

Design Portfolio

KC: Communication

RC: Adaptation

GC: Orientation in space and time

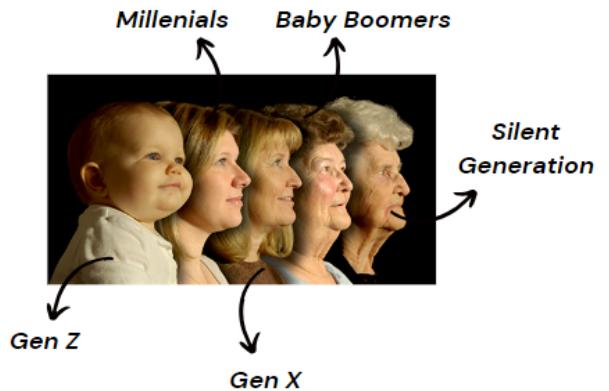
Design can impact Interactions



CRITERION A: INQUIRING AND ANALYZING

A(i): Explain and justify the need for a solution to the problem

With over 5 generations in our globalized society - Silent Generation, Baby Boomers, Gen X, Millennials, and Gen Z and with each day evolving with a new set of technologies, communication stands as the backbone of progression in corporate organizations because interaction between generations is most likely to increase the understanding of today. With this understanding, more productive innovations can flourish and bring more productivity to the firm. But currently with a diverse age demographic in corporate organizations, it has raised questions on how differences in communication styles and preferences between generations brings challenges. Thus far, as communication styles of our globalized society have evolved, so must our method of communication and the knowledge of what not to take offense at, slowly coming out of our comfort zones and taking a wider range of perspectives from different generations. Moreover, to thrive in such complex environments and cope with these challenges, resilience and responsiveness play an important role.



History of the issue:

Over the past few years, Social psychological research shows that communication and the formation of social relationships between highly dissimilar individuals generally entail higher costs than that within homogenous groups of individuals (Gevers, Peeters 2009; Harrison, Price, Gavin, Florey 2002; Horwitz, Horwitz 2007; Lazear 1999; Page 2007; Prat 2002; Richard, Shelor 2002). In my perspective, I strongly agree with the research that has provided valuable insights because these challenges often arise from natural human inclination to show favoritism or bias to a group (inclination that could be driven by age factors). To add on, the failure of awareness of age issues in an interconnected world has led to prejudice over employment and promotion.

Current scenario

Let us examine the innovation of a low-cost-open-source metal 3D printer. After plenty of research we find out that Former Director Joshua Pearce recognized their team's readiness to discover other generations' strengths and incorporate different techniques into their workstyle - which has contributed to the success of the innovation. He quotes this was only possible because of "technical skills of Gen X faculty, the software wizardry of Millennial graduate students, and the experienced resourcefulness of Boomer researchers." As the response from the younger one to an older one who they felt were overbearing referred "Ok! Boomer" had gone viral, the old refused to accept it as a sarcastic phrase and opposed it. This issue brought splits in each and every subject matter including gender identity, technology, climate change etc. In conclusion both these circumstances depict the hindrance in collaboration, communication and teamwork.

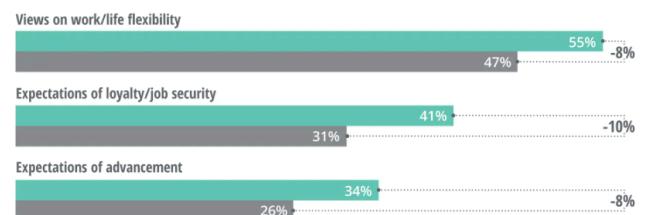
Future without this goal:

The current on-going challenges surrounding the age-diversity complexities in corporate organizations raises questions on whether this is an issue that is long-standing. As issues arise within 5 generations, there is no guarantee that more generations would not lead to further exploitation of the issue. We know that the usage of AI technology has been rapidly increasing over the past few years and it is expected to become more widespread. AI is being inhabited into different industries with younger generations relying on it vastly, but could potentially be difficult for older ones to understand them and get used to it. Let us think about this futuristically where AI is utilized for hiring purposes. We need to raise awareness concerning this, to ensure these AI technologies are designed in such a manner that does not

Respondents indicate a shrinking gap in generational differences related to work and careers

What do you see as the biggest differences across generations today?
What do you think will be the biggest differences in three years?

Today In three years



discriminate against the older working population. This portrays the need to mitigate any potential that AI holds to create these disparities in our world and increase the chances of misunderstandings in an organization.

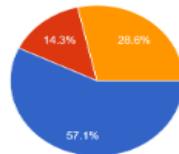
Scope of the Problem:

- Expert Opinion and survey of the target audience to show scope

TEB Talk Takeaway

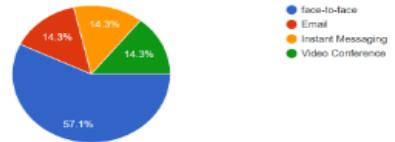
Alberto Garcia Jurado has worked in different organizations for over 15 years and he shares his opinion in the concept of natives and immigrants being those who adapt and those who are acquainted (the older and the younger). He himself believes that being from the older generation, he makes use of current technologies but is very convincing that there needs to be a balance. He said "it is like eating too much cake not so good for their lifestyle" but the balance between approaches in an organization creates a improved work environment and life.

What is your age range?
7 responses



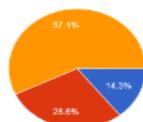
I collected the age range and their position in a corporate organization to check if age has any effect on the hiring for different positions because if it does add as a contributor then we can conclude that due to age diversity in a company there could be occurrences of misunderstandings when it comes to the reason for promotion etc.

Which communication channels do you find most effective in the workplace?
7 responses



I wanted to co-relate how different age categories preferences differ in terms of communication styles. From this I gathered information that the older generation feels comfort in a face to face discussion and few younger generation like to be video conference or messaging.

How often do you encounter misunderstandings in a workspace while talking to different age groups on a scale of 1-5?
7 responses



On a scale of 1 to 5. we got higher survey results for 3/5. From this we can understand that the problem currently is present, as it is not too low of misunderstanding frequency faced by employees. Looking at the data. we can predict the future to have increased challenge with this as more generations are added

Global context connection: “Orientation in space and time”

My understanding of this global context is how factors changed over time due to historical context in a particular space and how these changes have impacted personally and globally. My solution for the problem of diverse age demographics in corporate organizations bringing more miscommunications tackles the constraints to bring turning points in humankind. The concept of migration in this global context, I would like to take it as a metaphor, portraying indirectly the movement of employees into different teams of diverse age groups. To conclude, the diversity bought by this migration is in turn what contributes to productivity of the firm.

Statement of Inquiry: “Design can impact interactions”

My understanding of this statement of inquiry is how different designs have the potential to impact interactions, either have drawbacks in designs to constrain communication or either have many benefits in bringing forth communication. Bringing forth communication in both between a set of individuals/target audience or it could be how they engage with a space, a digital interface, physical product or even a process can significantly change how we interact. This statement of inquiry basically underscores the importance of thoughtful designs in shaping human interactions and experiences.

→ According to the above research and connections made, the problem statement is as follows:

Problem Statement: Corporate employees in an organization involving a diverse age demographic, increases the probability of misunderstandings and communication gaps, hindering collaboration and posing challenges due to differences in adaptations of communication styles and preferences over time between generations.

Conclusion:

The problem lies in corporate organizations where there are diverse age groups/various generations that work together for a common goal, however these various generations might face communication gaps due to different styles of

communication. Throughout my research, I can conclude that the challenge faced is mutual with both younger generation and older generation coming across conflicts. For the older generations, new digital communication methods would not be familiar or comfortable as they prefer a face to face conversation. This could lead to them feeling incompetent or outdated. Meanwhile, for the younger generation as they prefer a more work-life balance, the older generation might view these as lack of dedication. Therefore, taking the above examples of conflict, we need a solution to tackle this as the future containing more generations than now won't have the same communication issues, hindering collaboration as a whole.

A(ii): Identify and Prioritize research- construct a research plan, which states and prioritizes the primary and secondary research needed to develop a solution to the problem.

Before creating my research plan, I wanted to identify areas of focus for my research. To find out, I created the table below.

Priority Level Key:

- **VERY HIGH** - this has to be done immediately and is very important
- **HIGH** - this can be done later but is very important
- **MEDIUM** - this can be done later and contributes little to the information we seek
- **LOW** - this can be omitted as it does not give a lot value to the research

Area of Research	Priority	Reason
Aesthetics	HIGH	I need to brainstorm what the product would look like before making the product.
Cost	HIGH	I need to ensure that the product I come with is cost-effective as I want different corporate organizations to invest and mitigate the issue present.
Customer	VERY HIGH	Target audience is very important as we have to learn their challenges to implement a solution because in terms of our global context, we need to be conscious of how people in different geographical locations face different challenges sometimes based on cultural or historical contexts.
Environment	LOW	Only certain factors such as time zones, working hours in various locations which potentially could lead to communication strategies must be looked upon.
Size	MED	As I am planning a digital outcome/product, I would not worry much about size.
Function	HIGH	Any digital product must be organized in a manner that it functions appropriately and does not confuse the users. During the testing process, it must function appropriately so the function must be considered.
Material	MED	To create my product, I would need to understand the possible softwares that could be implemented in addressing this challenge.

Area of Research	What will I research?	How will I gather this information? (primary source)	How will I gather this information? (Secondary source)	Why will I research this?	When will this be done?
Background	How can design impact interactions?	N/A	INTERNET - I will browse through different websites pertaining to the question and gather data if it aids for background information.	To evaluate to what extent I can orient my problem and solution towards the unit details, I wanted to research first on the unit concepts itself. Then, before trying to make my product, I need to	02/12/2023
	What is adaptation in communication and give examples?				
	What is the distribution of				

	<p>employees across generations within the corporate organization?</p> <p>How frequently do these organizations conduct awareness sessions on generational communication?</p>			<p>ensure I know what is the purpose of me creating a solution and the expectations that need to be fulfilled. Therefore, these research questions act as my starting to achieve my goal.</p>	
Aesthetics	<p>What art style best suits the game's purpose and also target audience?</p> <p>Are there opportunities for animation and interactivity to make the UI more engaging?</p>	<p>INTERVIEW Interview with the counselor to human behavior. Understand how aesthetics play a role on your target audience and discuss the color, font etc for a professional usage.</p>			
Cost	<p>What is the trend over the past few years on spending patterns for programs in organizations?</p> <p>What could be the long-term cost benefits in addressing this issue contrary to costs of the challenge in itself?</p>	<p>DOCUMENT ANALYSIS - Looking for graphs with trends of expenditures on programs like these and other publicly available budget documents</p>	N/A	<p>To make my product implemented in different organizations, it needs to align with their budget plan. Therefore, I want to evaluate how their expenditures schemes have been over time and compare the cost of addressing this issue with the cost of the challenge to analyze if the high budget would be worth it.</p>	4/12/2023
Customer	<p>How satisfied are the employees today with regards to working with different generations and explain why?</p> <p>What technological communication tools have evolved that bring communication gaps between generations?</p> <p>How can you increase the efficiency of adaptation in employees?</p>	<p>SURVEY - Creating a google form and sending out to few corporate employees, who are of a wide range of ages to understand how they feel. INTERVIEW - Interview with a counselor to understand the psychology on how people adapt more quickly, especially in terms of these wide generational gaps that seem to keep</p>	N/A	<p>As the target audience's challenge is very crucial, this allows me to explore the way they feel which can aid in coming up with solutions. Plus also giving them one of the factors that leads to communication gaps being communication tool preferences can help me delve deeper.</p>	6/12/2023

		arising?			
Size	To what extent must the size of the database be to support large scale target audiences (organizations)?	INTERVIEW Interview with an expert in the field of game development and technology to understand the size of the database for a digital product.			
Material	What frameworks can be used to select communication tools that engage with diverse generational groups?	N/A	INTERNET - Look for websites and gather informations that answers the question	This can help me decide on a material that resonates with all generations to find a solution. In addition, these frameworks can help me evaluate my final product in later stages if all the frameworks were included in my product.	8/12/2023
Other (debatable question)	Is it more effective for organizations to implement communication strategies for a generation facing vast problems or help resolve equally based on all generation's problems?	N/A	INTERNET Case studies - look at a few organizations implementing strategies targeting specific generations or taking a more holistic approach to evaluate which was more successful.	To create an equitable workplace mitigating the consequence of prioritizing only certain generations.	10/12/2023

A(iii): Analyze the existing products - analyze a group of similar products that inspire a solution to the problem.

Source 1 - AMA (American Management Association)

Website - <https://www.amanet.org/leading-in-a-diverse-and-inclusive-culture/>

Description - It is an official website of an association which promotes awareness on age diversity for leaders and employees part of a company to implement strategies that can potentially bridge the generational communication gap. The website is in which you can book slots for training by understanding what you will cover during the training,

Strengths	Weaknesses
<ul style="list-style-type: none"> - The website's purpose is well-planned with the content properly organized through proper usage of subheadings. - It lists down all the objectives of the training program which makes it easier for us to decide on enrollment and understand how it is going to benefit us/ 	<ul style="list-style-type: none"> - There are no proper images to attract the audience with only the blank color taking up so much space. Without images, there is no interactive element that engages the audience - All the training content only available during the session when enrolled and does not contain any information or even an introduction to age diversity

Opportunities	Threats
<ul style="list-style-type: none"> - The reviews of the training sessions are given. The background of expert mentors are also mentioned. Both contribute to its credibility and reliability. - The training sessions are online, person-to-person, and also available at your company location for making a choice that you are comfortable with. 	<ul style="list-style-type: none"> - There are few technical issues with the website. There are few lags and the page load speed is comparatively slow to other websites. - I checked the website on different devices. In phones for example, the layout is getting disturbed and content is all over the place.

Source 2 - Age diversity training by WHU (otto beisheim school of management)

Website -

<https://www.whu.edu/en/research/whu-knowledge/age-diversity-training/>

Description - A similar product as the above - it is a website that discusses how to promote better relationships between different generations (especially the young and the old). It poses certain ways to manage conflicts, appreciate each generation's work - factors through which it can improve communication and efficiency of work. This website also contains information for getting allocated in certain programs to enhance further.

Managing Age Diversity Properly

How people of different age can make the most of working together

Read more ↓



Fabiola Gerpott - November 30, 2020

Tips for practitioners

Demographic change is progressing inexorably. Along with that, the age for retirement is also falling into line. Other economic areas, especially labor law, will also require major adjustments that labor market studies

Strengths	Weaknesses
<ul style="list-style-type: none"> - It has detailed content in regard to age diversity. Mainly focuses on corporate companies - which is the targeted audience. - It also includes details about different programs around the world that you can potentially join so that visitors of the website do not have to rely on another source to get this information. - When I tried out the website, it asked me to agree to a few policies to ensure safety of data. 	<ul style="list-style-type: none"> - No pictures, videos etc. Only a themed color is present which gets the audience easily bored. - Does not contain their own sessions, only information about programs going around in the world. Moreover, it does not include a link to enroll, you will have to visit the main website of the programs listed to enroll.
Opportunities	Threats
<ul style="list-style-type: none"> - There is a section embedded in the website called "tips for practitioners" where it poses an opportunity for all to input their suggestions based on their experience. - Contains the authors of this content production - who is a professor in leadership and diversity management, showing that this is credible. - Other information is also cited, showing its reliability. 	<ul style="list-style-type: none"> - Due to this being a website directly from a college publication, we can have students who write bad reviews that can impact the success of the online platform.

Source 3 - Virtual Team Builders - Your Hybrid Solution

Website - [Virtual Team Builders - Hybrid Teams - High Performance Hybrid Teams](#)

Description - It is an innovative online platform designed for the same purpose as above - to enhance team collaboration and cohesion in work environments. It offers a wide range of interactive activities to engage in, for users to foster trust between generations as well. It also offers various sources (extensive library) of activities that you can try in physical scenarios. These all activities also cater to diverse team preferences and objectives.

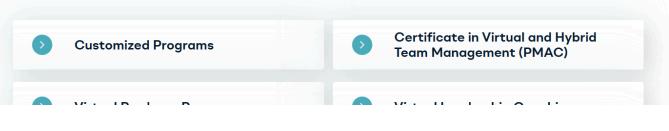
Complete our FREE Hybrid Teams Performance Survey TODAY!

Learn how to build stronger hybrid teams that deliver better results.

PERFORMANCE SURVEY

LEADER ASSESSMENT

How to work with us

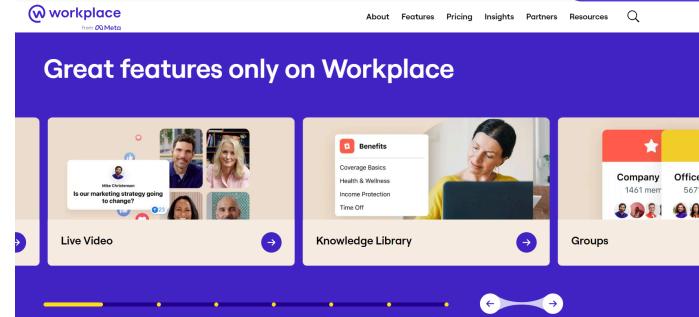


Strengths	Weaknesses
<ul style="list-style-type: none"> - It is very convenient for the target audience as it allows participants to engage from anywhere, promoting accessibility as well. - The platform can easily accommodate many users (teams with different sizes), making it suitable for large and small scale organizations. - The platform can be analyzed through data analytics to provide the success of the team engagement and performance. - To address generational gaps, this product ensures the target audience also adapts to diverse preferences due to a wide range of virtual team-building activities. 	<ul style="list-style-type: none"> - Virtual team building can hinder the physical interaction and bonding that can possibly occur and enhance teams better during in person activities. - Cyber security concerns can be present due to the product's dependency on technology. There might not be proper tracking of interaction between individuals to keep track of misuse of language. - I also feel like it is limited, because few team building activities cannot be replicated appropriately, virtually limiting the diversity of experiences compared to when in physical interaction.
Opportunities	Threats
<ul style="list-style-type: none"> - Since it is a virtual platform, it gives the opportunity to expand the customer base as it is throughout the globe. - There is an opportunity of constant improvement and enhancement that could be incorporated over time. You can either increase the activities provided or enhance the already existing activities based on feedback. 	<ul style="list-style-type: none"> - The most obvious one is that of market competition. There could be high competition as the problem persists frequently and many products might look forward to mitigating the same issue - Security concerns are another major threat. The storage of data should be handled sensitively as the information is crucial. - Evolution of technology - there is a direct threat that the product is not up to evolving technology.

Source 4 - Workplace by Facebook and Microsoft Yammer

Website - <https://www.workplace.com/> and <https://www.microsoft.com/en-in/microsoft-viva/engage>

Description - Workplace by Facebook and Microsoft Yammer are both integrated into a suit. It is designed for seamless communication for this generation and previous few generations to adapt to how the world has changed and focused around these dynamics.

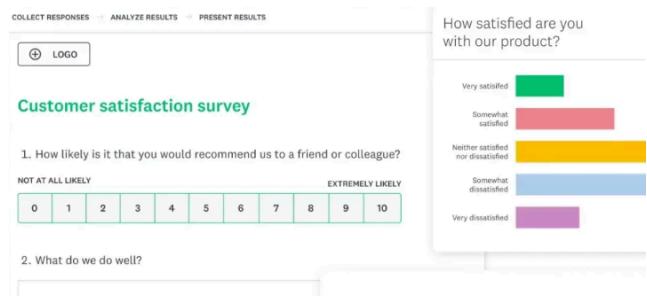


Strengths	Weaknesses
<ul style="list-style-type: none"> - Not new to technology implemented in the website because it leverages the same Facebook interface, making it easy for all generations and for them to adapt quickly. - It has diverse communication preferences like images, videos, live streaming, and includes text. - Particularly Microsoft Yammer is also a knowledge sharing platform which allows employees of different generations to share insights and their expertise 	<ul style="list-style-type: none"> - This feels like another form of social media which might make workspace feel more casual for some communication needs especially with older generations who are accustomed to more formal workspace interactions. - Data Breach & Security could also occur and therefore proper monitoring must occur for this sort to not happen like monitoring misuse of language, and cyber security issues. Moreover, no coordination would also lead to this.
Opportunities	Threats
<ul style="list-style-type: none"> - Opportunity exists to incorporate AI for personalized user experiences making the website more intuitive for diverse age groups. - Feedback mechanisms can be implemented because with it Microsoft can continuously improve Yammer based on user preferences and needs. 	<ul style="list-style-type: none"> - some organizations have reservations about data security on platforms associated by Facebook or Microsoft so do not opt to enroll - The subscription costs associated with Microsoft might be prohibitive for some organizations, especially the smaller ones. Overall this limits access and the product would not be able to reach a wide range of target audience.

Source 5 - SurveyMonkey

Website - [SurveyMonkey: The World's Most Popular Free Online Survey Tool](#)

Description - This is also a website, offering customizable surveys for various purposes. Like for example while doing SWOT analysis I will be focusing on employee engagement surveys. Its features empowers individuals to visit as it is a go-to tool for anyone seeking to collect and analyze the insights gained.



Strengths	Weaknesses
<ul style="list-style-type: none"> - As I said earlier it is a go-to tool, it has a user friendly interface as it is accessible to users with varying levels of technical expertise. - The survey can also be customized and gives many options to the user to change according to their needs. - All the other products I have analyzed are a direct solution but this one is where we start by understanding the issue. 	<ul style="list-style-type: none"> - While SurveyMonkey does have limited free tools, there are others which do not like the number of responses allowed, limiting it for larger scale surveys. - Competition in the Market: There are several other similar problems online and also it could be a handout physical form for surveys. These may compete for market share.
Opportunities	Threats
<ul style="list-style-type: none"> - Integration with other platforms: Since I mentioned earlier that this product is more into understanding the issue and to what extent, it has an opportunity to integrate with other tools that enhance functionality and appeal. - However competition in the market is a weakness, it can also be an opportunity as it can expand its user base/target audience by targeting new markets where there is a demand for survey tools. 	<ul style="list-style-type: none"> - There could be certain data-privacy concerns that discourage the users to participate in these surveys online and will encourage them to look for more platforms that have stronger data protection measures. - During an economic downturn for a business, they might cut down their spending or investment impacting SurveyMonkey's revenue. - Rapidly advancing technology may hinder the preference of this platform over others.

A(iv): Develop a design brief: Write a design brief which presents the analysis of relevant research, talks about the gaps present in user requirement and market availability

My chosen design problem is that in corporate organizations there are employees of different generations due to which a generational gap over time is created. Communication preferences, personalities and work ethics can be major factors that affect effective communication and collaboration between these generations. These constraints hinder the success and achievement of these large scale organizations.

When I asked my target audience about this problem, here's what they said (**the survey above in section "scope of problem"**). Based on the response, I made 2 significant conclusions:

- 1) This is a significant existing problem as people agree that they find difficulty in interacting with other generations and have to start adapting to foster productivity in a firm. They also mentioned that there are a high number of misunderstandings that occur on a daily basis while working with other generations.
- 2) I understand that many organizations have already implemented certain strategies and one of the most common out there is a handbook or meetings conducted once a month to spread awareness and foster diversity. Apart from spreading awareness, there are no other significant steps taken. Sometimes there are team building activities, however there is no platform that is virtual for doing the same.

The research accumulated for the research questions mentioned in strand 2 of the same criteria also helped me instill ideas and these the following summary of my research below:

Important findings of my research (summary):

Background: The research I have done indicates that design ideas do influence interactions, also shaping how they engage/communicate with each other. Additionally these design ideas also need to revolve around a key pointer which is adaptation, it is important to accommodate diverse preferences. Especially in corporate settings, a multigenerational workforce necessitates understanding among them. With organization conduction awareness sessions to promote inclusivity must be looked upon, which do educate employees fostering a productive environment. However, in my research I have come across that not many organizations have addressed or even understood the problem yet, but very few I do see are implementing certain strategies such as handing out brochures in offices with pointers to adhere to different generations' preferences.

Cost: Research findings do show a trend recently of spending patterns, showing increased investment in programs aimed at addressing various challenges, especially ones that hinder the overall efficiency of the organization. By proactively resolving these, in the future it can reduce expenses related to inefficiencies and lost productivity.

These research findings helped me recognize the need for the solution even more.

Even in my SWOT analysis (refer to Criterion A - Strand 3) to better understand some advantages and disadvantages I have analyzed and noted. So from this I was able to conclude what type of product is a viable or not viable solution to be implemented.

After a detailed analysis of the already existing products, I realized that most online platforms lacked something comparatively from the other, so when I brainstormed ideas to include all feature combines into one, this was the best online outcome. My goal is to create an online platform similar to a practical game in which it generates real-world scenarios that employees of different ages can work on together by communicating efficiently. Incorporating the usage of this tool at a **time** in office **space** during training programs could promote age diversity and bring more awareness for the future that this problem does exist. Since you are not only addressing the current issues and taking into account the future, it connects with the global context as it helps individuals in **adapting** to the evolution of communication tools.

How does it work and how is it going to look?

1. Scenario Generation: I will need to formulate scenario's/prompts that simulate common workplace challenges. My code for creating the platform should ensure that each prompt is corresponding to a card (shape). The prompts will mostly be collaborative projects and conflict resolution exercises.
2. Communication Tools: My product platform must include different features of communication preferences like enable chat, call etc. My set target audience will be using various tools (communication tools) to the prompts given.
3. Video (how to play game): After completion of my product, I will also be including a how to use the game platform to make it easier for my target audience to interpret. I will screenrecord the game, add captions and use different video editing tools for my end-product and add this in the website as an external link to visit.

CRITERION B: DEVELOPING IDEAS

B(i): Setting design specifications - use ACCESS FM to define and explain the specifications.

Aspect	Specification	Justification
Aesthetics	- The text should be bolded and the text color must be dark (black, dark gray) - The theme should be a background of a corporate organization, an aesthetic view of a desk - similar to an office space.	According to my primary research and an interview with a counselor, I understood that it is important to attain a better theme that correlates their situation as it attracts them more. From my A(iv) research I concluded that when addressing employees from various generations the colors must be dark and bold to bring an impact on them
Cost	- To play this game, it is going to be free but whereas if they want a training expert to organize this in their company, then hiring it	I made the game free as a free cost encourages more participants and for the additional charge if they opt for a training expense, as it is not expensive.

	might cost between Rs 3000-5000.	
Customer	- The game must have prompts that involve a wide range of communication techniques such as text, voice etc.	As we are targeting employees that fall into different generational categories, we have different preferences to cater. As our aim is to increase communication between these generations, we need to make sure to feel comfortable and make them adapt to different styles so there is a balance. Therefore each prompt generated by the game must include a different communication style to cater to that prompt so the employees get acquainted.
Environment	- The platform should be user-friendly, being easy to navigate for all generations and technological proficiency levels.	Even though it is not very direct to the literal environment, we are looking at this aspect in terms of the digital world/environment. The mentioned aspects should be taken into consideration to deal with real-life possible conflicts. Additionally, ensuring no biases can prevent from creating more differences
Size	- Should include different dimensions for different devices (phones, tablets, computers). Appropriate dimensions are as follows for each: - Layout size in phone - 15cm X 6cm (length X width) - Layout size in tablet - 23cm X 14cm - Layout size in laptop - 32cm X 18cm	Through my primary research (in Aiv) , I was able to get an professional opinion from an expert regarding how the size of the website or game must be set in a manner that is not disturbed when seen in a phone, tablet or computer. From the experience of the expert, there were cases in his profession that text included in the website was not visible when seen in phones as the screen size was smaller.
Safety	- Should have security measures to protect user data and maintain confidentiality. These are as follows: - A system in place for non-usage of inappropriate language - A system in place for not saving or extraction any personal data	From my research, I was able to collect data where there were many games and websites that did not have safety measures kept in place that hindered the privacy of the customers. I used this article for reference: Free Online Video Games: Exploring Security Risks and Compromises (internetsafetystatistics.com) . It mentions “Free games may collect personal information and data from players, which could be used for targeted advertising or sending to third parties. Players should be cautious about sharing sensitive information” and “Free games, especially those with online components, can expose players to inappropriate language, behavior, or content from other players. Parents and guardians should monitor and educate younger players about appropriate online behavior.”
Function	- The information it contains to raise awareness should not divert the topic - The game should be able to ensure that all communication styles must be addressed in the prompts - The target audience must decode the prompt accurately.	In terms of function, it is to make sure our platform is not diverted into addressing something totally different from our goal. Since our goal arises to bridge misunderstandings, to do so equal addressing to both generations is required which means all communication styles must be equally addressed to ensure transparency. Moreover, as the collaboration also depends on decoding the prompt, the prompts should be related to the office environment and easy language.
Material	- Well crafted/built and informative prompts - Adding content that is meaningful and valuable to users - Diverse content to cater to different style - Software used to create the game (technology must be up-to-date).	This is a very crucial part of designing your platform which enhances effective user-engagement and communication (being one of the main aims of the solution designed). Have a proper format to cater to different preferences as the main cause identified is this. From my primary research from the interview with an expert, I was able to understand that to make sure there is more influence of your

		product in a wide market, the technology used must be up to date.
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Success Criteria: will be evaluated out of 5 (1 being the lowest and 5 being the highest achievement levels)

Specification	Level 1-2 (0-40%)	Level 3-4 (40-90%)	Level 5 (90 - 100%)
Aesthetics	- An appropriate game layout is designed which is formal, but the colors are not matching and not aesthetically pleasing. The platform doesn't contain any aesthetic features like music.	- There is a formal layout that is designed and contrasting colors that add to the professional layout. It is to some extent aesthetically pleasing. Music has been added to the set, but not according to the mood of the purpose.	- The platform is aesthetically pleasing with a formal layout and contrasting colors. It is a very professional layout for organizations to implement in their activities. It contains pleasant music that is according to the mood of the purpose.
Customer	- The platform doesn't include anything that caters to the needs of the target audience. It has minimum communication preferences so not all generations are comfortable to use it.	- The platform contains the target audience's requirements to an extent. It has all communication styles but more prompts generation for a specific type of communication style, creating bias and misunderstandings between generations.	- The target audience has most of the necessary requirements that the target audience requested for. The platform generates prompts that have equal preference to all communication styles according to the generation's preferences.
Environment	- The platform is not easy to navigate and encourages unfriendly communication between the target audience.	- The platform is somewhat easy to navigate, but still is clustered with features here and there. But there is no encouragement of unfriendly talks.	- The platform is very easy to navigate with properly placed features. There is no encouragement of unfriendly talks and an extra feature of blocking the chat when there is possible unfriendly talk.
Size	- Only one server for all organizations using this platform, therefore cannot handle user traffic, only less or equal to 60-70 people .	- Many servers for different organizations using this platform, but each server is only able to manage around 70 people .	- Many servers for different organizations and each server able to manage user traffic, around 150 to 200 people .
Safety	- Very prone to personal data breaches and the platform does not contain any safety measures for these cases	- To some extent prone to personal data breaches and has some measures kept in place to decrease the chances of occurrence.	- Not prone to personal data breaches as there is proper safety precaution and measures kept in place.
Function	- The employees cannot understand all the prompts generated in order to attempt together and foster better communication.	- The employees can understand a few prompts generated. They can try to attempt and have communication to an extent.	- The employees can understand and interpret the prompts with accuracy as it is simple but effective in fostering communication.

Indicators for the success of the product:

- Score of below 20 will be considered poor
- Score of 20 and above will be considered good
- Score of 25 and above will be considered excellent

B(ii): Setting design specifications - use ACCESS FM to define and explain the specifications.

Below are a few designs that I brainstormed regarding the layout and structure of the platform/game.

Design 1:

Brief description - Likewise to a Monopoly setting and layout, but the functions are recreated which I will explain in the annotations. This is to be incorporated into an online platform, where a wide range of employees are able to analyze prompts

given during this game and solve them with better communication and collaboration.

Annotations -

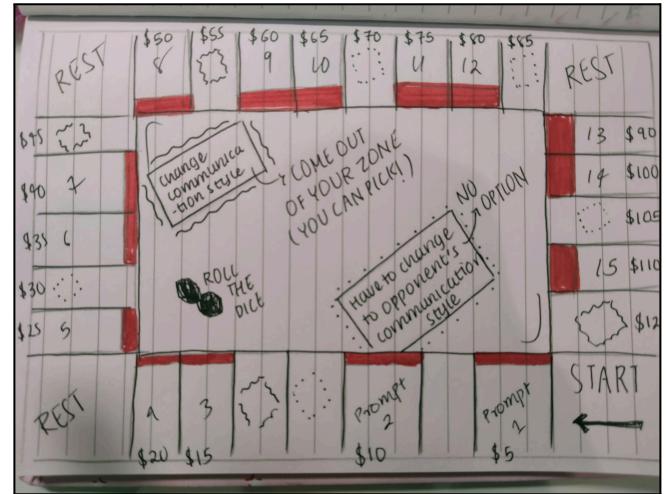
- Layout size in phone - 15cm X 6cm (length X width)
- Layout size in tablet - 23cm X 14cm
- Layout size in laptop - 32cm X 18cm
- Colors will be enhanced in the chosen design
- 2 dices
- Card type 1 (dotted brackets)

If you fall under the blank box without any prompt and only dotted brackets, then you will have to pick up the card to read the prompt. This prompt will be answered using the communication preference that your team member is comfortable with only.

- Card types 2 (curly brackets)

If you fall under the blank box with curly brackets, then you have to pick the other type of card which means that you receive a card that can save you for one round. This card will ensure that whatever prompt you get your teammate has to follow your communication preference.

- In online platforms, the prompt received will be read out (feature) with medium pace so it is understandable.
- There are also 4 rest zones, where you do not have to do the prompt.
- If the prompt is done or fulfilled according to the requirements, earn money in the game. I added dollars for each prompt with an increase in 5 dollars from start to end. Wherever you land, accordingly you receive a token of success.
- Approximately 15-20 prompts included



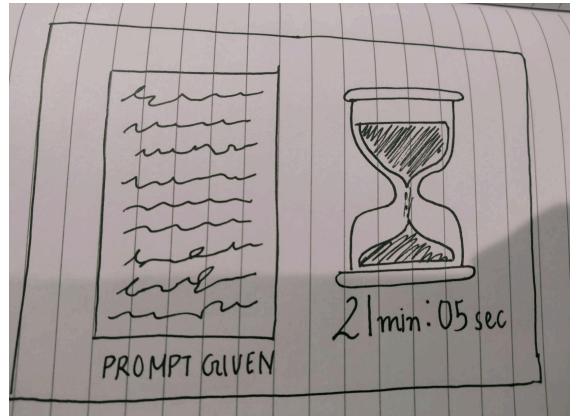
Annotations:

- Same size as the above for all devices
- Set of cards upto 20 in total
- Hearts, Spades, Clubs and diamonds each representing one communication style

Hearts - communication through texting in social media, Clubs - communication through verbal language (talking/speaking), Diamonds - writing letters in a sheets of paper to each other, Spades - communication through video calls

Design 2:

Brief description - This layout follows the theme of solitaire or cards deck but not how it functions. I would say this one depends on luck since pairs of employees or even groups have a set of cards which are going to be shuffled each round. The spades, clubs, hearts and diamonds each represent one communication style. When it is a group's turn and the cards are shuffled, whichever shape they have the most, they have to perform the prompt generated using the shapes's communication style.



-Ex: maximum of 9 spades (highest compared to all other shapes), then you can choose between the 9 spade cards and your chosen one will be revealed with your prompt.

- For creation of prompts:

2 sets of 20 cards - 40 prompts (can be modified to approximately 40-60 prompts)

- Timing set for each group based on communication style (popup message)

Communication through verbal language - 8 min

Communication through video calls - 10 min

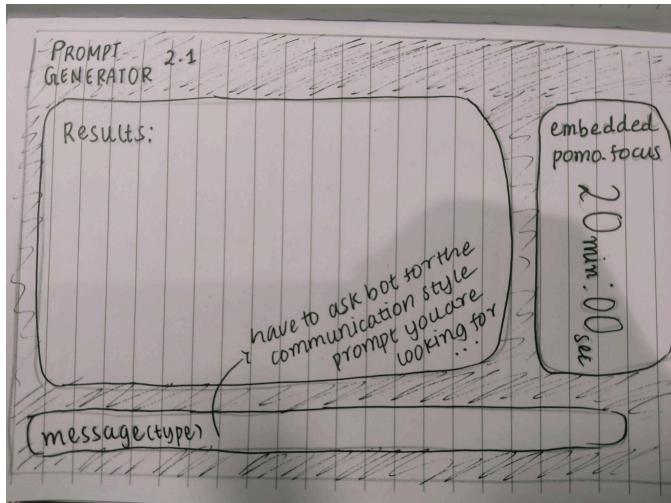
Texting through social media - 12 min

Communication through written letters - 25 min

- dimensions of the popup message (10 cm X 5 cm)

Design 3:

Brief description - This is rather a more formal approach, without any theme it is just a creation of a chatbot that contains a database to generate prompts for the employees to work on. Likewise to chat gpt, but I look to enhance it more with certain aesthetics that I will mention in the annotations. What is different from the previous designs is that, for this you will have to ask for a prompt to work on and specify the communication style. To keep a track of your efficiency while working with each communication style, this platform has an embedded pomofocus. With this, we can evaluate which communication style we need to increase our efficiency in. Asking for prompts that include communication styles that you got least efficiency in would improve your adaptation.



Annotations:

- Dimensions for different screens:

- Layout size in phone - 15cm X 6cm (length X width)

- Layout size in tablet - 23cm X 14cm

- Layout size in laptop - 32cm X 18cm

- for phones, the pomofocus option is unavailable as the screen is too small.

- need to ask the chatbot itself for the recommended time and set the pomofocus according to the suggested time

- background will be likewise to a office environment (2-3 options available to choose from)

- Database will be designed to cater to the needs of the users.

- Database structure depending on (topic, length, difficulty etc)

- Prompts in the database will be around 50 - 100 in the starting, but regular updates over time and adding on prompts can be done which increases the numbers of quality prompts.

- Chats with the chatbot are saved in your history to review prompts in case needed

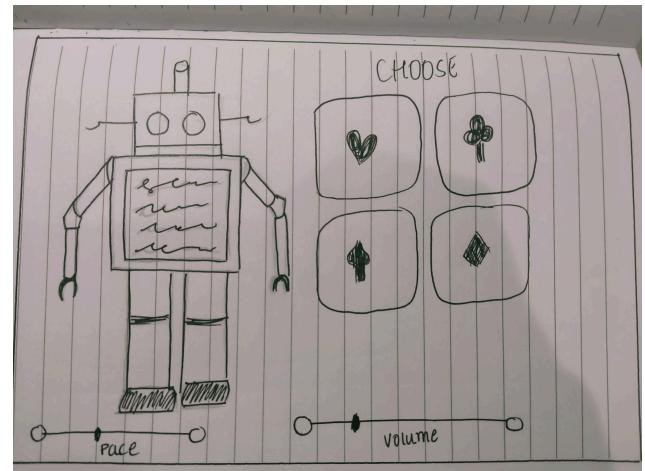
Design 4:

Brief description - With the same idea as before likewise to a chatbot, this is a robot figure trying to give prompts based on the database created for this platform. Similarly, to the above, you will have to choose one each symbolizing a communication style.

Annotations -

- 1st screen when you open the platform will be the cards display to choose from

After you choose, second screen will appear where the robot gives prompt



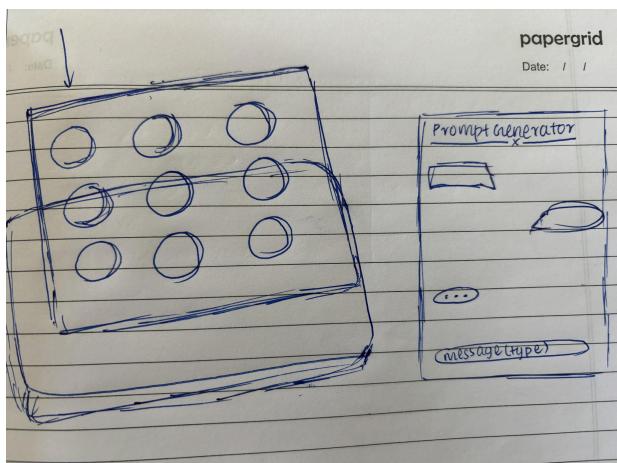
- Prompt displayed in the middle body of the robot but recitation will also be there.
- For recitation setting options(drag and drop):
Decreasing and increasing volume
Pace of the prompt recited by the robot (slow, medium, fast)
- Dimensions of the screen is same as above in all devices
- The symbols represent each communication style same as the above cards deck one
- colors and aesthetics must be included
- approximately 4-10 prompts added
- The robot calculates the suggested time, and time is shown by the robot moving around when the time is running and as soon as time is up, the robot falls down out of energy.

Design 5:

Brief Description - This idea involves a chatbot that generates a prompt based on the request from the user, like the communication style needs to be specified to the chatbot. I have added a fun element to the game, where whichever teams are done with their 1st prompt, they can toss a coin into the respective space they want. This increases competition and efficiency in working in faster and complex situations. By completing prompts they can toss coins and if they get 3 in a row, the game ends with that team winning.

Annotations:

- Dimensions for different screens:
- Layout size in phone - 15cm X 6cm (length X width)
- Layout size in tablet - 23cm X 14cm
- Layout size in laptop - 32cm X 18cm
- Arrow indicates where the coin can be inserted (arrow buttons can be used to move the arrow and tell where you want to insert it).
- It will be a screen with 2 sides (one side with prompts, second side with the game (3 in a row))
- This the second screen, first screen will be instructions
- 4 in a row box will be 3D and chat will be 2D screen
- Timer popup is not there in this design idea as they can take as much time however the main aim of theirs should be that they are really fast



to get 3 coins in a row.

- in database for the prompt generator, the database can be large so upto 30-35 prompts included
- For each team, the color of the coins will be different so that they are able to differentiate. For example one team = yellow and other team = red.
- The board color will be blue and the chat generator will be black and white. The background will be office space (chat background)

How are these above designs addressing the issue identified in corporate companies - There is a slight twist in this game. The prompts are asked to be solved in a particular way, that means using a particular communication style that not all generations are comfortable with. Therefore, as employees get acquainted with using different communication styles with their fellow teammates, it fosters more understanding between generations and their preferences. Additionally, employees with diverse ages can start adapting to various methods to ensure efficiency in their workplace. Through this the older generation is able to adapt to new technologies, whereas younger generations are able to understand the older generation's perspective and respect their ideas.

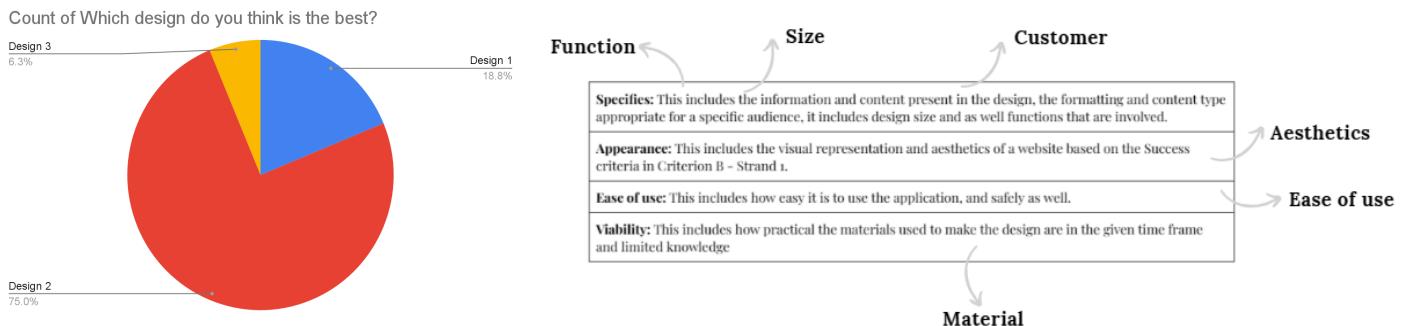
B(iii): Present the final chosen design and justify its selection

Rating System:
5 - Excellent
4 - Above average
3 - Average
2 - Below average
1 - Very poor

To evaluate my 5 design ideas, I conducted a survey through google forms with my target audience to understand their point of view on the designs and which one they prefer. I also made my own marking scheme which gives a score to each design on different criteria and aspects.

To also make the grading easier for my target audience, I have narrowed down my whole ACCESSFM specifications to a few criterias that cover up all the specifications as shown below:

Annotated the ACCESS FM specifications and their connection to the above listed criteria.



To choose the final design from the above designs, I created a Google Form, where I inserted the five designs and gave their annotations. I asked them which design idea they liked and below is the response I received:

Based on the responses and design features, I filled the below table.

The below table is plotted with each design assessed with the success criteria in Strand 1 of this criteria. The view of the target audience is also considered. Each of the designs will be graded in each criteria, and then the total is calculated. The design with the highest point will be selected.

Apart from this, I also received the marks assigned to each design out of 5 which is listed below. On the Google form, I picked the number that received the most votes for each design, thus if the majority of people scored design 1 a 4, that is the number that is displayed below in the table.

Evidences: (Few of them:Refer to the appendix 1.0)

<https://docs.google.com/forms/d/1wlyei0ZWh7xOUPFOrdCG3wpP2mdeIoEKjhD3pZfqAAA/edit>

According to the success criteria and design specifications, on a scale of 1-5 how much would you give for aesthetics?

16 responses

Copy



According to the success criteria and design specifications, on a scale of 1-5 how much would you give for customer?

16 responses

Copy



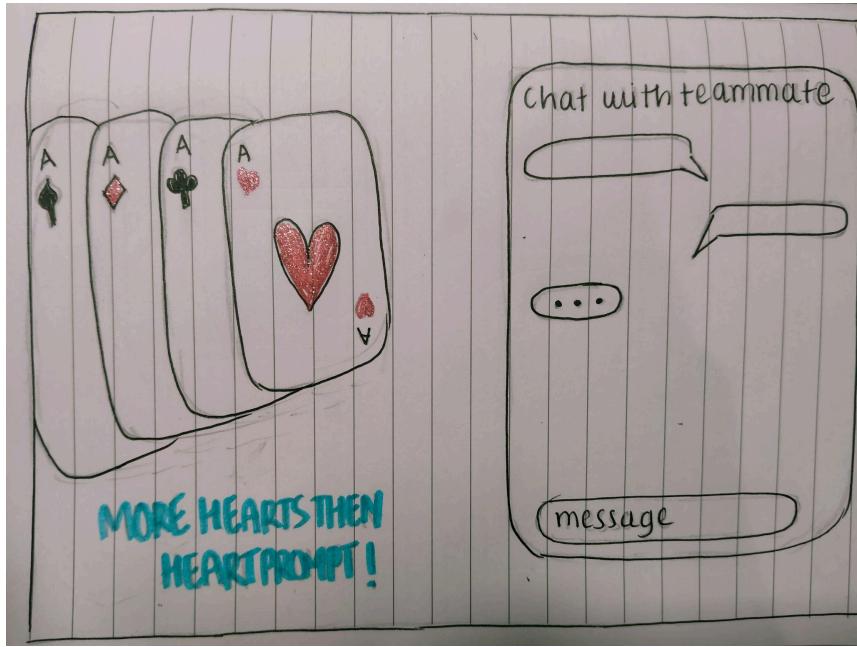
	Aesthetics	Customer	Environment	Size	Safety	Function	Total
Design 1	5	4	2	5	3	5	24
Design 2	5	4	4	5	5	5	28
Design 3	3	2	5	5	5	3	23
Design 4	4	2	5	5	5	3	24
Design 5	4	3	4	5	5	3	24

The responses considered from Google forms says that design 2 is the best. But the other designs, however, have greater points in a few aspects, so I decided to design the final product by making a few small changes by interchanging some features between the designs.

The changes I incorporated into Design 2 is as follows:

- I used Design 3's chatbot idea and made a chatbot as well for design 2.
- I used certain animations I decided from Design 1. In design 1 I mentioned in my annotations that I will be including an animation during my coding for game development (animation - card flip for prompt revelation). I thought since Design 2 also involves cards, I am going to do the same here while coding.

I incorporated all these changes and presented my final design idea below - an image (with annotations)



Annotations:

Dimensions -

- In phone: 15 cm X 6 cm
- In tablet: 23 cm X 14 cm
- In laptop: 32 cm X 18cm

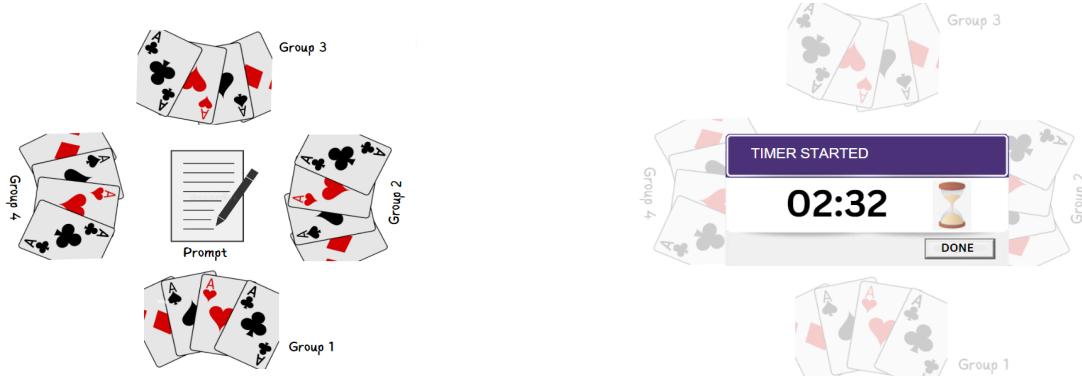
Communication style -

- Heart: communication through texting in social media
- Diamonds: writing letters in a sheet of paper to each other
- Clubs: communication through verbal language
- Spades: communication through video calls
- On the corner of the screen suggested time for each prompt will go on from the minute you get the prompt

To ensure there is proper respectable environment and safety during the process of using this online platform:

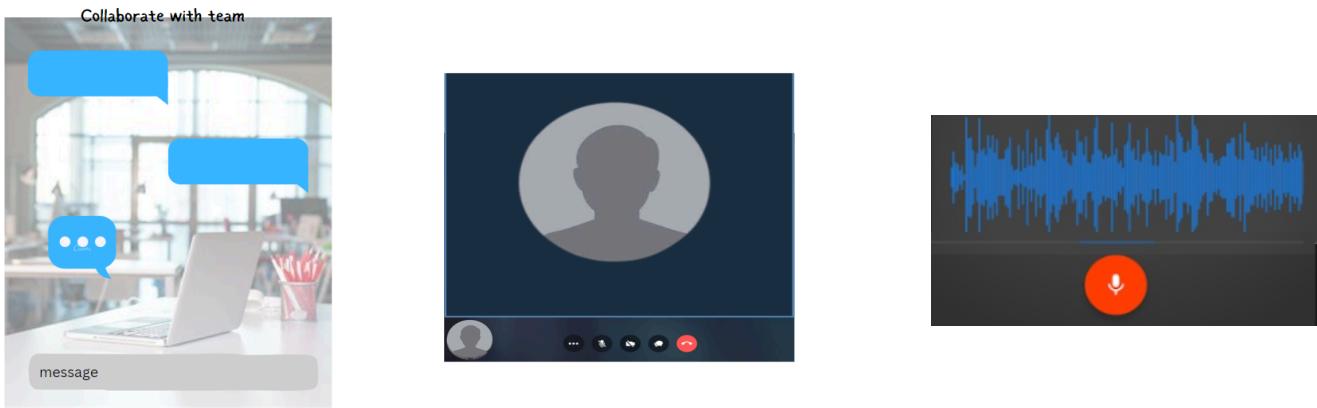
- for heart prompt (texting through social media): a separate chat box appears on the screen to collaborate and in any case of inappropriate language, the chat box automatically gets blocked and your prompt is unsolved.
- for clubs prompt (texting through verbal language): a separate voice recording screen appears to record your discussion while collaborating. Any misuse of language will lead to expelling you from attempting the prompt.
- for spades prompt (communication through video call): a box appears for connecting online face-to-face and the call gets recorded. When there is misuse of language, the same as above occurs.
- Approximately 60 prompts will be designed and regular updates can increase the number ahead

B(iv): Develop accurate and detailed planning drawings/diagrams and outline the requirements for the creation of the chosen solutions:



Maximum 4 groups, but prompts will be accordingly made to cater between 10-15 people in each group

- The screen dimensions for each device the similar as noted before
- The dimensions for the popup notifications (timer, voice recorder, chatbox, video chat)
- Approximately upto 80 prompts, with 20 cards for each
- During voice recording popup or video chat popup message, timer popup will move to the top
- Timer: 5 cm X 10 cm (in laptops) , 5 cm X 10 cm (in tablets) , 2 cm X 6cm (in phones)
- Exemplar gameplay: 12 hearts, 3 spades, 4 diamonds, 1 club, then you get the prompt according to the set communication style for heart
- There will be many other servers (upto 5) but regular updates could lead to more, decreasing issue with user traffic



Requirements for making the website:

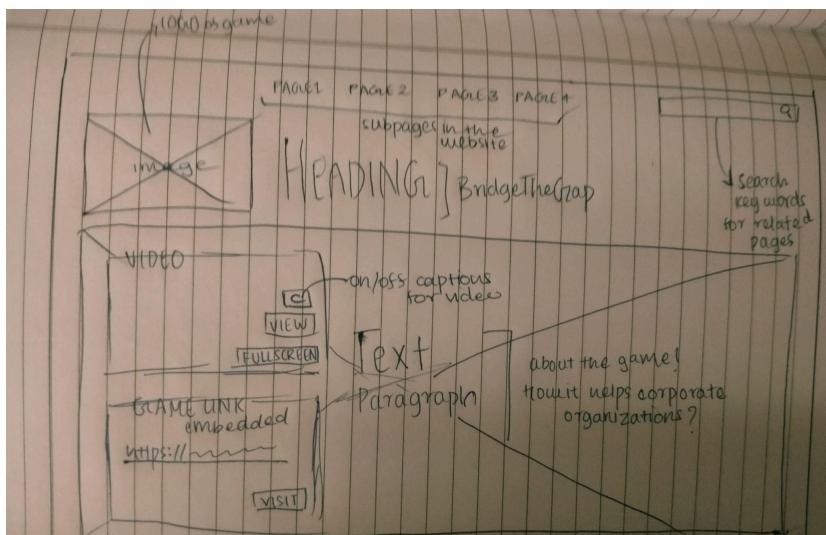
Hardware requirements:

- Computer (to program and it and test it)
- Keyboard (to type in the program)
- Mouse (to navigate more easily)
- Wifi router (to access the game play animation video)

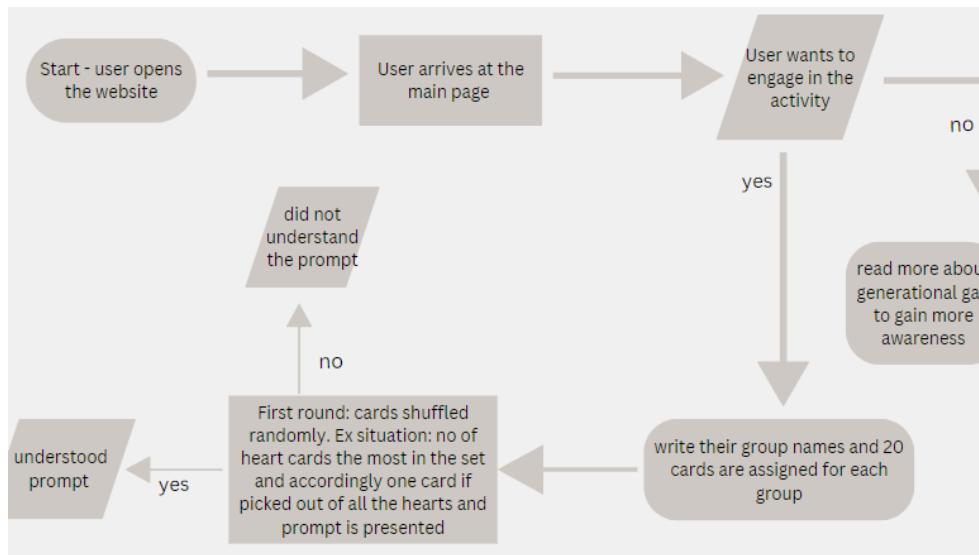
Software requirements

- W3 school spaces (to code HTML and Javascript)
- W3 schools (for HTML and Javascript coding references)
- DaVinci Resolve (to edit the gameplay video)
- GenAIStudio (to establish AI features to analyze misuse of language during game and ensure better environment and safety)

Even though the main final product is a game, this will be the website in which it is all embedded so I created a simple layout for my website. The below is how I organized it with different pages on the top, external links and videos etc.



I even want to mitigate any chance for my target audience to not understand the game, therefore I am also preparing a flowchart that shows exactly how the users of the platform will be taken through to ensure there is no confusion for me during the process of creating it.



CRITERION C: CREATING THE SOLUTION

C(i): Construct a logical plan, which describes the efficient use of time and resources, sufficient for peers to be able to follow to create the solution:

Task	Description	Tools	Target Date	Time to complete
Making 3D model of game which is going (for visualizing)				
Model all the elements of the game (cards, player characters)	This can be used as a reference to create the game	Computer, Keyboard, Mouse	9th January	1 hr
Add colors, designs, and background layout to the 3D model Background layout - office space Colors - dark and bold as specified in B(i), black and dark gray	Playing with colors and other aesthetics to finalize on details to include into your finalized 3D model to attract the audience	Blender, Computer, Keyboard, Mouse	10th January	15 min
Create the render view Angles -	Adjusting angles to evaluate which angle is the best to be included in the final game layout	Computer, Keyboard, Mouse	11th January	30 min
Render the model and save it as an image	After rendering is complete, save it as a png file to refer back to or to embed game play movements into it at later parts.	Computer, Keyboard, Mouse	12th January	10 min
Design the 3D layout using the above steps again for all devices (phones, tabs,	To make it scalable to all devices and layout to be appropriate for all devices, design 3D modeling for all devices and	Computer, Keyboard, Mouse	14th January	1 hr

computers)	ensure the dimensions are different for each so in the end there is proper scaling.			
Main website making (final product)				
Create the design layout of the website (font, background color etc)	Design the layout keeping in mind the aesthetics and the overall impact on the audience. This will be your base for all your end products - so must be considered with utmost importance.	W3 school's space, W3 school, Computer, Keyboard, Mouse, Internet	15th January	1 hr
Add title and introduction text for the website	Come up with a catchy name and introduction that captures the audience's attention to read more.	W3 school's space, Computer, Keyboard, Mouse, Internet	17th January	20 min
Add rest of the information	More information must be added to raise more awareness about the issue we are mitigating through the game developed	W3 school's space, Computer, Keyboard, Mouse, Internet	18th January	15 min
Create a sub-page for game corner and start developing code for game according to the 3D model	Using HTML code, create a section in the webpage so that when clicked can be directed to the game. Start coding for the game as well, now it is easier as you know how to visualize it because of the already created 3D model	W3 school's space, W3 school, Computer, Keyboard, Mouse, Internet	18th January	2 hr
Add the link of gameplay video once done (how to play the game video)	I am creating a video to show the audience how to play the game and the rules to make it more easier and efficient.	W3 school's space, Computer, Keyboard, Mouse, Internet	20th January	10 min
Test the game and the website overall and evaluate its functionality	Use various testing methods to evaluate your website and game's functionality and impact on the audience using the success criteria already created previously	Computer, Keyboard, Mouse, Internet	20th January	30 min
Make necessary changes and publish the website	If any limitations or issues are seen in the evaluation process, then make the changes accordingly.	W3 school's space, Computer, Keyboard, Mouse, Internet	21st January	45 min
Creation of video (game play/how to play)				
Using the finalized website, take screen recordings of different clips of the game	After the game is completed, take screen recordings of a demo game play and use editing tools to appropriately cut the clips.	Screen Recorder, Google Photos	21st January	45 min
Select and compile the videos that will be used in the final video	Use a video editing app to combine all of the clips taken and make adjustments to create a final piece together.	Da Vinci Resolve, Keyboard, Computer, Mouse, Google Photos	24th January	30 min

Edit the video (adding text in necessary places) and make it into one	To make the demo game understandable for the audience, include text that follows the game play with instructions	Da Vinci Resolve, Keyboard, Computer, Mouse	24th January	30 min
Review the video and make sure it runs smoothly	Check once or twice whether the video runs smoothly or if any changes have to be made.	Da Vinci Resolve, Keyboard, Computer, Mouse	25th January	10 min
Make necessary edits	The observed issues in the previous step must be addressed in this step.	Da Vinci Resolve, Keyboard, Computer, Mouse	25th January	10 min
Download and publish the video in the website (in the game corner section)	As the main base of the product is the website and embedded game, it is necessary for the video to be published in the same site for users to view.	Da Vinci Resolve, Computer, Keyboard, Mouse, Internet	26th January	15 min
After the product is ready, testing the product	Just to ensure that the website and the game is functioning properly check on different browsers and screens on the accuracy of the functionality of the product.	Computer, Keyboard, Internet	26th January	25 min

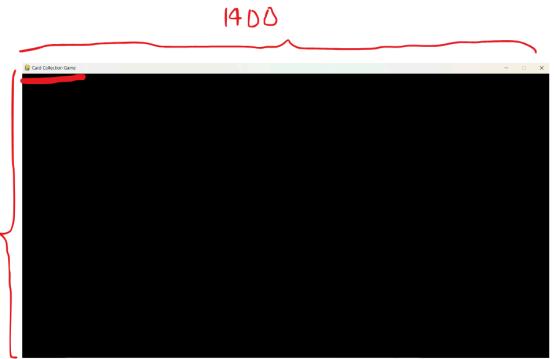
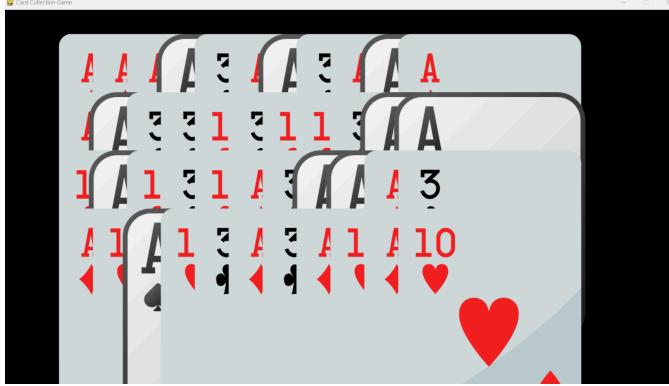
C(ii): Construct a logical plan, which describes the efficient use of time and resources, sufficient for peers to be able to follow to create the solution:

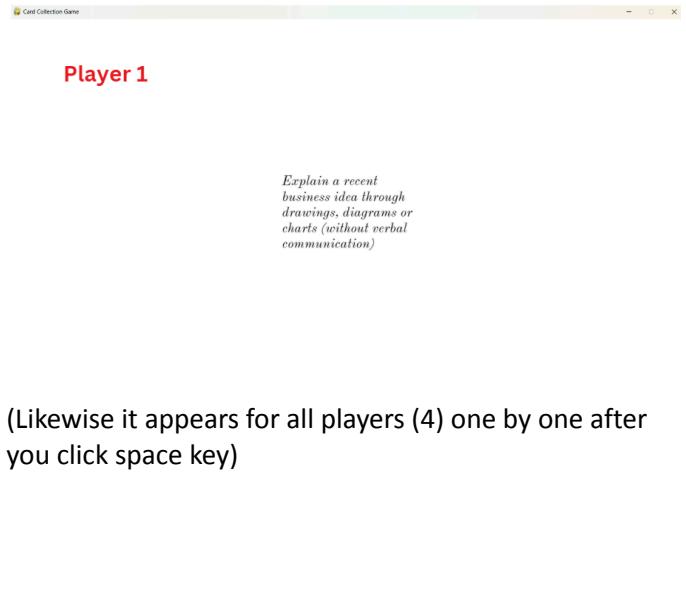
Technical Skill 1 - HTML coding: (for web development) I used one simple coding language - HTML - to create my website and used w3schools for learning this technical skill and creating a database to start coding. During the process of coding my website, I used several HTML tags for various different purposes. The table shows the tags that I have used, their application with an explanation of how the tag helped in the process of creating my website and what was the output due to the usage of a specific tag.

Tag	Code + Explanation (the code is highlighted)	Output
<image>	<p>This tag allows me to insert images.</p> <ul style="list-style-type: none"> Width and height tag: you have an option to add the dimensions Float tag: helps to align the image to the side or middle with the text on the other side <pre><html> <head> <title>screenshot1.jpg</Fig.6:Multigenerational characteristics></pre>	<p>HELLO WORLD!</p>  <p>As seen above, the image is floating or aligned towards the right.</p>
<style>	<p>Similar to the above, there are multiple tags under the style tag</p> <ul style="list-style-type: none"> This allows me to change the size, font type, color and the alignment of the text. As seen in the right, the text is aligned in the center, has a specified size, font type and color as mentioned in the code. <pre><style> .green-text {</pre>	 <p>Welcome to "Hello World", where you can explore forever, making your experience the best you have ever had.</p> <p>Check the video out!</p>

	<pre>color: green; } .custom-font { font-family: Arial; }</pre>	
<body> <p> <head>	You use basic codes to separate the paragraphs and titles, and headers. </head> <body> <p>This is a paragraph of text.</p>	HELLO WORLD! Welcome to "Hello World", where you can explore forever making your experience the best you have ever had.
 	This tag allows me to add spacing between lines in a single paragraph. As seen in the image on the right, there is a clear gap between the 2 lines in the same paragraph. <p>This is a paragraph of text. This is the other line of the paragraph.</p>	Welcome to "Hello World", where you can explore forever, making your experience the best you have ever had.
<a href>	This tag allows me to add a link that redirects to another webpage when clicked on. <p>This is a paragraph of text. This paragraph has a link to an external website.</p>	Visit the link below! This is how it appears, but the output of redirecting to another page is self-explanatory and I can't show it separately
<iframe>	This allows me to add a Youtube video directly to the website as an embed, along with all the standard features that Youtube videos have like changing video speed or adding captions if an option for the video. <iframe width="560" height="315" src="https://www.youtube....." frameborder="0" allowfullscreen></iframe>	CHECK THE VIDEO OUT!  Bridging the generational gap in the workplace Watch on YouTube
<u>	This tag allows me to add underline to a text <p>This is < u > paragraph </u > of text with underlined text.</p>	How to play:
 + 	This allows me to add an unordered list to the paragraph consisting of multiple items as seen on the right under "How to play". item 1 item 2 item 3 	How to play: • Create groups that are multigenerational • Click "shuffle cards", the cards representing communication styles • More cards of a shape, that specific communication style you get for you prompt

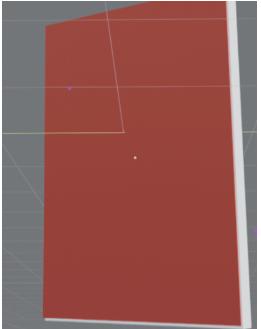
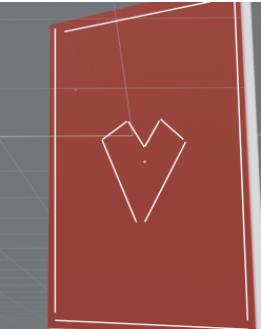
Continuation of technical skill 1: Python coding: (for game development) The above coding language was for the main product which is the website in which the game is going to be embedded. So for the creation of the game, I used python (pygame) coding language and the software used for the database was PyCharm. The table below also shows the tags in pygame I used, their application, and the output I received through the usage of a specific tag.

Tag	Code + Explanation (the code is highlighted)	Output
Initializing	<p>This code was how I started my coding for the game through pygame. You initialize pygame, set pygame as the code interpreter. I also set the screen width and height as 1400 and 800 respectively after running my code multiple times to check which dimensions were most suitable. The last line of the code also is setting a title for the window which is set as "Card Collection Game" as an example for now.</p> <pre># Initialize Pygame pygame.init() # Set up the screen screen_width = 1400 screen_height = 800 screen = pygame.display.set_mode((screen_width, screen_height)) pygame.display.set_caption("Card Collection Game")</pre>	
Adding images (Loading card images)	<p>I first saved the images in the directory of pycharm that I want to use. Then I started coding by adding a function of loading these images. I had to do each image one by one in each line of the code. These images will be displayed on the screen during the game.</p> <pre># Load card images heart_image = pygame.image.load("heart-card.png") diamond_image = pygame.image.load("diamond.png") spade_image = pygame.image.load("ace-of-spades.png") club_image = pygame.image.load("club-card.png")</pre> <p>Similarly for the other images that I need, I also added them in a similar format.</p>	<p>(there is no output that can be shown here because it is just extracting few images into the directory ensuring that the code knows few images and it can load them when needed)</p>
Animation (for the cards)	<p>Now that the images can be loaded, I wanted to add an animation function as these cards need to be distributed for the 4 players one by one each getting 12 cards. I added a code for it to have the choice of random distribution of shapes.</p> <pre># Function to distribute cards to players with animation 1usage def distribute_cards(players): cards = [] shapes = ['heart', 'diamond', 'spade', 'club'] for _ in range(players): player_cards = [] for _ in range(12): shape = random.choice(shapes) if shape == 'heart': card = heart_image elif shape == 'diamond': card = diamond_image elif shape == 'spade': card = spade_image else: card = club_image player_cards.append(card) cards.append(player_cards)</pre>	

Code to determine most common shape for each player	<p>In my game, it is needed for the game to determine for each player which shape they have the most to go ahead with the game. So for that I had to use the following code. I made the code such that it counts the occurrences of each shape and shows on the screen for example “Player 1 has diamond as the most occurred shape”.</p> <pre># Function to determine the most common shape for a player def most_common_shape(player_cards): shape_count = {'heart': 0, 'diamond': 0, 'spade': 0, 'club': 0} for card in player_cards: shape_count[card.shape] += 1</pre>	 <p>(When you click space the count starts and the text occurs showing the most occurred shape)</p>
Display Prompt	<p>I connected a shape and a prompt so according to the most occurred shape for a player, they receive the prompt. During this time, I wanted the cards to flip and disappear making the screen white so that is something I included in the code. In the beginning while adding images (loading images), I already wrote the code for these prompt images as well so now I just mentioned them in the code. I also included the width and height of the prompt images in the screen after checking which is suitable and most elegant and visible.</p> <pre># Function to display prompts and hide cards usage def display_prompt(cards): for player_cards in cards: for card in player_cards: card.flip() # Hide cards screen.fill(WHITE) # Clear the screen prompt_images = [heart_prompt_image, diamond_prompt_image, spade_prompt_image, club_prompt_image] for prompt_image in prompt_images: screen.blit(prompt_image, dest=(screen_width // 2 - prompt_image.get_width() // 2, screen_height // 2 - prompt_image.get_height() // 2))</pre>	 <p>Likewise it appears for all players (4) one by one after you click space key)</p>
Display Timer	<p>Immediately after one by one the prompts are shown to each group or player, the timer starts for 10 minutes on the screen through the code that I have initiated. Once again, I included in the code to make the prompts disappear filling out the screen white and it renders the timer text in the center of the screen. It has to keep running so I included a line in my code for it to keep updating the display.</p> <pre># Function to display timer usage def display_timer(): screen.fill(WHITE) font = pygame.font.Font(name: None, size: 72) timer_text = "timer: 10:00" text = font.render(timer_text, antialias: True, BLACK) text_rect = text.get_rect(center=(screen_width // 2, screen_height // 2)) screen.blit(text, text_rect) pygame.display.flip()</pre>	 <p>(when space key is pressed, the timer starts and keeps updating display to keep running)</p>

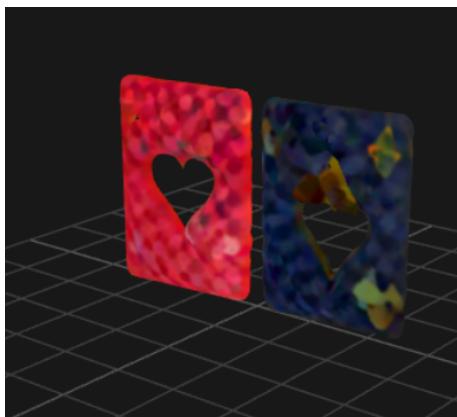
Technical skill 3 - 3D modeling: I used a software called Blender to make a 3D visual layout of the cards and to create them - incorporating color, texture, shapes etc. Although I used this technical skill to create the whole 3D structure of all cards, I have shown the subskills under this technical skill only for the one card of the game, which shows all the technical skills I have used under 3D modeling and its application. The table below shows the details of the editing tools used, their application, along with evidence of images and explanation.

Name of the tool	Before editing	Editing process + output	Explanation (purpose and how the process world)
Scale			The default cube is shown on the left. To make a card, the width must be reduced and the height must be extended. The result is a thin cuboid. I used the editing option of scale, where I reduced the scale X to 0.09 (width) and increased the scale Y to 1.0 (height).
Rotate			The shape of the card needs to be orientated properly, for which it needs to be titled along the x-axis. For this I used the rotate tool and checked at which degree it is convenient. Now the thin cuboid is in the position of a card and now ready to get designed further.
Base Color			The shape needed color because without it, it would look plain and not attract the audience to play the game. You can see on the left that I changed the color into right. For this to occur, I had to select the cuboid's materials where you can change the texture, color etc.
Gradient (lighter tone)		(gradient changed) 	I need to add a shape or design something on the inside of the card to differentiate between the four cards that I mentioned in my plan. For the shape/design to be visible, the gradient of the color used must be lighter toned. Therefore I did this using the gradient tool to change "px's"

Outline + cut			As I mentioned earlier, to design the shape I discovered a tool that aided in making the process simpler. I used an outline tool, where I drew the shapes I wanted cut in the thin cuboid and the software cut it creating a void like black space. (The drawing process of outlining is shown to the left)
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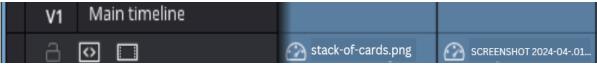
Though I showed the above editing tools under this technical skill for only one card (a part of the game creation), this is the final game 3D visual layout of all components included:

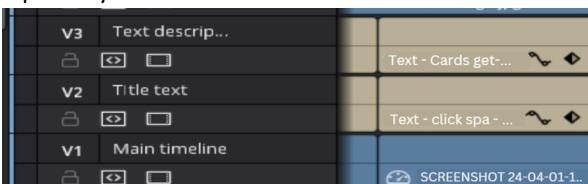
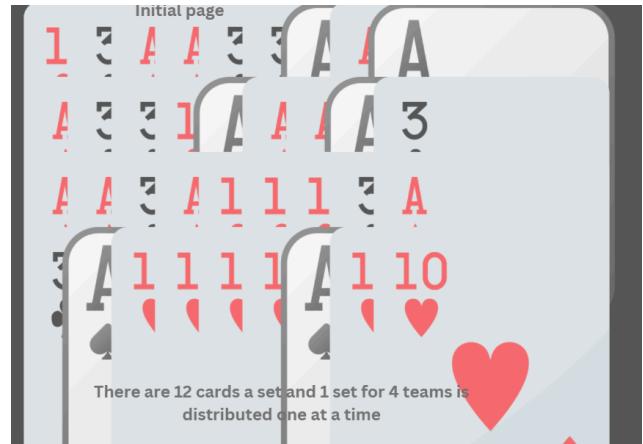
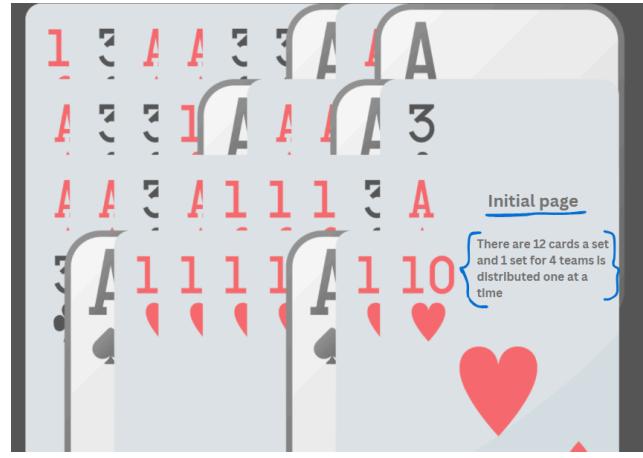
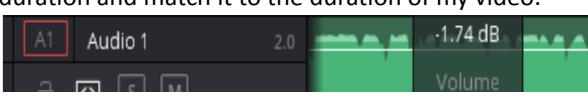
I did material shading also to finally get this output. I added various textures by using many material editing tools and they are listed below:



- **Musgrave Texture:** I wanted the visual to look very realistic and this texture made it look realistic.
- **Noise Texture:** This adds a layer of unevenness to the surface which changes the way we perceive it to interact
- **Wavy Texture:** After incorporating the noise texture, the color did not seem organized, therefore this texture made the color spread out evenly creating a shade across the material.
- **Map Range:** This tool was to combine all the above textures together.
- **Bump:** Even though we used noise texture, to make it more natural I used this tool as well.

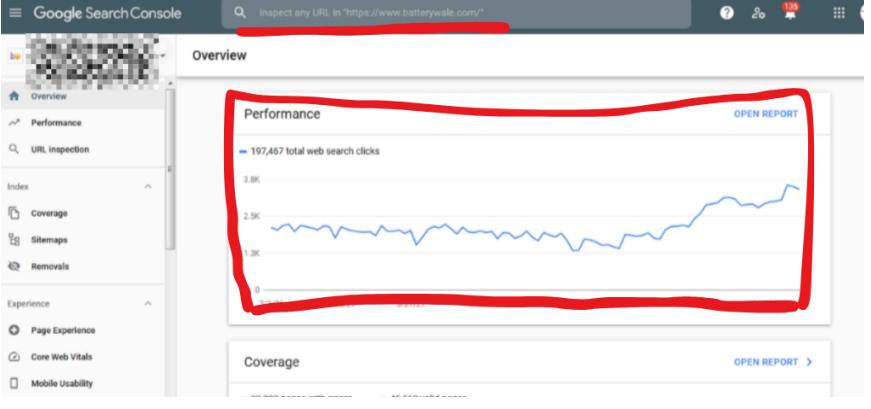
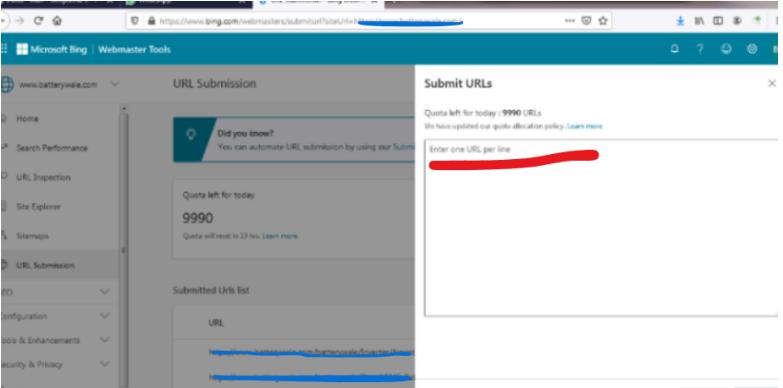
Technical skill 4 - Video Editing: Video editing was used to create the game play video and to make it easier for the audience to understand how to play the game by showing them clips of the demo game. I did this through a software known as DaVinci Resolve and in the table below I show all the video editing features that I learnt and incorporated and a small description of how it works. You can also see the progress of my technical skills through the output I received - which is added in the table. However this skill was very basic, only incorporating a few features that made it easier for the audience to make sense of the game.

Feature	Explanation of how it works	Output
Timeline Sequencing	Within a single timeline, there are several different content elements that are inserted. To add their position onto the timeline in an appropriate order, I need to sequence them accordingly so that my video is well organized and has a good flow with which the target audience is able to interpret. 	(There is no concrete output of this step, since the video is still being put together and this step is only in charge of sequencing the elements of the video, so it can't be shown in the form of an image)

Adding text	<p>To add text alongside the video, I need to create a separate timeline for the texts, so that they appear on the screen in front of the visual content and not separately.</p> 	 <p>As you can see the text is added for this image part of the video for a specific amount of seconds and then it will disappear when another image comes as new text will be added for that duration of the video.</p>
Content alignment	 <p>After adding the text, I need to ensure that the text can be viewed easily without obstructing the main content of the video. To do so, I used position vectors to edit the position of different elements and align them accordingly.</p>	 <p>As you can see in the image, you can see the difference from the previous step. This adds more visibility by putting the side in the text. With the header at the top and caption below it.</p>
Editing the audio	<p>I had chosen to add background music to my video to appeal to the audience. However while inserting the audio I felt it too loud and did not match the video duration as well, so I first changed the decibel level of the audio and then used audio merging tool to perfectly be in tune with the video by extending its duration and match it to the duration of my video.</p> 	<p>(This step effects the audio of the video and does not have any output that can be displayed visually)</p>

Technical skill 5 - SEO (search engine optimization): This was used to maximize the number of users/target audience to my website by ensuring that the site appears high or first on the list of results provided by search engines in different browsers. I did it for Google search and Bing search in softwares known as Google Search console and Bing Webmaster respectively and I am going to exhibit the tools I used in the table below:

Name of the tool	Evidence (image)	Explanation (the purpose of the tool)
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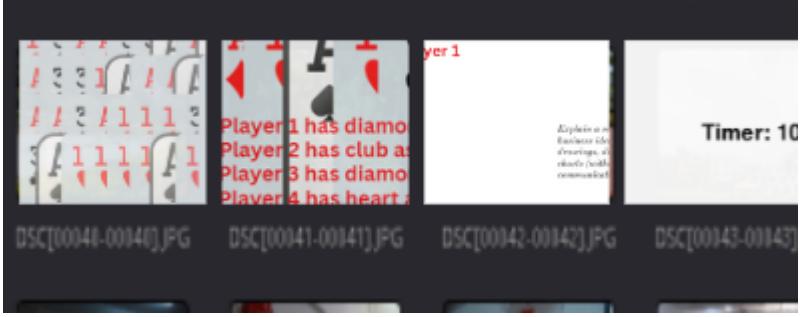
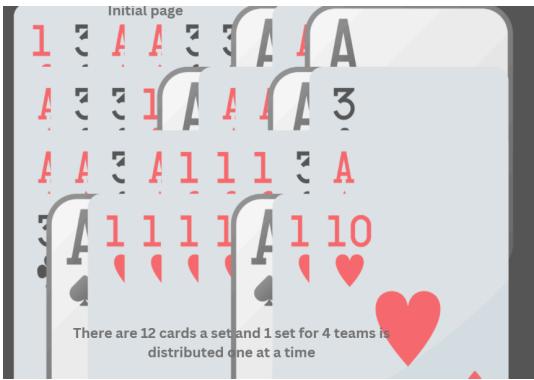
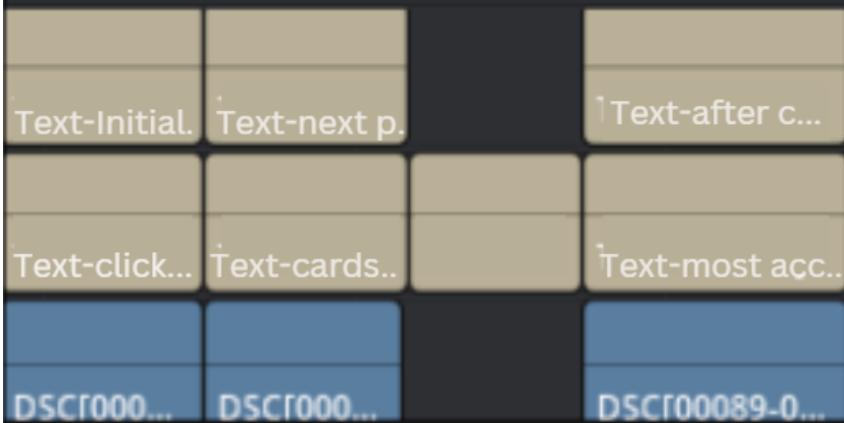
Keyword ranking	 <p>(The above is what I mean by which page number and for position you will have to count up in that specific page which number your website shows from the top)</p>	For the tools I will be using in my discussion in the next few columns, this is the first step that is very necessary to understand. You search the internet for a keyword and record which page and position your website appears on. Based on that you can focus on submitting links in the next few columns more for those keywords that your website is lacking in showing up.
Submission of links		I submit my different website page links on a regular basis on Google Search Console to make my website more visible for my target audience. I have highlighted with red the part where you submit your URL after which you can press on 'Request URL'. This is a database in which you can also monitor the number of views of my target audience which is seen by the graph in the image to the left. This does have a specific number of links you can submit a day.
Submission of links (for different browser)		This is also a tool for the same purpose as above. However this is for my website to be more visible to my target audience in another browser (Bing). This software is known as Bing Webmaster. The highlighted red part is where I submit my different website pages links and all at once submit when the request for all them go at once. However, unlike the previous one, being a webmaster does not limit your number of links though.

Strand iii): Follow the Plan to Create the Solution

Log of the updates on my product:

Task	Date Completed	Evidence
Creating Website		

Create the design layout of the website (font, background color etc)	15th January	<h2>About this website</h2>
Add title and introduction text for the website	17th January	<p style="text-align: center;"> BridgeTheGap Home Page  </p>
Add rest of the information	18th January	<p style="text-align: center;"> BridgeTheGap Home Page  </p> <p>What is a multigenerational workforce? A multigenerational workforce is one in which the employees span different generations. There are now five generations in the workforce simultaneously (Gen Z, millennials, Gen X, baby boomers and some members of the silent generation still working in their late 70s and early 80s) – a first in modern history.</p> <p style="text-align: center;">Best Solution for Engaging a Multigenerational Workforce!</p>
Create a sub-page for game corner and start developing code for game according to the 3D model	18th January	<p>Code for the game shown above and how it has turned out is also shown in the technical skills, therefore, in this step I will be adding the game to a website page/corner.</p> <p style="text-align: center;"><u>Open the link and immerse in the team-building game</u></p> <p style="text-align: center;"><u>Link = https://BridgeTheGap_gamepage.com</u></p>
Add the link of gameplay video once done (how to play the game video)	20th January	<p style="text-align: center;"><u>GamePlay Video Provided Below!</u></p>  <p style="text-align: right;">(using the iframe tag that I mentioned)</p>
Test the game and	20th January	(the output of testing cannot be shown, however it worked properly and loaded properly without any glitches when I opened in browser)
Make necessary changes and publish the website	21st January	
Creation of Video (GamePlay/how to play)		

Using the finalized website, take screen recordings of different clips of the game	21st January	 <p>DSC0040-00140.JPG DSC0041-00141.JPG DSC0042-00142.JPG DSC0043-00143.JPG</p> <p>Timer: 10 Expires in 10 minutes You have 10 minutes to complete this round.</p>
Select and compile the videos that will be used in the final video	24th January	 <p>DSC0069-000... DSC00101-001... DSC0079-0007... DSC0080-0008... DSC0075-0...</p>
Edit the video (adding text in necessary places) and make it into one	24th January	 <p>Initial page There are 12 cards a set and 1 set for 4 teams is distributed one at a time</p>
Review the video and make sure it runs smoothly	25th January	 <p>Text-Initial Text-next p. Text-after c... Text-click... Text-cards.. Text-most acc.. DSC000... DSC000... DSC00089-0...</p>
Make necessary edits	25th January	N.A (there was no particular output from this step, only some minor changes were made to the video)
Download and publish the video in the website (in the game corner section)	26th January	 <p>① Unlisted Copyright +1 more 12.01.2024 updated 6 0</p>

Strand iv): Fully justify changes made to the chosen design and plan when making the solution.

List of all the changes I made to the design based on the final presentation and description of product given in Criterion B strand 4 (to seek evidence of changes made, refer to appendix 1.1)

Original Plan	Change	Justification
The demo video duration was supposed to be 4-5 minutes	However, the video duration is 4:15 seconds	After including all the content and merging the clips, the length came upto 2 min 40 seconds. Instead of unnecessarily elongating the video, I decided to stick with this timing since the content was crisp and close to my set time.
The video was supposed to have timestamps	The video has no timestamps.	Though when I was editing, I was able to add timestamps, however when I downloaded the video to upload in W3 schools, those timestamps did not show up. Because my video was a continuation and did not have many separate parts, so I decided to go ahead with it as it did not hinder the process of conveying the effective demo game play,
The main heading text was supposed to have a lighter shade of gray and not be very bold.	The main heading text was made bold.	The main heading needs to be catchy and seen to attract the audience. But the problem with my initial plan was that the light shade of color was not visible as the background image was bold. So I had to make my text bold to make it stand out despite the bold background.
The image itself was supposed to be aligned to the right, left or center.	The image is added as background	To bring a better aesthetic appeal, I organized the image as the background to bring more impact on the audience. I blurred it a little for the text also to be clear. However, only one image is set as the background and the rest of the images are put underneath separately in other sections.
3D modeling of the whole game visual	3D modeling only used for creation of cards - a key visual of the game.	The main reason for me to do 3D modeling for the game layout was to make it easier for visualizing and creating the actual game. However, when I was simultaneously coding for the game it was easy for me to visualize all aspects except the cards. Therefore I decided to buy only the cards, which also saved my time.

Changes I made to my timeline (based on plan which I created in Criterion C strand 1):

Step	Planned	Completed	Justification
Modeling the cards for all screen devices (phone, ipad and computer)	14th January	16 January	I was contemplating whether to do designs for all and evaluating whether it would make a difference as it was very time consuming. But if the size of the cards was the same for all devices, it hindered the look and layout in different devices. Therefore, I concluded that it was mandatory and ensured to create for all of them which took time.
Coding for the game using HTML,	18th January	20th January	The delay was due to the delay in the previous step. I also needed some extra time to learn all the codes as they were quite difficult to implement for video

CSS and JavaScript			game creation.
Add the information in the website	18th January	16th January	The website was something I worked on in the first place. The information to add to the website was already curated in a separate document long back so it was easy to just add in.

CRITERION D: EVALUATING

Strand i): Design detailed and relevant testing methods, which generate data, to measure the success of the solution:

To test the success of my product based on various different aspects of the product, I have decided to use a combination of several different methods. This will help me critically evaluate my product based on the specification and success criteria (that I had created earlier in Criterion B Strand 1). This would help me understand how well I was able to carry out my initial plans, and how impactful the changes I made to the product was on the overall success of my product.

Testing method 1: Expert Appraisal

An expert appraisal will help me gain some valuable information and inputs regarding my product from a person who has experience or worked in the field that is related to my product or product content. In this field, the perspective of the expert becomes very crucial because they know the target audience really well as they would have interacted with them previously during the period of their professional career. They will also know the market containing similar products like mine, so they can compare and give feedback with respect to the market. These are some questions that I will ask the expert to collect relevant information, and extra inputs on how I can take the product forward:

Question	Objective
What are your first impressions on the product?	- To understand how they felt looking at it the first time. This gives an understanding of how the audience would also feel in a one time visit and their basic views on the product.
Does the aesthetics of the website pertain to all generations in the workforce?	- Since my solution targets different generations and solves communication gaps between them, this is a crucial factor in determining whether it is mitigating this issue or giving rise to more divides between them.
How does the product compare to other existing products in the market that addresses the similar issue?	- An experienced person in this field would know all possible products that address this issue. They can compare with my product and give suggestions to make it a better fit at addressing the issue by incorporating some key features
Do you think the game play video effectively reaches the audience - the instructions that need to be conveyed?	- Through this, I will be able to evaluate if the message through the video was clear and crisp for my target audience to understand. Because, without this video my product would be able to efficiently get
What do you think can be improved in this product that makes it a better fit for the target audience and more efficiently solves their problem?	To determine the possible extensions that the product holds which can be added in the future
What value does the 3D model add to the product?	To understand the relevance of this component
Do you think this solution is practical to implement in large scale organizations?	To identify the number of target audience I can reach through my product. Especially in organizations, where there are large numbers of employees, this helps us see if everyone is able to adapt to it.
According to you, what are the standout features of this product?	To evaluate what the product is appreciated for and the success of the product

Alongside these questions, I will also request the expert to critically evaluate my product based on the specifications and success criteria that I will provide. The expert that I will be consulting for this appraisal is a counselor to understand the behavior due to generational gaps and how my product will have an impact on the change of their adaptability of the behavior. I think a counselor would better know human behavior of interactions within dissimilar people, therefore I decided to consult the counselor for one of the expert opinions.

Expert Appraisal 2 -

In addition to an expert appraisal from the perspective of a counselor, I also want to get an expert opinion on the technical side of the product. The technical expert could give me advice on specific aspects of the product itself such as quality, functionality, reach which all fall under the category of web development rather than impact on audience aspect. It is also more beneficial to add two expert appraisals as it will help me cover a wider range of aspects of the product and its specification by utilizing their expertise in respective fields respectively. Like the above, even for my second expert appraisal, I formulated questions that I will ask to collect relevant information and extra insights on how I can take this product forward:

Question	Objective
Describe your initial thoughts on the platform?	To determine the overall opinion of the platform and how they felt it different from already existing platforms addressing a similar issue.
Is the chat application (AI bot as a helper to tour the website) simulation like a real human interaction experience? Is it smooth with replies?	To evaluate if this feature runs smoothly without interruptions to enhance the likewise human interaction experience set up to be given to the target audience.
Share your thoughts on the softwares utilized to produce the end product?	To understand, the softwares I have used are the right choice and the most efficient one. I can also ensure to discuss softwares mostly used today to be more up to the market standards.
Does the 3D modeling interpret the product accurately and how could I make it more realistic?	To check whether the 3D modeling of my product is efficient in conveying how you will be involved in the product to resolve the issue. I can also identify key features in 3d modeling that make it look more realistic.
Does the website direct smoothly, without buffering, to external links provided?	Since my product has a lot of external links for viewing game play video, 3d modeling layout etc, I wanted to understand whether there is smooth direction to the page without interruptions and how I can rectify if there are any.
What technical features of my platform do you think could have been improved?	To understand the areas of improvement which could be worked upon in the future.
Do you have any other feedback?	To obtain further feedback on my product.

In accordance with the interview process of the first expert, I will also ask my 2nd expert to evaluate my platform on the basis of other criterions too that include safety, material, size, aesthetics and environment to ensure the success of the product.

Testing method 2: Performance test

It is important for me to check how my website functions because through this I can ensure it is easy for my target audience to make use of and they get the most out of it. To do this I will run some tests to see how the website performs. I have created a table below that lists the different performance tests I will conduct to ensure optimal operation and seamless user experience. To make sure that this is reliable without any impartial value, I will test this multiple times on different devices and take an average value of both.

Test	Purpose
Search the domain link in the homepage of different browsers and	Finding out time taken for the homepage website to load

measure the amount of time taken for the content to load on screen. (quantitative)	
Open the chat application, pose a query and observe the time taken for the server to start and respond to the query. (quantitative)	Finding out time taken for the server to start once the homepage has loaded and how long the chatbot takes to interpret the target audience's question and responds
Look at the responses given by the chat bot, and note any false information provided or flaws encountered. (qualitative)	Recording the false information provided to chatbot and to rectify and change to accurate information
Open the video, check for subtitles availability and other options of speed etc and evaluate the flaws and errors. (qualitative)	Checking to what extent the features of the video are reliable

During this test, I am assuming that all the users have proper internet connectivity while carrying out these tests. However it is important to understand that it might hinder the accuracy of the results if some users do not have proper internet connectivity.

Testing method 3: User Observation To calculate the success of my product in the market and ensure customer/set target audience's satisfaction, it is crucial for me to address and understand the user's perspective. I have created a table that lists all the questions that I will be asking the intended audience for this purpose:

Question	Purpose
Is the design of the website appealing and will you communicate about the website to your friends and family?	To understand if the users like the appearance due to which they will spread more awareness of the platform.
Is the organization of the website's sections, information and features good?	To determine whether the navigation of sections was easy, the information was placed in a sequence without confusing the audience. Also whether the overall selected design concept was appropriate.
Have you run into any issues while getting a tour of the website using the chatbot application?	To understand if their experience is hindered due to the feature or it works properly.
Could you easily understand the video created or which part did you find difficulty in understanding if you did face difficulty?	To understand if they could understand the video and make sense of it also by making connections to the overall platform.
Do you like the idea and to what extent do you think it will help be beneficial in facilitating communication between generations?	To see whether people genuinely support the concept of my product and what is their opinion on the success rate to address the issue.
Do you have any more feedback?	To receive further feedback on the platform.

Success criteria and design specification connection to the evaluation methods listed above:

The table below highlights how my testing process are structured to meet all of my requirements:

Method of testing	Aspect of the specification that is covered
2 expert appraisals	This covers all aspects (expert appraisal one focus on: customer, aesthetics) (expert appraisal two focus on: material and function also)
Performance test	Covers mostly the function
User observation	Covers customer, aesthetics, customer

Strand ii): Critically evaluate the success of the solution against the design specification:

Expert 1 provides an evaluation and the following table describes my expert's replies to the questionnaire:

What are your first impressions on the product?

The expert mentioned some points they were impressed about with respect to the product:

1. Aesthetics: I liked the design, it was simplistic yet aesthetically pleasing. The implementation of colors also played a role in making it more enjoyable to look at
2. Purpose and Idea: The idea of this platform is very innovative and unique making it stand out to the global market. The incorporation of a game in a website is very intriguing to the audience (creates a lighter tone while addressing the issue) which makes them immediately want to try and inform about the same.

Does the aesthetics of the website pertain to all generations in the workforce?

Answer: Yes, being able to ensure that aesthetics of the product pertains to all generations is crucial to cater to all their needs and the website and game does a good job in doing so. It has minimalist and simple usage of colors pleasing to the eyes of older generations and for today's generations to make it seem more like a free space with less text and more aesthetic images.

How does the product compare to other existing products in the market that addresses the similar issue?

Answer: I feel this platform is very unique in several ways compared to other platforms that address a similar issue. Other attempts to mitigate the issue were done physical and not virtual, therefore I think this product is more beneficial as technology is one of the huge components that brings differences, so through this itself you are ensuring the older generation is adapting. Even though virtual, it gives a lot of communication style options to work on the prompts provided by the game like chat application is the game, video call application the game, which other products in the market I have not seen so far.

Do you think the game play video effectively reaches the audience - the instructions that need to be conveyed?

Ans: There are certain features you have incorporated in the video development which makes the content easily conveyed and sets the mood making us evaluate the issue presented and they are as follows:

1. Background music: such a serene tone creates an impact on the audience and motivates them to try the game for mitigating the issue and fostering positive change
2. Subtitles: it is human tendency to sometimes procrastinate during a video but the subtitles included gives them more concentration directing them forward
3. Sequencing: the video is sequenced properly without clips here and there messed up. Since it is more organized the content is reached more effectively to the audience

What do you think can be improved in this product that makes it a better fit for the target audience and more efficiently solves their problem?

(I received an answer to this question that was very well closely interlinked with the second last question so I clubbed them and provided their answer in the second last column)

What value does the 3D model add to the product?

Ans: The 3d model clearly was able to engage the viewers and make them visualize the game better compared to if it was a 2d representation. It enhances user experience by evoking stronger connections due to which the organization is more drawn or compelled to initiate this strategy into their organization.

Do you think this solution is practical to implement in large scale organizations?

According to the expert In large scale organizations there might be other gaps between individuals itself due to their personal choices so this product is only partially helping foster communication. The below is the improvement that the expert has suggested as part of question 5. Improvement (Ans):The crucial aspect in influencing communication even more and breaking other stereotypes that might also exist among individuals lies in the designing of these prompts. I think you can think about prompts that also focus on mitigating cultural gaps or gender gaps while working together within the large scale organization.

Do you have any other feedback?

Answer: Not really.

Evidence for the above responses and for the below as well: the expert sent their responses via an email (Refer to appendix 1.2)

However, I also asked the expert to provide feedback on the product based on specific criteria related to its specifications and success. The below is what I received:

The criterion	Received feedback from expert;
Aesthetics	If we are talking about the platform's look and how appealing it is to the audience, it is very appealing particularly the organization of the design, background images and color palette chosen. It sets a positive mood in the audience to bring positive change for better collaboration.
Customer	If I look at the specifications then I think the product meets the specifications perfectly as it is very detailed. However, the improvement for making it more influential in large scale organizations could be established further.

Conclusion from the expert appraisal 1: I received significant positive feedback about my product's purpose, originality and effect on specific target audience. According to the expert, the prompts were effective as it helped stimulate communication while adapting to various generations' communication preferences. However, the expert suggested that I look at making it more broad by designing prompts in such a way that I can reduce other stereotypes that exist within organizations like cultural or gender etc. Overall, my product was well received in terms of its aesthetics too that set the right mood for the target audience.

Expert 2 provided an evaluation, The following table describes my expert's replies to the questionnaire:

Describe your initial thoughts on the platform?

Ans: I have a favorable opinion on this platform since I foresee that the issue it is targeting could arise more often in the future and it is a very innovative idea to implement. It fosters diversity and effective communication which is the main agenda in organizations to bring forth achievements.

Is the chat application (AI bot as a helper to tour the website) simulation like a real human interaction experience? Is it smooth with replies?

Ans: Absolutely, yes, in my opinion, the chat application is able to replace or stimulate real human interaction experience while giving the tour of the platform. The chatbot response is very human like making us connect even more and the speed of the replies are also quite good. Making it similar to a human interaction can score beneficial due to the issue we are tackling. The preference of humanlike experience and for today's techies, they are both comfortable in adapting to each respectively.

Share your thoughts on the softwares utilized to produce the end product?

Ans: According to my past understanding, the languages used (HTML, CSS, Javascript and Python) are widely used and widely available which indicates that it is not difficult to get help or resources, putting these languages in a favorable position. Moreover HTML and CSS are widely used in the creation of websites, python programming language is also widely used for chat applications (chatbot). Python has a variety of frameworks that can be used to make programming easier. So altogether, a decent collection of technologies was employed to build the platform.

Does the 3D modeling interpret the product accurately and how could I make it more realistic?

(expert shown my brainstorming and process for 3d modeling)

Ans: Comparing to a 2d representation itself portrays that 3d modeling is more accurate and realistic. It was a good initial step to collect reference images related to your product, due to that you were able to correctly interpret the realistic details and textures. However, a recommendation would be to consider animations or interactive elements to the 3d model which could also demonstrate the product functionality, adding a layer of realism.

Does the website direct smoothly, without buffering, to external links provided?

Ans: Even though the links clicked on in the platform were directed to the relevant and accurate page, the page load speed time was more - making the first visitors to the platform wait for longer and lose their trust on the ability of this platform created. I also tried in different browsers and it was faster in Bing than Google Chrome though Google Chrome is more widely used across.

What technical features of my platform do you think could have been improved?

I especially liked the customizable options that are recommended. For example the target audience can tailor the product to their preferences including themes, or user profiles. As per today's evolving world in the field of technology, I like the incorporation of Machine learning and AI integration. It enhances your product making the interaction seem humanlike and real time.

Do you have any other feedback?

As it is for large scale organizations and trillions of employees, you should definitely include user-friendly and security measures to ensure privacy for all individuals and mitigate any chances possible for data breach. Since there are many chat applications in the website as well as in the game, you should also take measures in the platform that prohibits users from usage of inappropriate language.

Evidence: The expert provided the answers to the questions above via mail (refer to appendix 1.3), In addition to overall feedback, given below is the specification and success criteria based feedback for the product given by the expert. The above questions were long answers as it needed detailed evaluation so I asked the expert to send via mail however for specification and success criteria based feedback as it is very short and brief, I took down notes while the expert I surveyed answered looking at the success criteria on my computer screen.

- For customer and function, I have provided the expert with a few examples of the prompts that are already present in the game and few that will be incorporated in the future.
- For the expert to analyze the material, I have provided the expert with all the softwares that I have used, also giving a brief about my technical skills.

Notes taken from feedback given by expert 2.	
CRITERIA	RECEIVED FEEDBACK FROM EXPERT
customer	<ul style="list-style-type: none"> - There is no bias present in the technology as it is generating prompts that address all communication preferences and gives equal preference to each.
Function	<ul style="list-style-type: none"> - The prompts are effective and can be easily interpreted with accuracy. - It does not have any grammatical or syntax errors to hinder understanding.
Material	<ul style="list-style-type: none"> - The content on the website is of great quality (including video game and game play video). - You have done coding, however to be more aware of today's tech, you could have used draggable coder.

(The above is another reason I did this part oral survey because I had to provide the expert with all this information and it was more convenient to do so in my screen in itself)

Evidence gathered through user observations (For evidence refer to appendix 1.4)

A google form was used to collect the user's comments. The users answered all the questions I specified in Criterion Di

Conclusion: After conducting a survey through a google form asking my target audience the questions, I got an overall quite positive feedback. In terms of aesthetics and design the median score was 8.3 out of 10 which is pretty impressive, in terms of organization of content and features 68.2 + 17.6 % of the people likes it, for the ease of use and accessibility the median was 8.2 out of 10 which was also quite high, and the median value for the overall concept, idea and originality was 9.2 out of 10 at the highest. This shows that the overall idea and implementation of the platform was done well. In terms of errors or buffers, 17.6 % of the people found issues in getting

directed to external links and when I further reached out to them regarding the issues I found they faced issues like when clicked on the link it would say does not exist or stay on the same page. To improve this I even received ideas from expert 2 when I had a discussion as it was related to technical functionality. As the expert was aware of one of my technical skills being SEO (search engine optimization), there was a suggestion to improve this by rectifying links on page through Google Search Console software (that I am acquainted with as I performed SEO in the same software).

Performance test results: A performance chart of my product based on my experiments is shown below:

On Google Chrome Browser				
Test Type	Trial 1	Trial 2	Trial 3	Avg.
Homepage website loading speed	3.41 seconds	2.37 seconds	2.25 seconds	2.67 seconds
Chatbot response time	5.12 seconds	5.22 seconds	4.49 seconds	4.94 seconds

Reliability: I posed the same query/question in all 3 trials and all to both the browsers.

On Microsoft Bing Browser				
Test Type	Trial 1	Trial 2	Trial 3	Avg.
Homepage website loading speed	2.19 seconds	2.11 seconds	1.99 seconds	2.09 seconds
Chatbot response time	5.16 seconds	5.12 seconds	4.86 seconds	5.05 seconds

Accuracy: As it is seconds, the reaction time of me stopping the online stopwatch might hinder the data collected.

Conclusion: I conducted the performance test on 2 browsers, one Google Chrome and the other was Microsoft Bing. The homepage website loaded faster on Microsoft Bing compared to Google Chrome, however it was the opposite with the chatbot response time where it was faster in Google Chrome compared to Microsoft Bing. The difference for the chatbot response between the 2 browsers was a very slight change.

Executive summary of my findings (based on my specifications):

The aspect	Rating system out of 10
Aesthetics	8.5 out of 10 - My platform as a whole followed the specifications to a great extent concerning the design, font type, and color choosing. In the user observation , the users majorly liked the design and aesthetics while my experts felt there is still scope in terms of making the 3d design more realistic but this is only a part of what the website includes.
Customer	7 out of 10 - The product has been made for the specific target audience and includes features and content accordingly. Few of the users in my survey and experts made some remarks about how the content written would not be enough for first timers and very less information to spread awareness itself about the issue. Therefore, I feel this specification has been partially met with scope of improvement.
Safety	5 out of 10 - Since the product has a lot of chat applications, I did ensure to keep systems in place that discourage inappropriate language but through my performance tests I understood I need to advance my chat applications and train it to identify inappropriate language further. Whereas from my expert opinions , I also need to apply measures to my platform that mitigate the chances of data breach while making user profiles and provide more confidentiality.
Size	10 out of 10 - As confirmed through all tests (user, performance and expert), I was able to identify that the size of the website in different devices was appropriate without disrupting the organization. According to the expert, since there are many servers there won't be a lot of buffering as well due to our target audience being large scale.
Function	8 out of 10 - The specifications have been majorly met. The chat applications work properly with smooth responses and humanlike interaction. Even during user trials , all users were able to understand different prompts shown to them that will be generated in the game. However, some users experienced issues while clicking on external links provided in the website which could also be hindered due to internet availability.
Material	9 out of 20 - I have met the specifications for material used entirely. As stated by my expert 2 , the coding languages used are most common and widely used across so easier to find resources as well and will be more willing to the global market. But there sure was a suggestion of how I could have used dragable code options as it is becoming more familiar these days. It would also help in time management.

Strand iii): Explain how the Solution Could be Improved

Based on the evaluation of the product I received from my experts, my performance test and user observations I was able to find a good number of areas advantages and limitations present in my platform. The advantages were the main strengths of my product which received good feedback and weaknesses that needed some improvement to make the platform address the problem statement more effectively. I collated all information and created a table present below that mentions the areas of improvement and how they can be implemented when the product is worked upon in the future:

Drawbacks	Advancement	Execution
The homepage website does not have sufficient content for first timers so the functionality and the purpose would not be clear rather very confusing.	I could add some more information on why this strategy is important and give a brief about the problem that exists and what we are tackling. Also a lot of data and statistics can be added that supports that the problem exists.	I could get some statistics and census data through secondary sources or through primary sources I could ask a few of my target audience (surveys).
The chat application cannot identify	I could add certain measures that would	In my database for making the chatbot, I need to

inappropriate language to discourage the users from it making it not a user-friendly environment.	ensure at any cost that the chat applications get blocked while using inappropriate language.	add more information specifying common inappropriate terminologies commonly used so using the database the chatbot becomes more user friendly. I do this using the python database that I saved previously.
For the game, one of the communication styles is a video call. It relies on a 3rd party application called Zoom to host these calls.	I could make my own meeting application similar to Zoom but customized for my platform only.	I can use frameworks like webRTC and socket.io to create the meeting application similar to zoom where the main language will be JavaScript. \
The video of instructions on how to play the game is included in the website, however the audience once in the game page won't come back to refer and get confused.	I could make a tutorial or atleast instead of a video just instructions at least at the beginning of the game so that it is easier for them to access.	This advancement implementation includes editing my code once again after understanding. Since I just want to include instructions and not the video, before the game begins, I will have a screen displaying step by step instructions. I will use the functions of "click or enter" to move to the next instruction.

In contrast to correcting the flaws, I noted other areas of improvement in my product review. These were not necessarily flaws, but I considered that integrating these suggestions would improve the product even more. The table below summarizes these enhancements and how they can be included into my product.

Improvement	Implementation
Create a name and logo for my chatbot that will be added as a tiny icon to enhance my platform further into being more professional.	I could use Adobe Photoshop tool to create my design of the icon and I could learn to use the application from a Udemy Course. In the further years of improving my product, I could keep having updates to my chatbots like versions of it with different icons as well.
Instead of keeping a timer separately for suggested time, I could create a stopwatch popup during the game itself.	I can use w3schools to learn how to create a stopwatch application using JavaScript and the window.setInterval() method.
Adding sound effects for card flipping, timer countdown and overall serene music that can ensure more concentration for employees while working on the prompt given by the game. This will add more points for my aesthetics criteria.	I would start this by researching sounds that build more concentration to the mind. Then I will need to learn how to incorporate music into my codes. I can use software audacity to download music for codes and then use the "Load sound effects" function in Pycharm to apply it.
Add a scoring system in my game for players to compete that increases the chances of groups wanting to work together to get rewards.	I will have to learn other functions and codes using a course for python or pygame, and this will help me enhance my code such that these functions are also included.

Strand iv): Explain the impact of the solution on the client/target audience:

The intended purpose of my product is to provide an online platform for employees in corporate organizations to address their generational preference differences in terms of communication styles. I started by understanding that I have a clear need for such a product in the market because the graphs have shown inefficiencies and lack of success for organizations due to employee conflict, the key reason being - generational misunderstanding. I assume that my platform will help these employees to build a better relationship and communicate better by doing conflict resolution prompts or collaborative prompts. This can be implemented in organizations free of cost to reduce the costs of future inefficiencies and lack of success while working on projects.

My platform is currently available on the internet and has been receiving quite positive feedback both from the experts as well as the users (target audience). When I conducted a survey with my users **81.8% of the users felt that the tools and the functionalities present would be useful for the problem** that they face and they also loved the idea and concept of a 2D game format for the prompts generator. Taking into account, my expert appraisals, my expert 1 mentioned "I feel this platform is unique in several ways compared to other platforms which are just about creating awareness", whereas my expert 2 mentioned "I feel this platform fulfills current market requirements because the softwares and technologies used is up to today". Based on this feedback I could conclude that my platform has been successful in solving the problem for the intended audience to a large extent.

The product did have some **limitations** as well. Though it has good load speed in the browser. Although there was good page load speed in Google, it was very slow in the browser Bing. My platform is also not available for users who use MacOs as it is only for Windows, therefore does not work in browser Safari as well. I researched and concluded that 69.71 users in the world are users of Safari which hinders the overall reach of my product. As a result, it **limits the positive influence that my product may have**.

In addition to that, after going through all the feedback, I have concluded that my specifications and objectives which I had set for my platform previously have been achieved including my design brief and success criteria. The criteria has been achieved to a great extent and they include and not limited to:

- Creating a game enabling all decided communication tools in the platform
- Creating a homepage website that provides access and links to other applications
- Creating a video for my target audience to easily interpret how to play the game
- Making the platform available across the world and ensuring access through a domain free of charge

By addressing all of the objectives, I was able to build an efficient solution that addresses the problem, as evidenced by the results of my user observations and expert appraisals.

Socially, my product has a profound impact. According to the Wipro corporate organization, generational gaps are the most leading factor of lack of collaboration and overall success. Few months ago, my dad had also told me that this issue persists with him in office and my brother also mentioned that this issue persists - both generations face a problem. As time passes this issue becomes more persistent and employees become more distant socially. Therefore I think my solution can allow them to mitigate this before there are more generations in the future and communicate more socially freely.

Economically, traditional training programs require significant time and resources to implement like for example instructor fees. Therefore, my platform is providing an opportunity for a cost-effective solution to participate in interactive exercises from anywhere with an internet connection. However, my product does not directly have an environmental benefit.

Organizations with this solution are able to now communicate with each other properly to come up with solutions together as an organization to mitigate the other environmental consequences that are present around the world.

In conclusion, after examining all the features and feedback I received for my product I can say that my product is a success as I crossed the **value I received for an 'excellent'** according to the grading system that I set when I made the success criteria. In the future, I would like to make improvements to my product during any break and furthermore. To make my code run faster without any glitches, I also want to make the code simpler by using **technologies that have been introduced today like drag and drop codes**. This would be a revolutionary **addon** as it reduces the glitch chances and lesser time to enhance the product. It will revolutionize the way in which employees interact with each other as well as with my platform to foster **adaptation** to preferences that different generations have (fostering long lasting relationships) and increasing the success among organizations.