverable G - Prototype 2 and Customer Feedback	1 week	All team members	November 10
Design prototype 3	2 days	Darrien Chen & Hannah Knipe	November 24
Build prototype 3	2 days	Quan Luu & Gabrielle Chénier	November 24
Test prototype 3 and receive feedback	1 day	Darrien Chen & Hannah Knipe	November 24
Interpret feedback	1 day	Rusafi Kamal	November 24
Deliverable H - Prototype 3 and Customer Feedback	1 week	All team members	November 24
Deliverable I - Design Day Presentation material	1 week	All team members	November 27

Prepare for design day presentation	1 week	All team members	November 28
Design day presentation	5 hours	All team members	November 28
Deliverable J – Project Presentations	1 week	All team members	November 12
Deliverable K- User and Product Manual	1 week	All team members	December 3

4-PROJECT RISKS

- **Time:**

Time can be an important challenge for this project for several reasons. First, since this project does involve some coding, which will require some testing and debugging, we must organize our project around that fact. Unexpected bugs could demand more time than we anticipated. Second, time could also pose a problem depending on how ambitious we are with our goals and final prototypes. With the limited time for this project, setting ambitious goals might lead to rushed work, which could lead to more mistakes and even unfinished work.

- **Unrealistic approach:**

Another thing to keep in mind is to make sure that the approach we are taking is sane and can be logically applied based on the availability of materials. In reality, most of the theoretical projects do not go as planned because, either it is unrealistic or we do not have the capability to create the project just yet.

- **Failure:**

Failure is always imminent, and it is no different for us. Anything that can go wrong will go wrong (Murphy's Law). We need to make sure that we are accounting for every part of the project which are prone to failure, and, since it is a software-based project, there are many unexpected issues that could occur. For example, if we will be using Shabodi's API, we need to ensure that it is replying to our API calls as wished.

5-CONTINGENCY PLANS

Regarding the time-related issue, our team has decided to adopt a contingency plan that is centered on prioritization. Initially, we'll determine and prioritize all of our upcoming tasks that are important for our project's development. The project will also be divided into smaller, more manageable tasks. Finally, we'll also allocate extra time for every task to be ready for any unexpected problems.

To address the risk of having unrealistic approaches or goals, we will have to make sure that both our plans and method are realistic and feasible. To prevent ideas who are difficult to implement, we'll regularly do sanity checks, making sure we are on the right path.

Finally, in regard to the failure-related issue, we have to expect unexpected issues to arise at any stage during the project. We'll create strategies and plans that will mitigate the possible fallout if those issues were to occur.

6-BUDGET

PROTOTYPE 1 - Bill of Materials					
Item #	Item Name	Quantity	Purpose and Description	Price	Amount
1	Bristal Board	1	Testing the User Experience, to understand the functionality of the app, we are going to create a paper or bristal board user interface. So, each button will navigate to a different paper copy of a concept for example audio. This will help us brain map the navigation tree of our app, then we can apply it to software. (we can use a Bristal board and use arrows to different concepts, to show the app navigation)	\$4.00	\$4.00
2	Colored Markers	1	To add color, to show the color palette concepts of our app	\$3.00	\$3.00
3	Figma	1	We can also use Figma, a software platform to create pictures for different app concepts. This will show the different app pages our app has to offer, and a real time navigation throughout our smartglass platform	\$0.00	\$0.00
Total product cost					\$7.00

PROTOTYPE 2 - Bill of Materials					
Item #	Item Name	Quantity	Purpose and Description	Price	Amount
1	Reserved API Call's	1	We may use API's that are outside the shabodi sandbox, the higher quality API's will cost a certain amount of money each call. It will be in the cents range, for each call.	\$5.00	\$5.00

2	Phone Camera	1	We need a camera, to be the eyes for our software. We will connect our software to the camera, so the camera will be our input source for the software.	\$0.00	\$0.00
Total product cost					\$5.00

PROTOTYPE 3 - Bill of Materials					
Item #	Item Name	Quantity	Purpose and Description	Price	Amount
1	Figma	1	This software will help us create prototype images of outputs our software will give to the user based on the object recognized. We will create scenario-based images for example if this object is recognized, our user will see this	\$0.00	\$0.00
2	Paper	1	We may also use , paper to create a test case scenario of what our software will signal	\$3.00	\$3.00
Total product cost					\$3.00

DESIGN DAY- Bill of Materials					
Item #	Item Name	Quantity	Purpose and Description	Price	Amount
1	Project Banner	1	To present our project	\$50.00	\$50.00
2	Glasses	1	As a prop, we while use glasses.	\$25.00	\$25.00
Total product cost					\$75.00

BUDGET 1	
PROT 1	\$7.00
PROT 2	\$5.00
PROT 3	\$3.00
DDay	\$75.00
Total	\$90.00

7-LIST OF EQUIPMENT

- Shabodi Sandbox (API)
- Presentations board
- 3D printer
- Microsoft Visual learner
- Future API calls
- Cellphone
- Figma

Physical	Software Based
3D Printer	Shabodi Sandbox (API)
Cellphone/Laptop	Figma
Presentations board	Microsoft Visual Studio

8-PROTOTYPING TEST PLAN

Prototype 1: (Physical Prototype) Testing the User Experience, to understand the functionality of the app, we are going to create a paper user interface. So, each button will navigate to a different paper copy of a concept for example audio. This will help us brain map the navigation tree of our app, then we can apply it to software.

Prototype 2: (Software prototype) An important part of our software is the detection feature of our smart glasses. This is our main input option, so we would like to create a software prototype of our camera feature. This will just include the ability to find faces and objects, and should draw a square box around the object or face.

Prototype 3:(Physical Prototype) Another key feature we need to prototype is object recognition. In this prototype we will create a test case scenario for different objects user may interact with. For example, if the object was to recognize a pole, the software will send out danger signs. We will create a paper or Figma based prototype for each of these scenarios

# Test	Title	Description	Method	Estimated Time
1	User Interface and Experience Test	We would create a paper/digital design of our application. This would allow us to take feedback from users on how they feel about the application and how easy it is to understand what is happening.	Asking users to rate the user interface out of 1-10	2 hours
2	Shabodi API Call Test	We would create a sample program and do an API call test to make sure that it is working and giving us necessary information	Doing multiple tests and seeing whether they are working or not at a 'Yes' or 'No' basis	1 hour
3	Objection/Facial Recognition Test	Since it would need to depend on the ability to detect something out of the camera input, there	We would keep a note of how many objects/faces were	1 hour

		would be multiple instances where this might fail. We will do multiple tests using objects and faces to see if they are being detected or not.	detected out of the total number of tests.	
--	--	--	--	--

9-CONCLUSION

One of the most important steps of design thinking is prototyping. It helps us visualize what our finished and final concept and prototype will look like. We began this stage by planning and organizing all of the upcoming tasks, assigning them to one or two team members, estimating the duration of the task and the deadline. We also identified some possible risks, such as time, unrealistic approaches and possible failures, and their associated contingency plan. We then came up with an estimated overall budget and a list of equipment for the remainder of the semester. Lastly, we developed test strategies for various type of prototypes. While we did accomplish a lot with this deliverable, we are yet to complete the prototyping stage, which we while complete by the end of the end of deliverable H - Prototype 3.