REPORT

MEMCALL-RECALL OLD MEMORIES AND FEELINGS

PROTOTYPE LINK
www.memcall.net

OTHER LINKS
Intro Video Prototype Specification Disclaimer Document Questions and Answers

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AS PART OF
DE 630 Trends in Interactive Technologies

UNDER
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ABSTRACT
Human storage capacity is enormous. Then why is it that we keep forgetting things when we get new memories? People worldwide have researched and found out that it's not the memory that hinders in the path, it's the neural connections in the brain that get weaker with time. What if you could remember the events of the past and how you felt like then? In this project we look into a diegetic prototype which allows us to recollect old memories. I have created a website as the prototype which allows us to book appointments for the memory recall procedure, which would happen at a specific center.

INITIAL IDEATION

1. *What if you could feel the music differently?*
   Allow people to feel music in their entire body by bone conduction by using bands on wrist and ankles. People can share bands to listen to the same song. Another method could be: Two people wearing bands can listen to the same song by one person tapping his/her band over the other's band.
2. *What if we had a band to say support statements?*
   I band which could say supportive statements during presentations and it's hidden easily under sleeve. Only the owner can hear the voice, something like a voice in the head.
3. *What if skills need not be learnt anymore?*
   They could get injected just like batteries in the human body. They get depleted over time. A maximum of 3 categories of skills a person could have at a time. Each skill could have levels of expertise. Since skills are acquired easily, how do people get jobs? Lucky draw? Probably getting a skill could be in a lucky draw where rich people can buy multiple entries for lot picking(upto a threshold) by paying extra.
4. *What if we would know what to do next according to others?*
   Users get answers from their personal assistant for the question “What would she/he(inspirational people/loved ones/influencers) do in this situation?”. The answers could be based on scenarios mapped from others who always wear a band with sensors. They keep recording their activity and voice.
5. *What if people make rules based on votes?*
   Anyone could initiate making a rule. Everything is recorded and any penalty/law breaking activity has a charge and is automatically added in the yearly tax payable. No tangible government.
6. *What if you could restore connections to old memories?*
   This device allows users not only to remember the facts but also their emotions and the causes due to which they took a particular decision. The catch is that they can remember it only for a small amount of time and they need to delete some of the current memories.

CHOSEN “WHAT IF” SCENARIO

What if you could restore connections to old memories?

POTENTIAL ARTIFACTS

Below are the artifacts which were initially thought of to illustrate the design fiction scenario.

1. *Neurons accessing device:*
   A device which accessed the neurons of the brain. This device could be attached to the brain and could note the activity of the brain and control it in some manner.
2. *Memory selector device:*
   A device which selects the memory to be restored. It could give a visual glimpse of the memory to be restored. The person could look at the memory to be restored while being attached to the device.
3. *Website book appointment:*
   Put up a website which allows people to explore the product and understand how it helps. Also tell about the product and company.

CURRENT SCENE

People can restore the link to their old memory at home. A person can exactly remember the details and could exactly feel how he/she used to feel. But the downside is that the person should let go of some of their current memories. Also the memories could be restored for a limited amount of time.

WHAT LED TO THIS

The below are some of the events that I imagined which might have led to the developments in the MEMCALL device.

1. Advancement in technology to study criminal cases has gone so high that we are able to map out previous memories
2. Distress among the public is grown so high because of the politicians. The unfulfilled promises and lies told by them has triggered this.
3. Humans have gained a ton of information as the knowledge boundaries are farther and farther that they have stopped feeling emotions and creating memories all together.
4. Alzheimer's patients have been able to return back to normal life, but need continuous assistance.

WHEN AND WHERE

Year: 2040
Space: The scientists have evolved the technology to restore lost linkages to old memories by stimulating neurons.
People: People nowadays have stopped feeling emotions as they are extremely busy in chasing the skill race. People don't have time to develop memories. So they just cling to old ones.

TRENDS OBSERVED

Below mentioned are the trends that suggest such a scenario in future

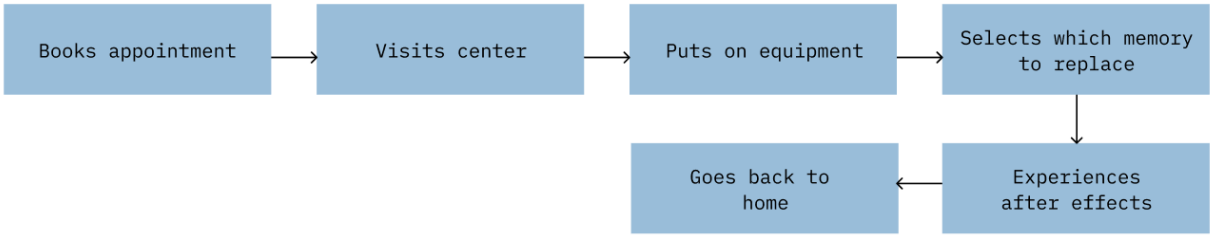
1. There are findings and research that to regain lost memory you have lost by consciously trying to replicate the setting in every way possible.
2. Experiment on mice by optogenetics, which led to the mouse remembering the trauma it once had.

ITERATION 1

Initially the plan was to showcase a person travelling to a location to get his/her memory restored. The plan was to showcase a video of a person facing alzheimers going out after recovering the memory. But suddenly the person starts to forget things. This leads to the person running back to his home and booking an appointment. The video will end when the person opens the website link. The video will be the main artifact and the website would be the secondary artifact.

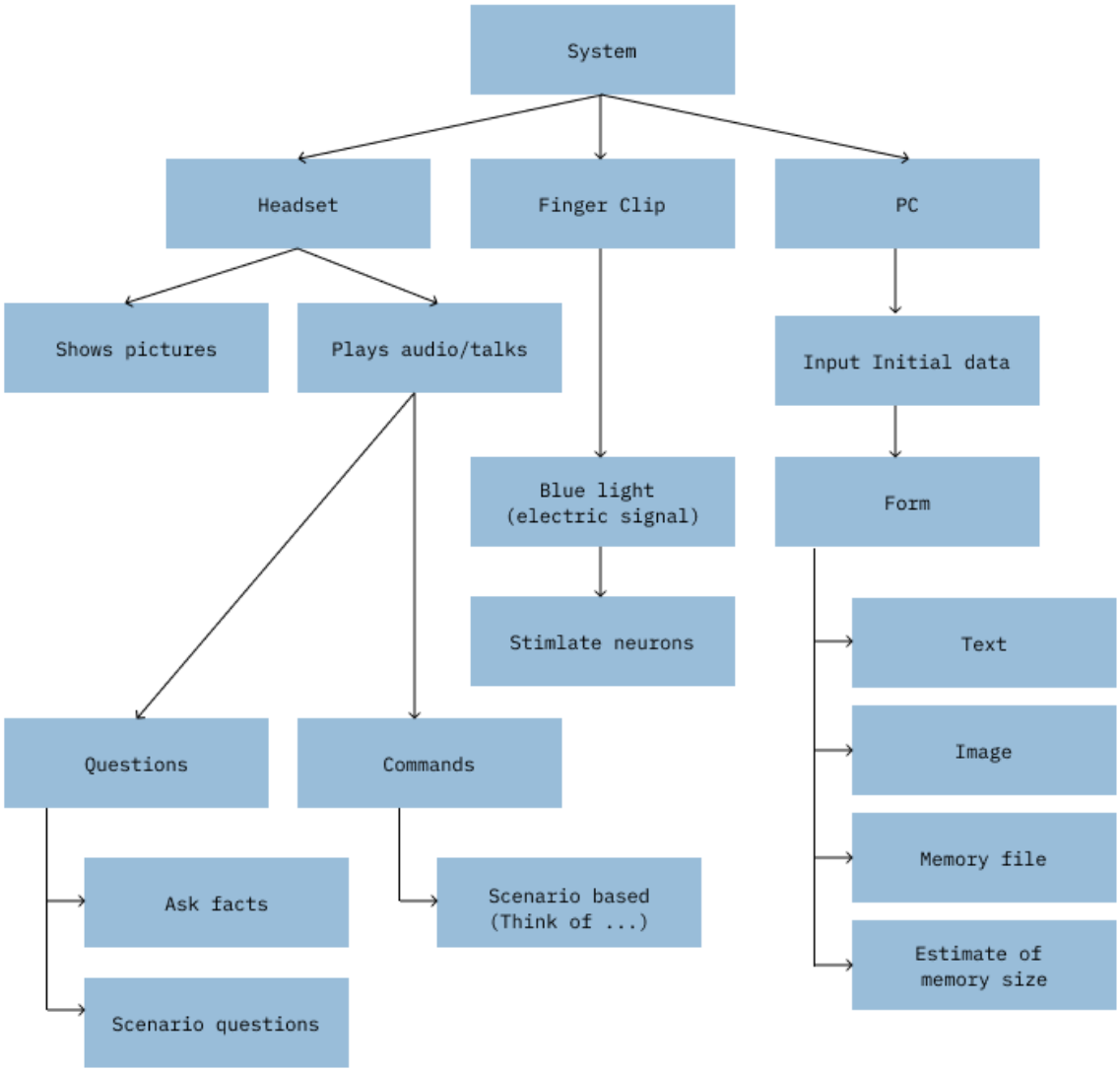
USER JOURNEY

The person would initially book an appointment on the web and add whatever details he/she has of the past memory to be restored. The person would then visit the center for the procedure. He/she is asked to put on the equipment for the procedure. He/she is asked which present memories could be compromised as retrieval of old memories requires that. The user takes some time to adjust with the past memories. Later he/she goes back home.



SYSTEM DETAILS

In here I discovered how the entire system would work. The system connects the human whose memory needs to be retrieved through a headgear and a finger clip. Headgear gear is used to track neural signals and trigger by voice/image. Finger Clip stimulates electric signals. The machine is connected to the system which has information about the previous memories like images/videos/audio.



QUESTIONS TO BE ASKED

So in this section we explored how the person and system communicate with each other. Over here we narrowed down to 4 questions which could be asked and answering them would lead us to the details.

1. *What do you want to remember?*
   This question answers the part about what all details a person would like to remember from the past. Below are some of the points he/she would want to remember.
   a. Scenario
   b. Names of people, places, things
   c. Causes (why you took a particular decision)
   d. Feelings (instincts, emotions, gut feelings)

2. *How do you remember?*
   This question deals with the technical aspects of the system and how it would function. This question also would lead to answers of the science behind the system.
   More details is in the document : Prototype Specifications
   a. Replication+Recognition
   b. Optogenetics
3. *How do you tell which memory to recollect?*
   This question deals with how a person would say which memory of the past the person wishes to recollect.
   a. Entire time period:
      Inform about the date beforehand. Approximate time period will do.
   b. The last I felt like that:
      The person could be given samples of feelings and made to choose which feeling a person wishes to remember. This could also be aided by giving pictures/videos/audio recordings.
   c. Facts:
      The person could state about the pre known facts.
   d. Events:
      The person tells beforehand which event memory to recollect and later thinks about it. This makes the system understand about the neural patterns.
4. *How to tell which memory to replace?*
   a. How much space is required?
      Analyse current memories and required memories and tell how much memories need to be compromised and how long it will last.
   b. Should we allow the memories to be stored in a file?
      The memories could be stored in a file and they could be used to retrieve it in an easier and faster way.

FOCUS TOPICS

After the review, some key areas of development were identified for the prototype. These areas would then bring the prototype back in the arena of design fiction. Below mentioned are the 4 areas that need to be focussed.

1. *Make them question/think*
   Allow people to think about the possibility of the prototype and let them imagine about the reality it could exist in. People should be able to think about reality and how they would react to it and what problems they might face. People should be able to believe that this could be a possible reality.

2. *Build a Futuristic interface*
   The interface should be imagined how it would be in the future. The placement of components, layout of pages or the modes of interaction should be explored.
3. *Depict a story/ bring in back stories*
   Depiction of a story could also be done. This could also invoke questions in the minds of the people. However this approach was not taken forward.

ITERATION 2

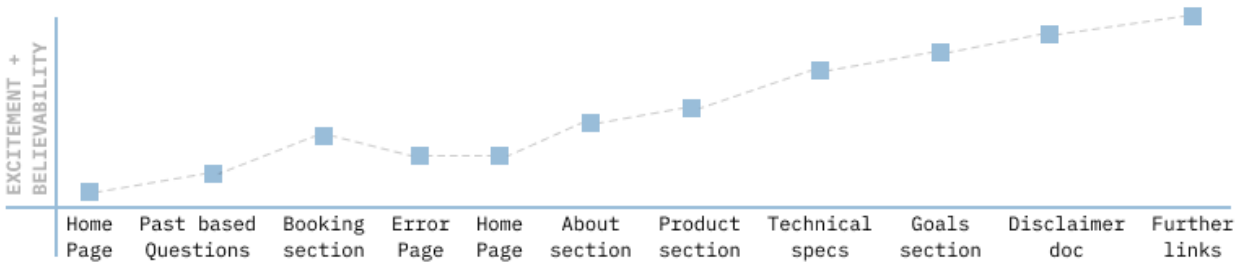
In the 2nd iteration I narrowed down on the ideas and focussed on website development. Website was decided to be the primary artifact. This website would enable people to book an appointment for the memory recollection procedure. The website would also make people question the possibility of the concept in the future.

STRATEGY FOR PROTOTYPE

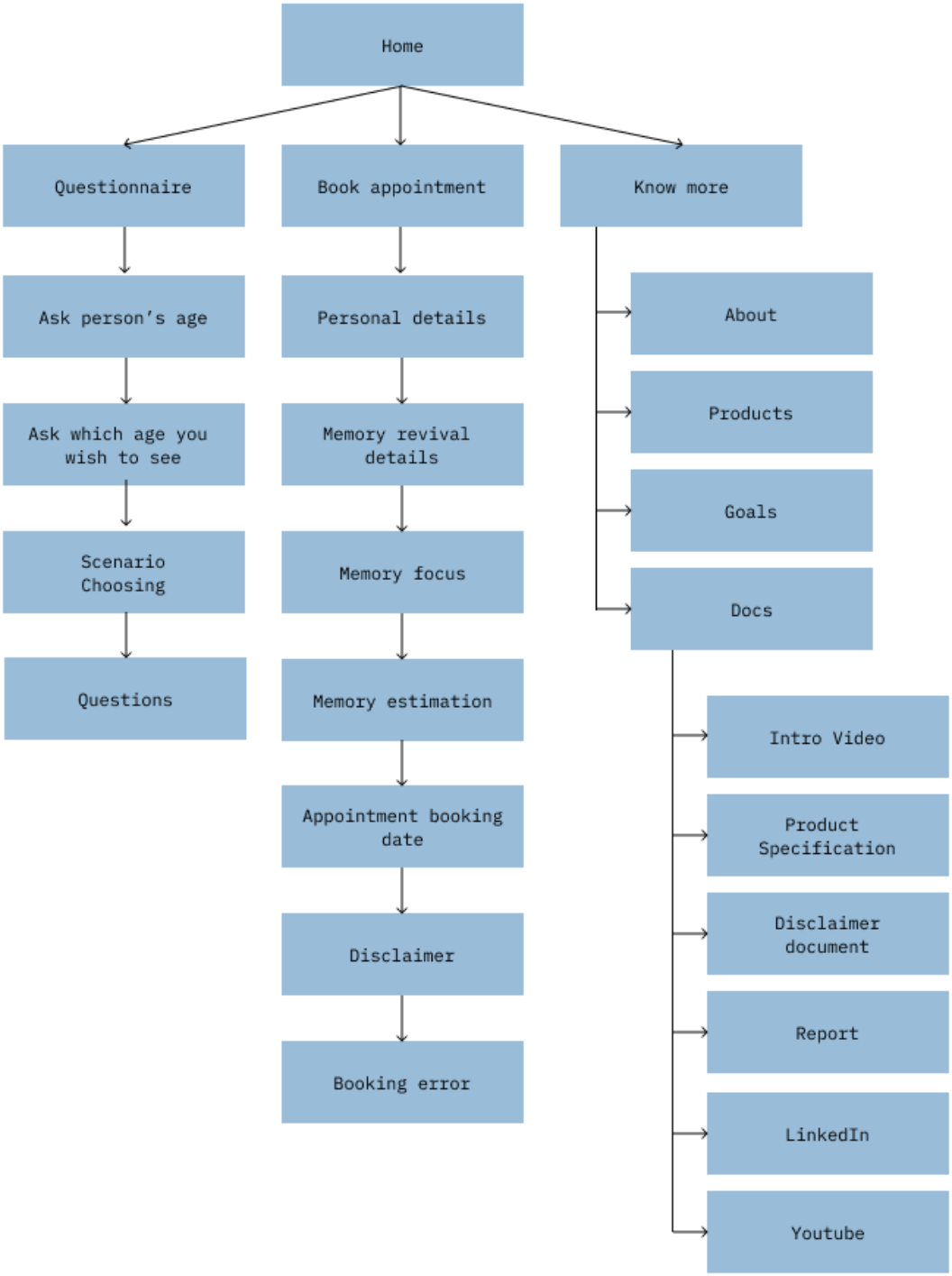
The goal of the website was to make people believe that such a device is relatable to them and it could be helpful for them. The goal is to fill in the gaps of desire to remember older memories. The website also allows the user to book an appointment. The appointment booking procedure is similar to that in the current scenario. This makes the customer believe that he/she is actually booking an appointment. Error and extra(sometimes irrelevant) details are added in the prototype which make people believe in the prototype. These details aid the mental model of the user. Attention to details is also given in the information section of the company which makes people believe in the legitimacy of the prototype.

WEBSITE FLOW

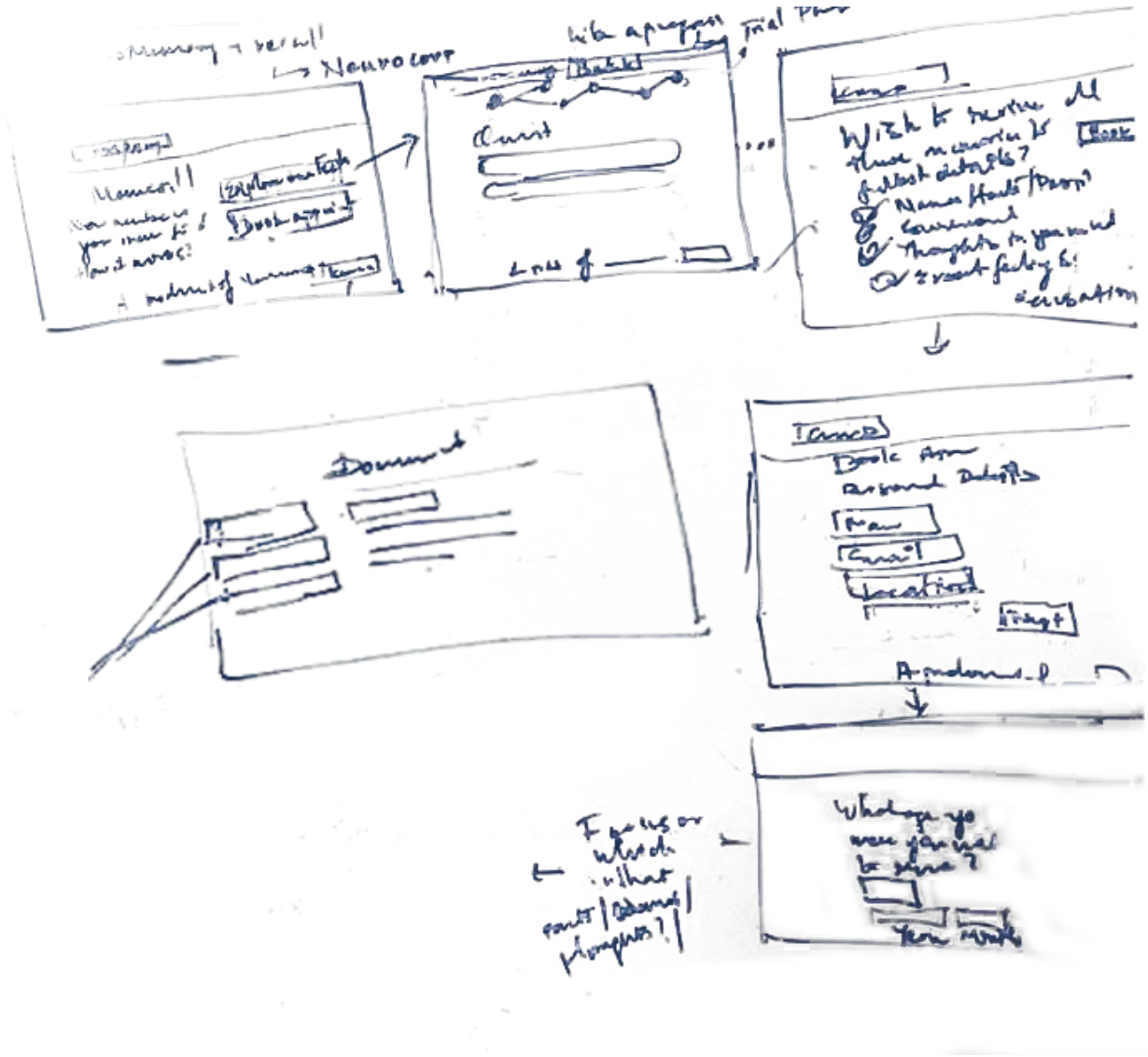
Below is the information architecture of the prototype. Initially the person is greeted with a question “NOW RECALL ALL THE PREVIOUS MEMORIES AND HOW IT FELT LIKE” which makes the people think in directions they never thought of. Next the person is introduced to a questionnaire which asks them questions about the details of their memories, which further invokes their excitement to know about the past. After this, the person is prompted to book an appointment. He goes through several stages which make him believe in the authenticity of the product. The person again checks in the information section to further aid his belief.



INFORMATION ARCHITECTURE



INITIAL WIREFRAMES



PROTOTYPE DEVELOPMENT

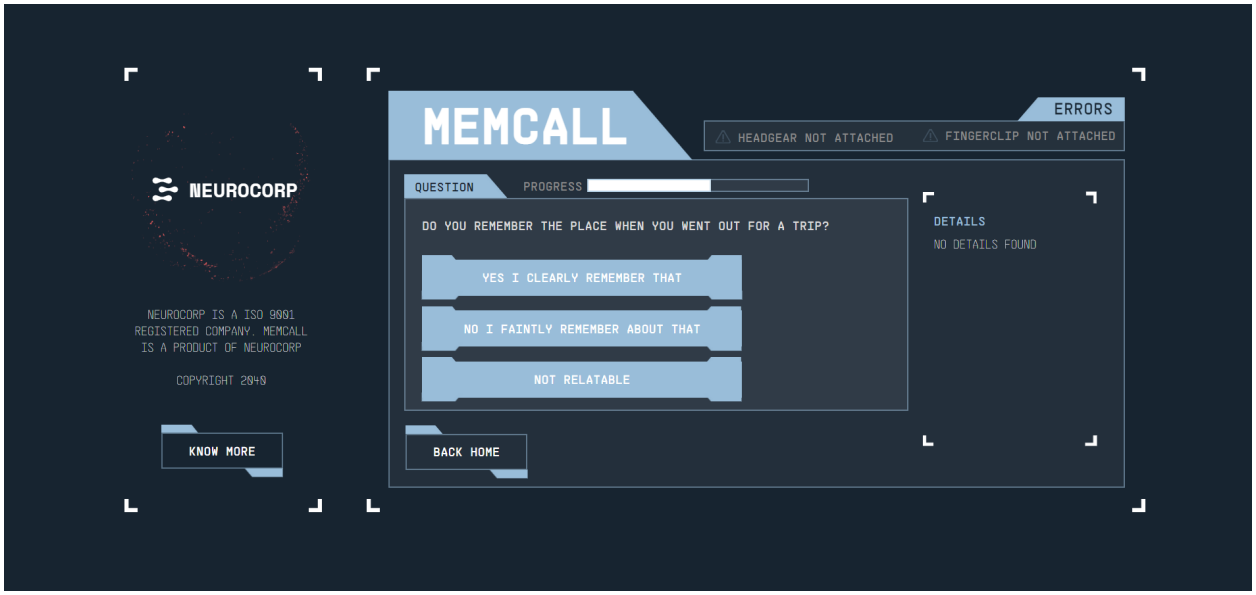
So as a medium for development of the website, I chose Wix because development is easy as it involves dragging and dropping of elements. Wix also has both hosting and domain purchase which makes the task one step easier. So as to make the website look more authentic I bought the domain for about Rs.1100 for an year.

The company deals with the tinkering the neurons in the brain so the company was named ‘NEUROCORP’ and the product as ‘MEMCALL’ (MEMory + reCALL)

QUESTIONNAIRE SECTION

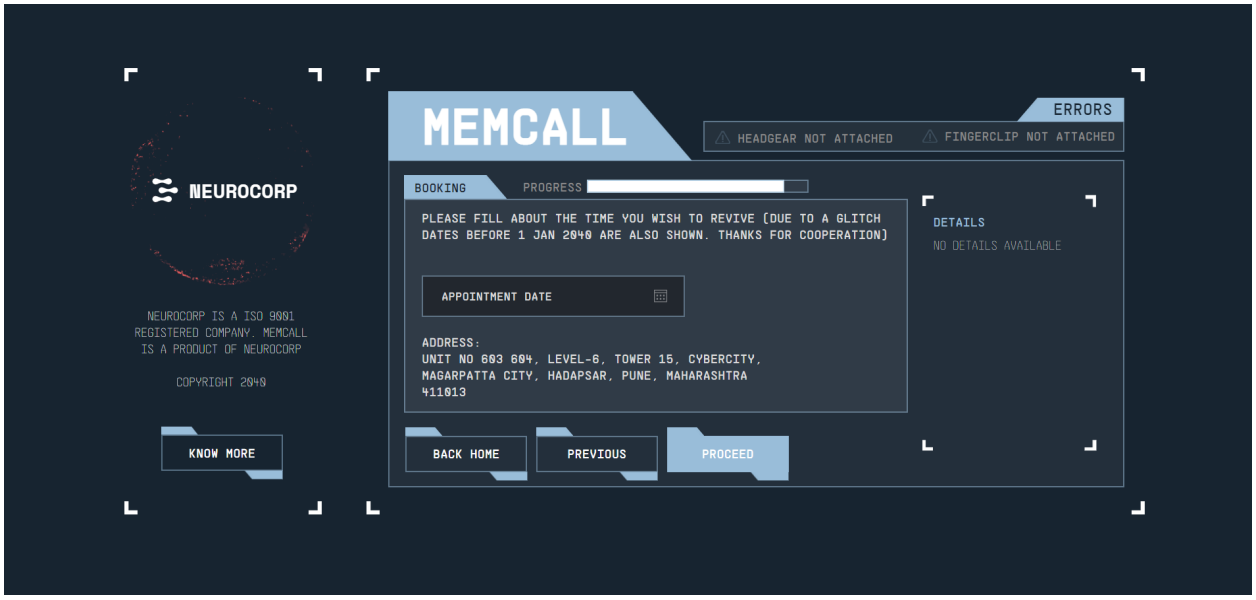
The questionnaire was divided into multiple sections. Initially the website asks about the age of the person. This is used to show memories only below that age group. In the next section we ask the person which age group memory they wish to revive. This is a personalisation step so that the person doesn't have to view scenarios of other age groups. Due to time and resource constraints I had to skip this refining step. After this the person is provided with 3 scenarios and each scenario is followed by 4 questions related to the scenario. 1 generic question related to the scenario was also planned, but due to constraints it could not be put.

The type of questions and answers can be found here: Questions and Answers



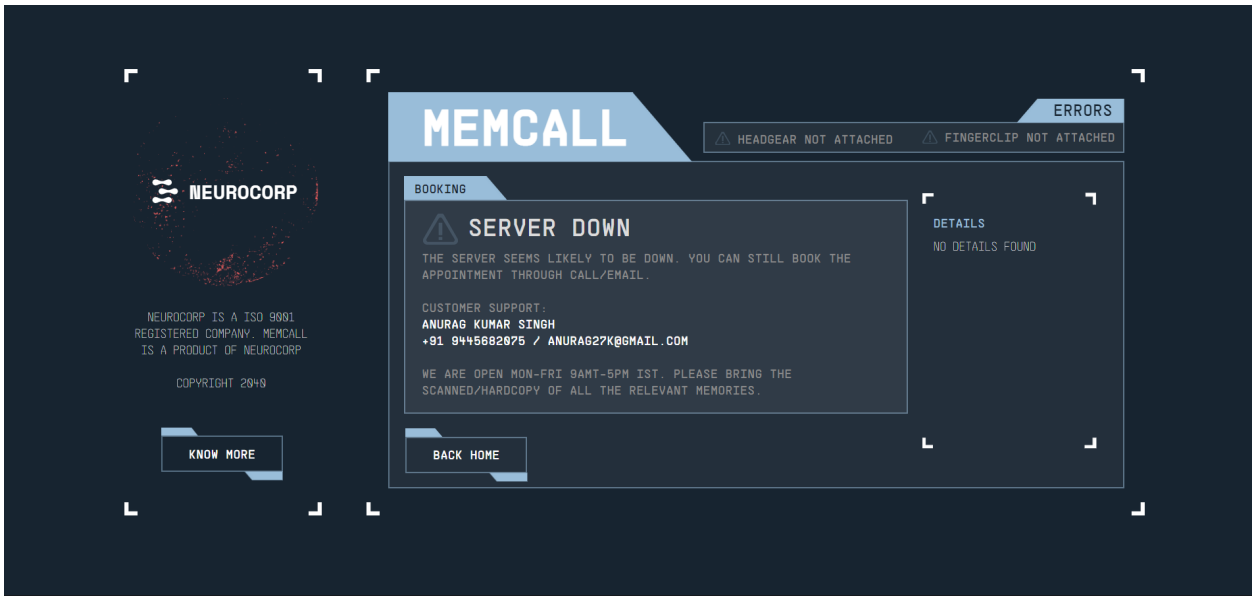
BOOKING SECTION

This section allows you to book an appointment as well as question about the functioning of the machine. An error page is added at the end which leaves people thinking at the end. The interface is similar to that of the current booking systems. Additional details like the headgear and finger clip for memory estimation, SSDBF(Sensation Stored Data in Byte File) add to the details.



ERROR SECTION

Initial thought was to implement downloading of PDF with appointment details. Due to time constraints, this was not implemented. Also to leave the users thinking the idea of an error page was introduced.



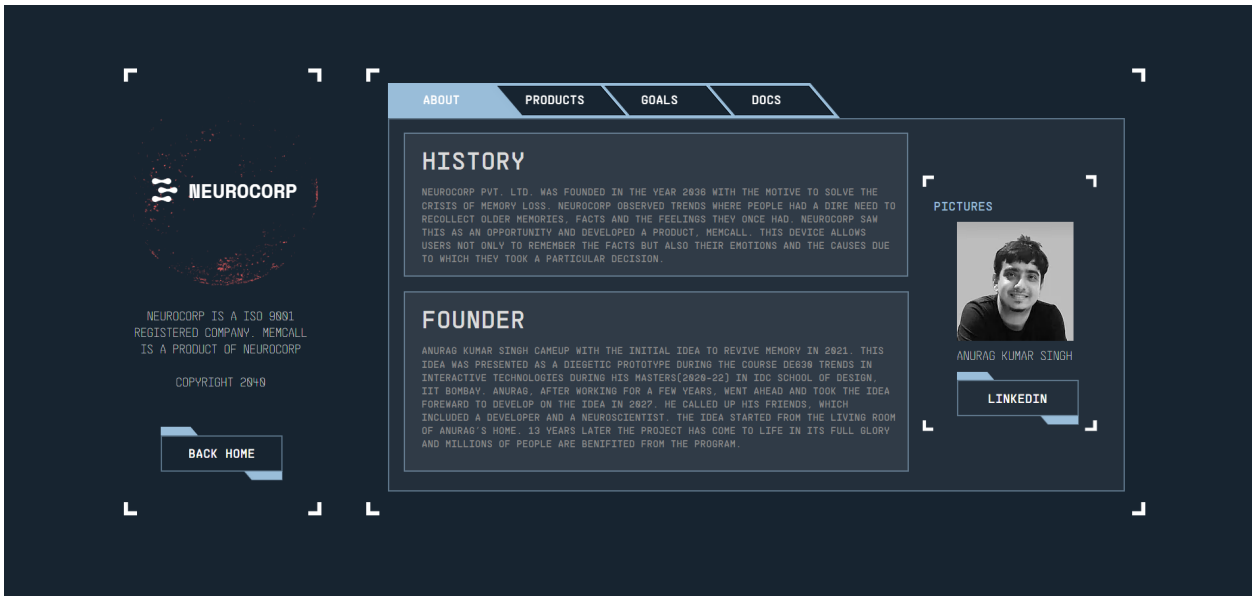
ABOUT SECTION

The about section was introduced so that the people start believing that such a company and its products exist. This includes 4 sections:

1. About

This section contains the history of the company and its founder.

2. Products
   This section contains details about the product MEMCALL. It also contains a link to a prototype specification document.
3. Goals
   This section contains the goals and objectives of the company.
4. Docs
   This section contains all the links to the documents and external links.



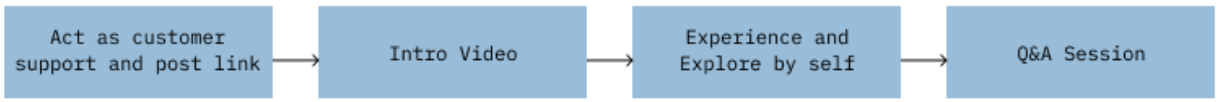
SUPPORTING ARTIFACTS

Three supporting artifacts were added which explained more details about the product and which made the user question about the possible future.

1. Disclaimer document
2. Specification document
3. Introduction video

PRESENTATION STRATEGY

So to present this prototype a small sequence was made where I enacted as the customer support guy and the audience are part of the MEMCALL program. The audience is then asked to interact with the website and explore different sections.



RESULTS

The prototype was successfully developed and presented to the audience. The prototype is engaging and definitely raises some questions about the future of mankind. Attention was given to the interface in order to make it look futuristic. Some additional features and refinement could be added so that the questions are catered to the chosen age group and their age of preference of memory retrieval.

ACKNOWLEDGEMENTS

To begin with, we would like to thank our project mentors, Prof Venkatesh R and Prof Jayesh Pillai for providing us with a progressive and encouraging environment that kept us motivated even in times of long distance learning. Further, I would like to thank Shivangi and my classmates for helping me with their expertise when needed and keeping us motivated especially in my moments of self-doubt. I would like to acknowledge the incomparable cooperation of our parents who provided me with constant support in the form of food, shelter, isolation especially in these times of pandemic where we had to stay home and work.

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