

DIGITAL ASSIGNMENT - I

Winter Semester 2022-23

LAB

CBS3011--Usability Design of Software Applications
PARTHIBAN K

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REDESIGNING MS Teams APP

1. Introduction

Microsoft Teams is a collaboration and communication platform developed by Microsoft. It is designed to bring together all the people, conversations, and content in a single place to improve teamwork, communication, and productivity. Teams provides a single platform for teams to chat, hold video and audio meetings, share files and documents, and work together on projects. The platform integrates with other Microsoft 365 services, such as Exchange, SharePoint, and OneDrive, to provide a comprehensive solution for team collaboration. Teams is available on desktop and mobile devices, and it supports multiple languages and accessibility options to meet the diverse needs of users around the world. With Teams, teams can communicate in real-time through instant messaging, audio, and video calls. Teams also provides a range of collaboration tools, including file sharing, task management, and note-taking, to help teams work together on projects and tasks. The platform also supports integration with third-party apps and services, such as Trello, Asana, and Salesforce, to further enhance collaboration and productivity.

1.1. Purpose

Microsoft Teams is a universal communication and collaboration platform that combines persistent workplace chat, video meetings, file storage, and application integration. Having an excellent team space is key to being able to make creative decisions and communicate with one another. Shared workspace software makes this much easier to achieve, especially if a particular team is based in a very large company, has many remote employees, or is made up of a significant number of team members. The App is designed to get people to work more effectively together while making use of the integration of the other Microsoft 365 apps. This means you can do things like easily set up a meeting with calendars, create and share content, call team members easily and more

1.2. Document Conventions

The main motivation and purpose for us to choose this app for redesigning was to make the students handle hassle free. The existing features of the App are just informative and do not help the users in conducting any task end-to-end. So, our aim is to analyze the interface of Microsoft Teams and to plan how to make it user friendly. We will try to understand Teams and design an enhanced version of it while still sticking to their main goal. This will be our attempt at making Microsoft Teams a more interactive and intuitive platform.

The headings are of Times New Roman with size 18, sub-headings and the content of this document are written in Times New Roman with size 12

1.3. Intended Audience and Reading Suggestions

This layout version is supposed for Students. It is suggested that each one styles of customers must have interaction themselves in studying and apprehend everything. This file is supposed to be a useful resource in addition to requirement file for our involved project. It is written so that each one the stakeholders can recognise and apprehend it very well. University representatives, software program developers, college mentor, peers, they all can apprehend it.

The SRS about version 1.0 contains basic layout of the workflow and the methodologies to be adopted. The overview section of this document provides with the extent, scope and utility of this project.

The next phase of Overall Description additionally covers those components in detail, aside from offering with undertaking scheduling diagrams. The different sections of the SRS cover the inner interface necessities which could offer insights to the technical group carrying out evaluation and the non-useful necessities which are probably of assist to students, give up customers, and others who need to recognize the character of this undertaking.

1.4. Product Scope

The redesigning of MS Teams app is done to address few of the inabilities of the app. Some of which we would resolve are, to set reminder of meets and assignment, it would help students as there is no reminder for the team meets that are Scheduled and it gets confusing sometimes to figure out which team. Removing

2. Objective

The objective of redesigning the Microsoft Teams app is to improve its overall user experience, to make it more intuitive, efficient, and accessible. The redesign also aim to add new features and capabilities that better meet the changing needs of Teams users, such as improved collaboration, communication, and productivity tools. Additionally, the redesign could aim to enhance the app's performance, stability, and security, while ensuring a seamless integration with other Microsoft 365 services and tools.

Redesigning Microsoft Teams involves updating the app's design and functionality to improve the user experience and add new capabilities. The objective of a redesign is to make the app more intuitive, user-friendly, and accessible to a wider range of users, including those with disabilities. A redesign could also aim to add new features, such as improved video conferencing, file sharing, and task management, to enhance collaboration, communication, and productivity within Teams.

Objective for redesigning Microsoft Teams app are:

1. User Experience (UX) improvement: Making the app more intuitive, user-friendly, and accessible to a wider range of users, including those with disabilities.
2. Adding new features: Incorporating new capabilities and tools to improve collaboration, communication, and productivity within Teams, such as improved video conferencing, file sharing, and task management.
3. Performance optimization: Enhancing the app's stability, speed, and overall performance to provide a seamless user experience, even in challenging network conditions.
4. Integration with other Microsoft services: Improving the integration between Teams and other Microsoft 365 services, such as Exchange, SharePoint, and OneDrive.
5. Security and privacy enhancements: Implementing new security and privacy measures to protect sensitive data and ensure compliance with industry standards and regulations.
6. Mobile optimization: Improving the app's design and functionality on mobile devices to provide a seamless experience for users on the go.
7. Support for diverse user needs: Designing Teams to better support the diverse needs of users, including those with different language requirements, accessibility needs, and cultural preferences.

3. SWOT Analysis

Strength

- Productive and good communication
- Better focus on work-related topics
- No additional cost for Microsoft 365 users.
- Transparency
- Good mobile experience.
- Together mode
- Chat bubbles
- MS Whiteboard

Weakness

- A lot of similar tools
- Limited Flexibility
- Confusing file Structure
- Constant internet Connectivity
- Not intuitive

Opportunities

- Lots of Users due to COVID-19
- Development of Technology
- Addition of files wiki tabs
- Availability of online Content

Threats

- Similar services provided by Slack and other companies
- Small barrier between products
- Pricing is a key factor

4. System Features

Functional Requirement

Functional requirements are the specific features, capabilities, and performance criteria that a system must meet to be considered successful. The functional requirements of Microsoft Teams can vary depending on the specific use case and audience, but some common functional requirements include:

1. Chat and Communication: Teams must support instant messaging, audio and video calls, and screen sharing to allow teams to communicate in real-time.
2. Collaboration Tools: Teams must provide tools for file sharing, task management, and note-taking to allow teams to work together on projects and tasks.
3. Video Conferencing: Teams must provide high-quality video conferencing capabilities, including support for screen sharing, virtual backgrounds, and real-time collaboration.
4. Integration with Microsoft 365: Teams must integrate seamlessly with other Microsoft 365 services, such as Exchange, SharePoint, and OneDrive, to provide a comprehensive collaboration and communication solution.
5. Third-Party Integration: Teams must support integration with third-party apps and services, such as Trello, Asana, and Salesforce, to enhance collaboration and productivity.
6. Accessibility and Usability: Teams must be accessible and usable for users with disabilities and support multiple languages to meet the diverse needs of users around the world.
7. Mobile Support: Teams must provide a seamless experience on mobile devices, including support for instant messaging, audio and video calls, and file sharing.
8. Security and Privacy: Teams must provide robust security and privacy features to protect sensitive data and ensure compliance with industry standards and regulations.
9. Performance and Scalability: Teams must provide fast and reliable performance, even in challenging network conditions, and must be able to scale to meet the needs of large organizations.

Non-Functional Requirement

Non-functional requirements are additional criteria that a system must meet, beyond its functional requirements. Non-functional requirements in Microsoft Teams can include:

1. Usability: Teams must be user-friendly and easy to use, with an intuitive user interface and navigation.
2. Performance: Teams must respond quickly and efficiently, with fast load times and responsive interactions.
3. Scalability: Teams must be able to scale to meet the needs of large organizations and support a large number of users.
4. Reliability: Teams must be stable and reliable, with a high availability and low downtime.
5. Security: Teams must provide robust security features to protect sensitive data and ensure compliance with industry standards and regulations.
6. Compliance: Teams must comply with relevant industry standards and regulations, such as GDPR, HIPAA, and SOC2.
7. Support: Teams must provide comprehensive support options, including online resources, self-service portals, and live support.
8. Interoperability: Teams must work seamlessly with other systems and platforms, such as web browsers, mobile devices, and other Microsoft 365 services.
9. Maintainability: Teams must be easy to maintain, with a well-documented codebase, version control, and a clear upgrade path.
10. Testability: Teams must be designed and built in a way that makes it easy to test and validate its functionality, performance, and security.

Non-functional requirements help to ensure that a system is usable, performant, secure, and reliable, and they play an important role in the success of Microsoft Teams.

5. Overall Description

5.1 Operating Environment

Android	iOS Mac
Windows	Linux.

5.2 Design and Implementation Constraints

The following are the limitations:

- App is protected with 2-way authentication, for login.
- It takes 2-3 seconds to Switch between Teams.
- It takes 2-3 seconds to load the channel.
- It takes 2-3 seconds to load the open downloaded files.
- Assignment must be less than 10MB to upload in MS Teams.

5.3 User Documentation

N/A

5.4 Customer Analysis

A. Users

1. Students

- Students affiliated to any educational institution conducting their teaching online can make use of Microsoft teams.
- Students have an advantage of open and distance learning (ODL), by using Microsoft Teams.

2. Working class

- Individual businesses and multinational companies use Microsoft teams for various purposes ranging from conferencing, scheduling meeting, planning events and all work from home related activities.

3. Family and friends

- Since this is a versatile platform it can be used for casual purposes such as calling a friend, or virtually meeting a distant family member online.

B. Age

There are broadly two types of users classified based on age

1. Dependent

- Children who usually need assistance from their parents or guardians. They fall into the 5–10 years age group.
- The elderly might need some assistance too. They would fall into the 60 years and above age group.
- People who are physically challenged would also need assistance.

2. Independent

- They are capable enough to navigate and use the platform on their own.
- Their age group is between 11 to 59 years.

Socio-Economic Background

- Considering the social economic status, this software can be used by anyone able to operate a compatible device. Microsoft teams specifically targeted to the upper middle class income management class who might be more comfortable with using the software given their higher digital exposure. Ultimately it is user friendly and can be easily accessible regardless of your economic background.

Geographic Scope

- A major advantage of Microsoft Teams is the vast coverage it offers across the globe. Ease of accessibility regardless of location and geographical barriers increases digital reach and contributes in making the world a ‘global village’. Regardless of the location of the participants, be it international or local, each of them can conveniently connect with the others. The only mandatory requirement is a stable network connection in addition to a device which supports the latest version of the software.

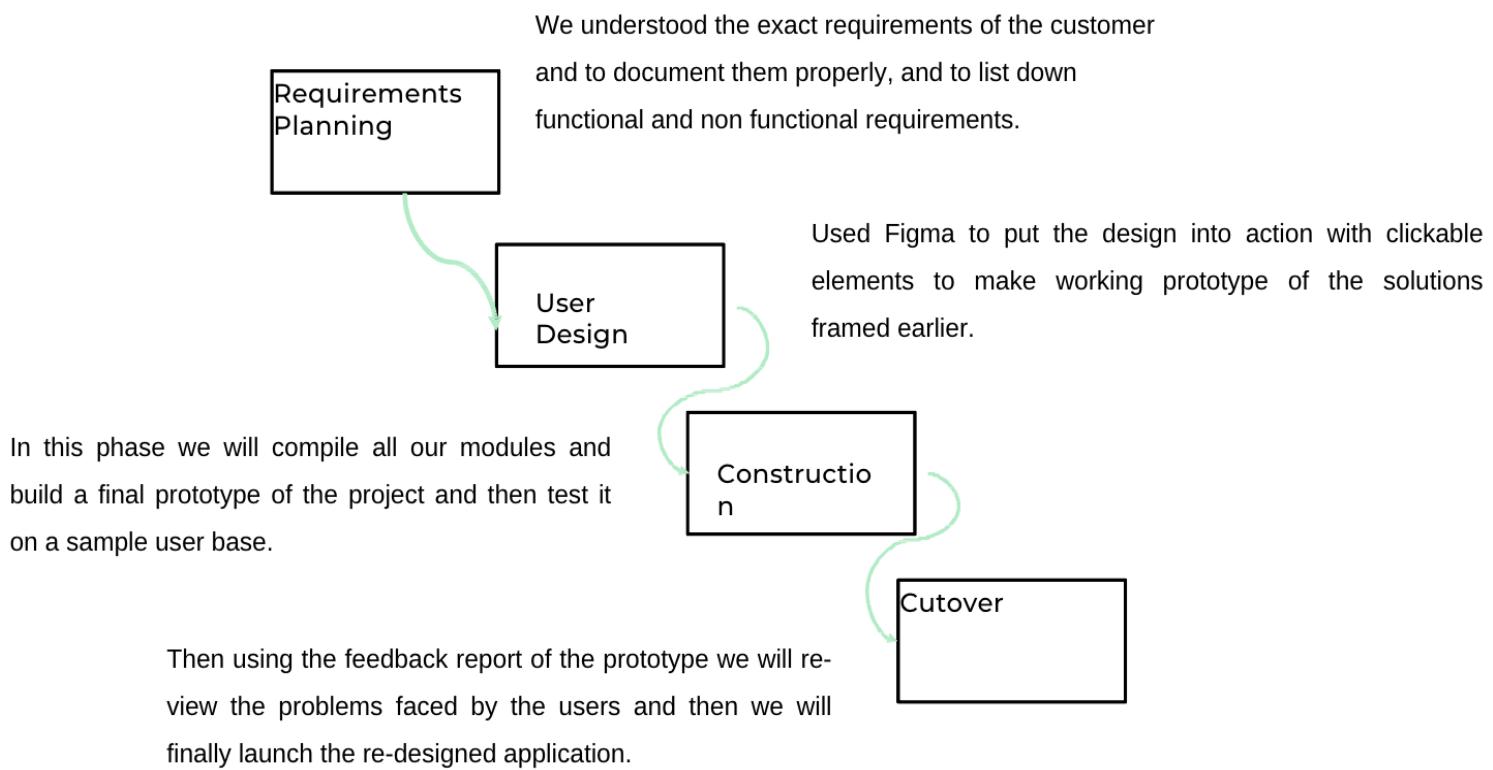
6. Rapid application development (RAD) Model

The Rapid Application Development (RAD) model is an agile software development method that prioritizes rapid prototyping and fast delivery. The RAD model is being applied to the redesign of Microsoft Teams in the following way:

1. Requirements Gathering: The first step in the RAD model is to gather requirements from stakeholders, including users, business leaders, and subject matter experts. This step helps to define the scope of the redesign and to identify the key functional and non-functional requirements of Teams.
2. Prototyping: The second step in the RAD model is to create a series of prototypes, starting with low-fidelity wireframes and gradually increasing in complexity. The prototypes are then tested with users to gather feedback and make necessary modifications.
3. Development: The third step in the RAD model is to develop the redesigned version of Teams, using agile methodologies such as Scrum or Kanban. The development process is iterative, with regular sprints and deliveries to ensure rapid progress.
4. Testing: The fourth step in the RAD model is to thoroughly test the redesigned Teams app, including functional, performance, security, and usability testing. This step helps to identify and resolve any issues or bugs before the app is released to users.
5. Deployment: The final step in the RAD model is to deploy the redesigned Teams app to users, with comprehensive training and support to ensure a successful transition.

The RAD model is a flexible and iterative approach that allows teams to quickly respond to changing requirements and to deliver high-quality software in a timely and efficient manner. The RAD model can be particularly useful for the redesign of Teams, as it allows teams to quickly validate new design concepts and to iterate on the design based on user feedback.

- It is also suitable for projects where requirements can be modularized and reusable components are also available for development.
- The model can also be used when already existing system components can be used in developing a new system with minimum changes.
- Model enables rapid delivery as it reduces the overall development time due to the reusability of the components and parallel development.
- This model attempts to take a user-centered view and to minimize the risk caused by requirements changing during the course of the project.



Requirements Planning

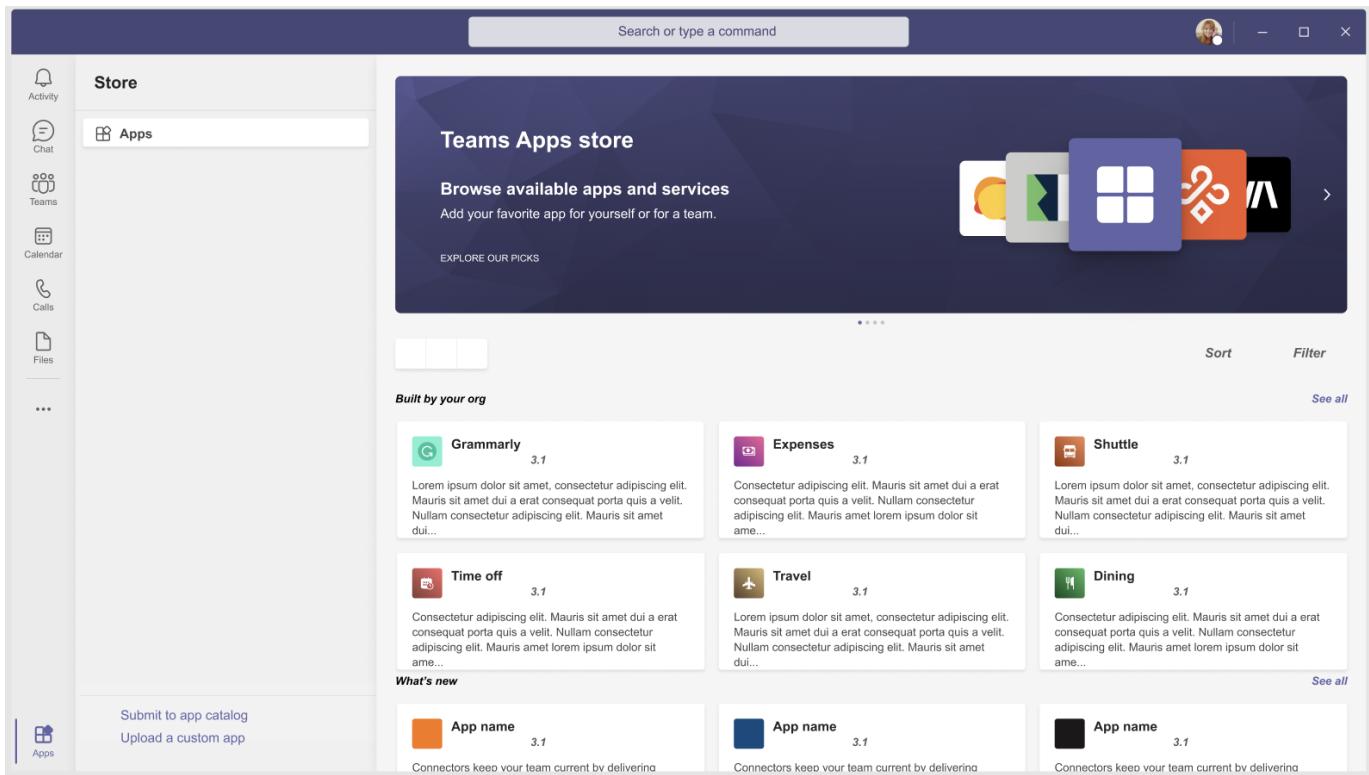
Joint Application Development workshops are intensive requirements- gathering sessions in which users and we the developers came together to thrash out the requirements of the project and also to understand the issues faced and analyze the cons from user persona. We discussed and came up with an idea for the problem and provide proper justification to implement the same.

User Description/Design

Used Figma to put the design into action with clickable elements to make working prototype of the solutions framed earlier.

Figma Project link –

<https://www.figma.com/file/JA6awobFcIhCfRwopf3YRa/Usability-Project?node-id=0%3A1&t=viAIhW4eSlkmLLkJ-0>



Construction

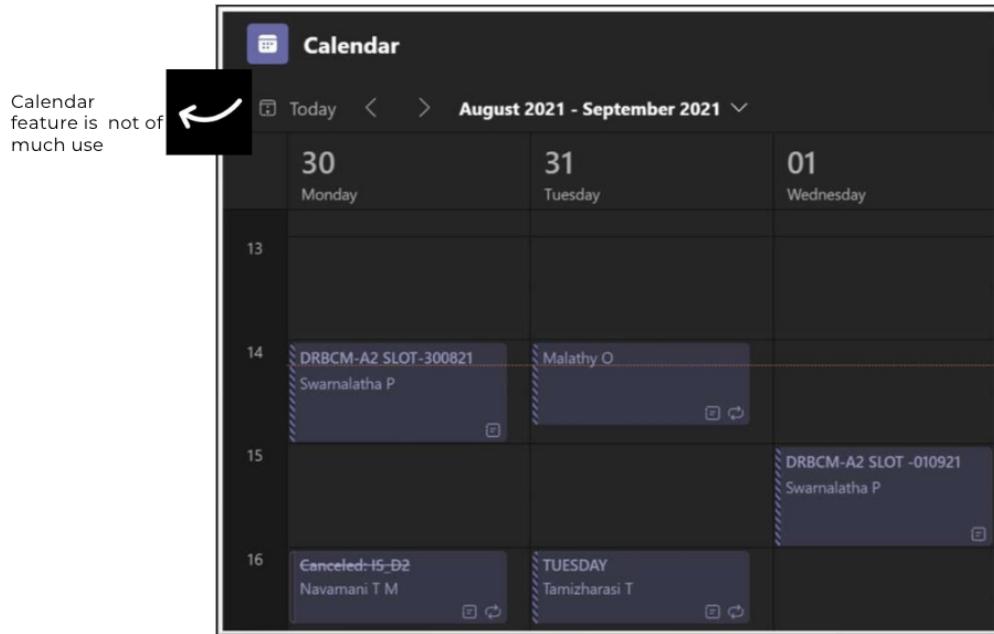
In this phase, refinement of the prototype and delivery takes place. It includes the actual use of powerful automated tools to transform process and data models into the final working product. All the required modifications and enhancements are to be done in this phase. In this phase we will compile all our modules and build a final prototype of the project and then test it on a sample user base.

Cutover

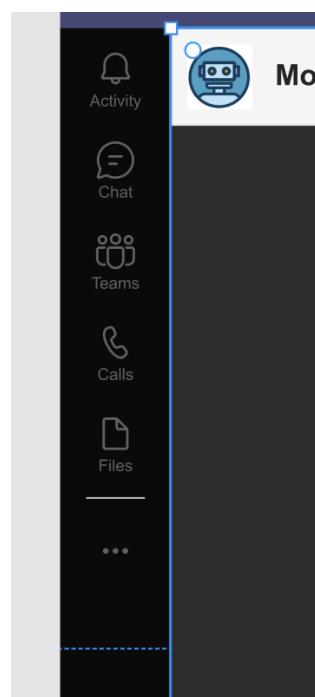
All the interfaces between the independent modules developed by separate teams have to be tested properly. The use of powerfully automated tools and subparts makes testing easier. This is followed by acceptance testing by the user. Then using the feedback report of the prototype we will re-view the problems faced by the users and then we will finally launch the re-designed application.

7. Problem and Solution

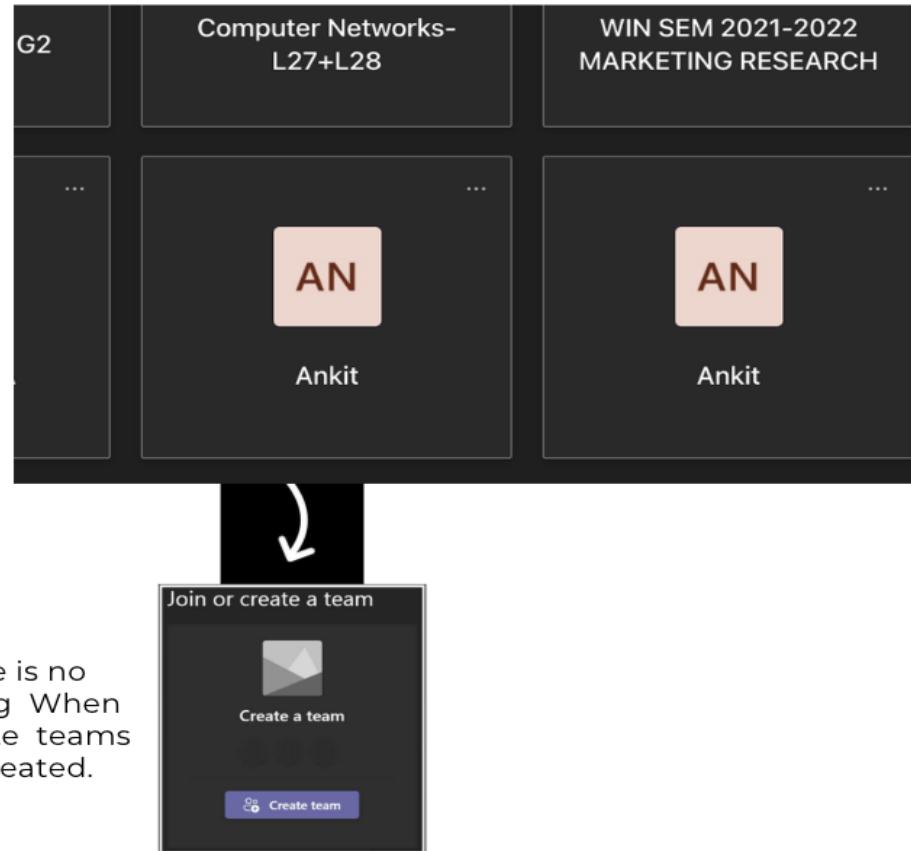
1. Lack of reminder of meets and assignment notifications. It would help students if reminder feature is added. Also there is no reminder for the team meets that are Scheduled and it gets confusing sometimes to figure out which team.



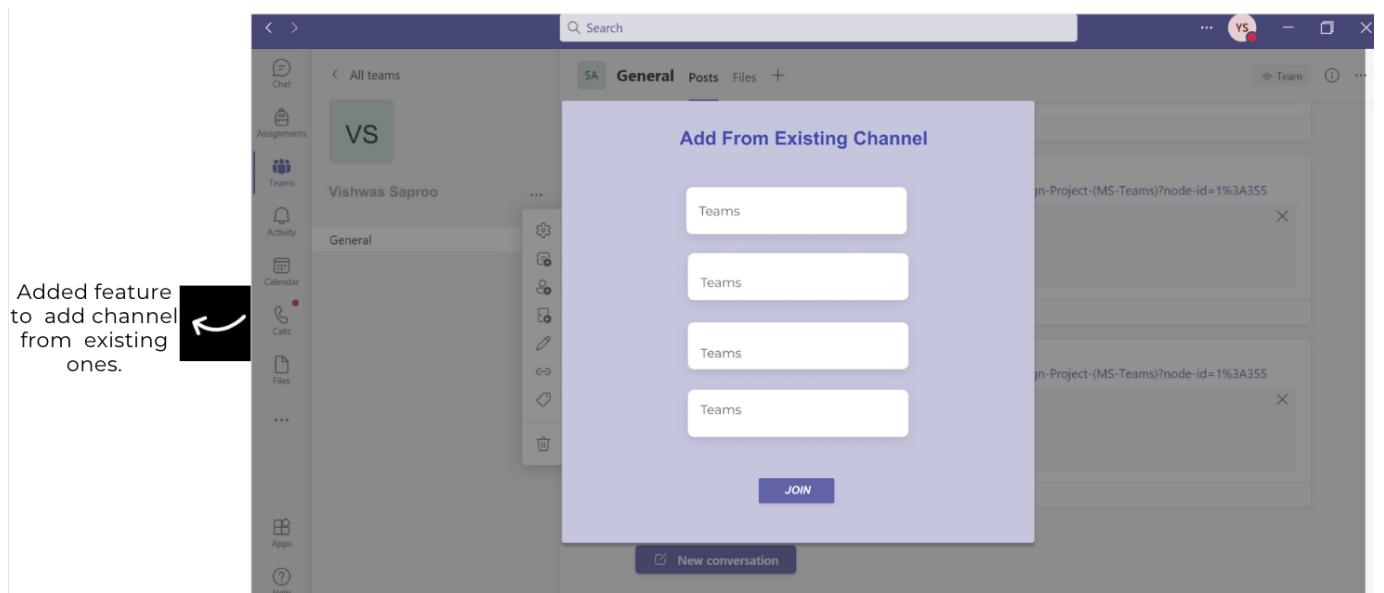
Solution



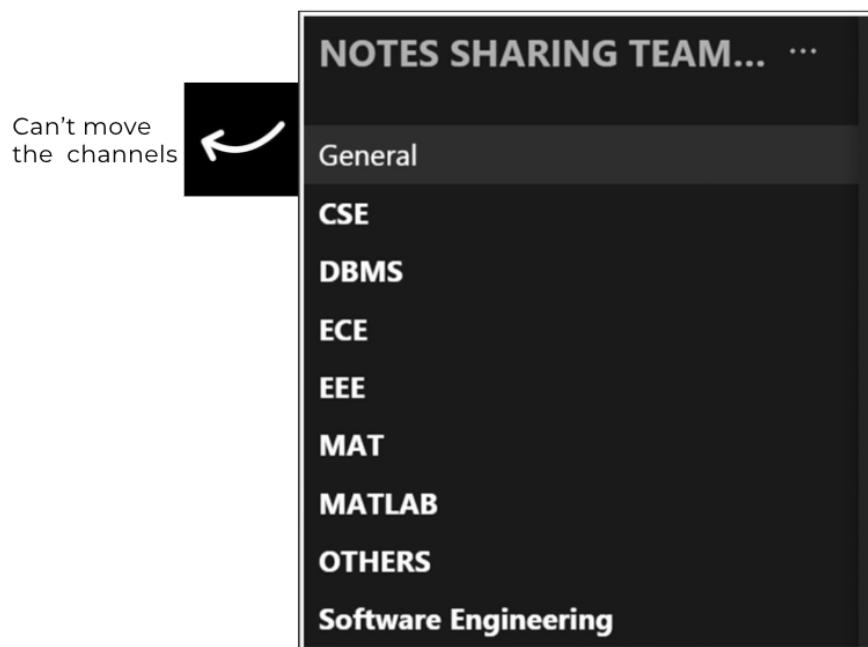
2. When creating a team. If you try to make a new team with a name that already exists, you don't get any heads up on it, so you could end up with two or more teams with identical names which can be confusing. There is no warning.



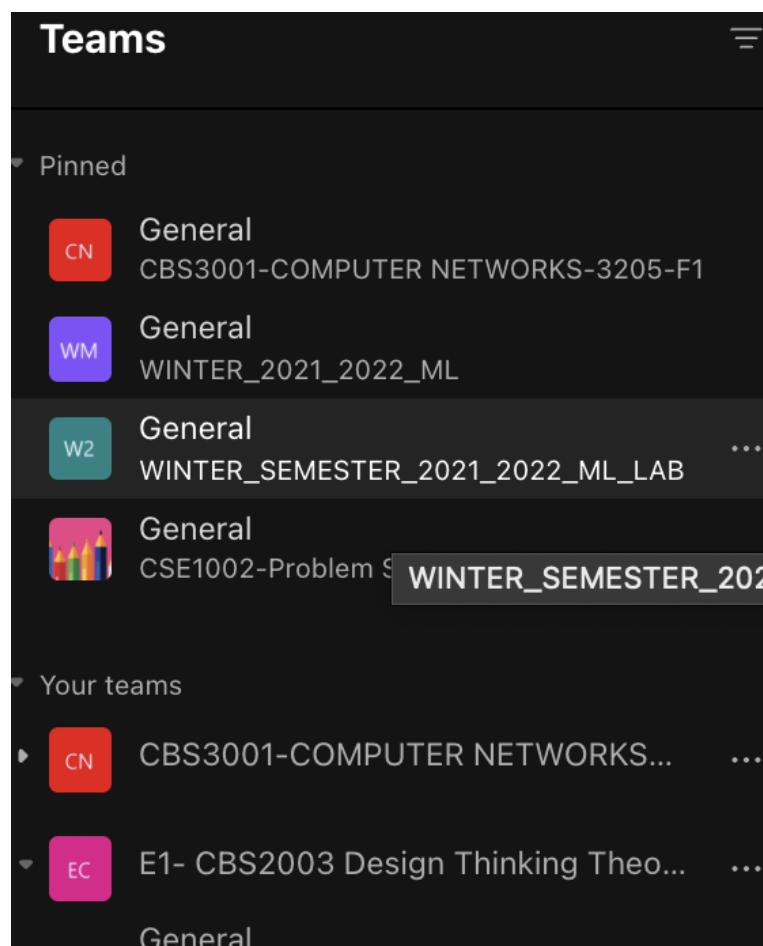
Solution



3. Limited flexibility — You can't move channels between teams and hence, you need to replicate a channel manually which is time consuming.

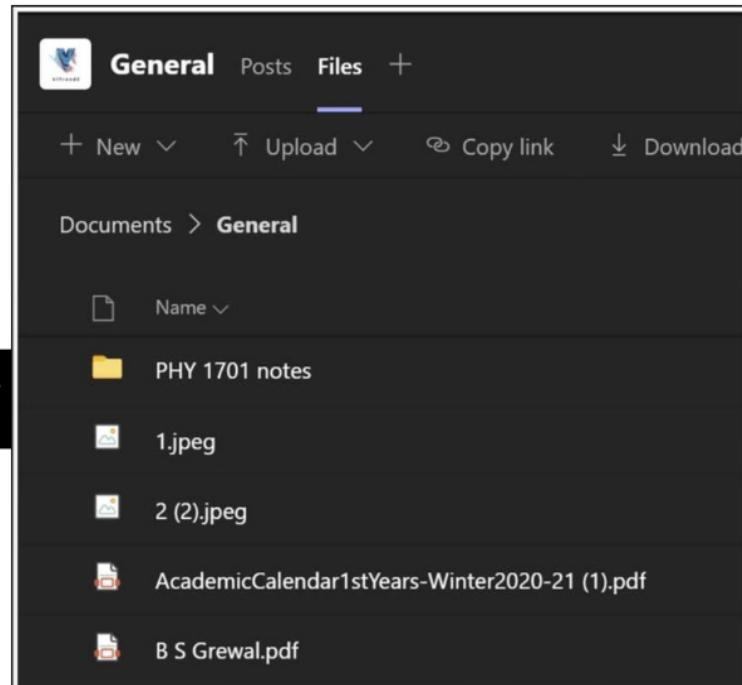


Solution

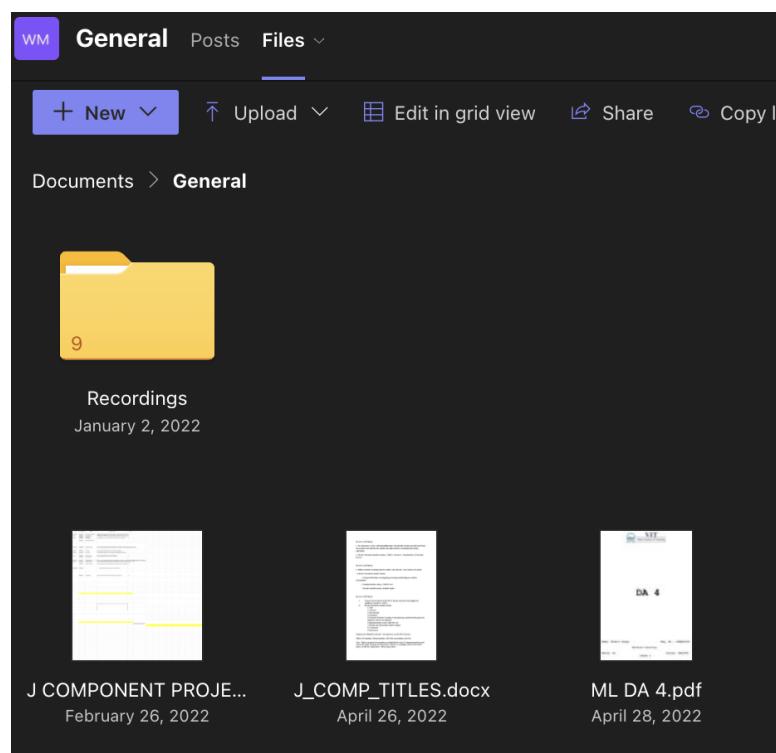


4. Confusing file structure and session recordings — Although you can search for a file in Microsoft Teams, the way the files are stored in this application can be confusing. Every channel has a root folder where all files uploaded to the conversations are stored.

File Structure
is not
organized.

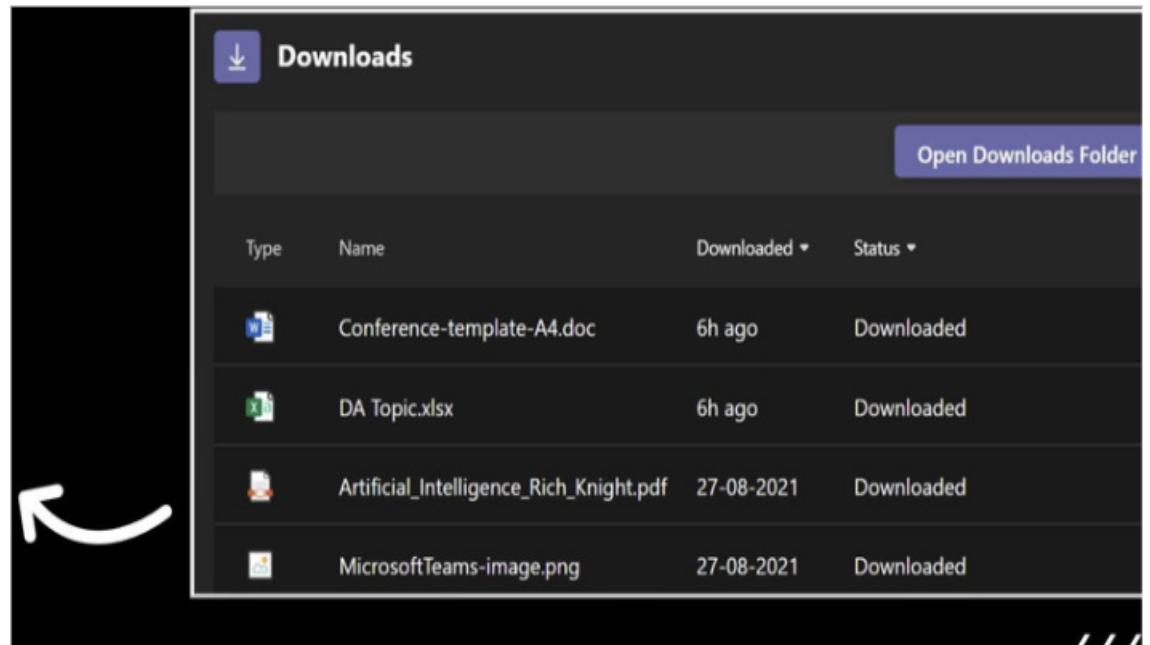


Solution



5. Downloaded files are also not organized.

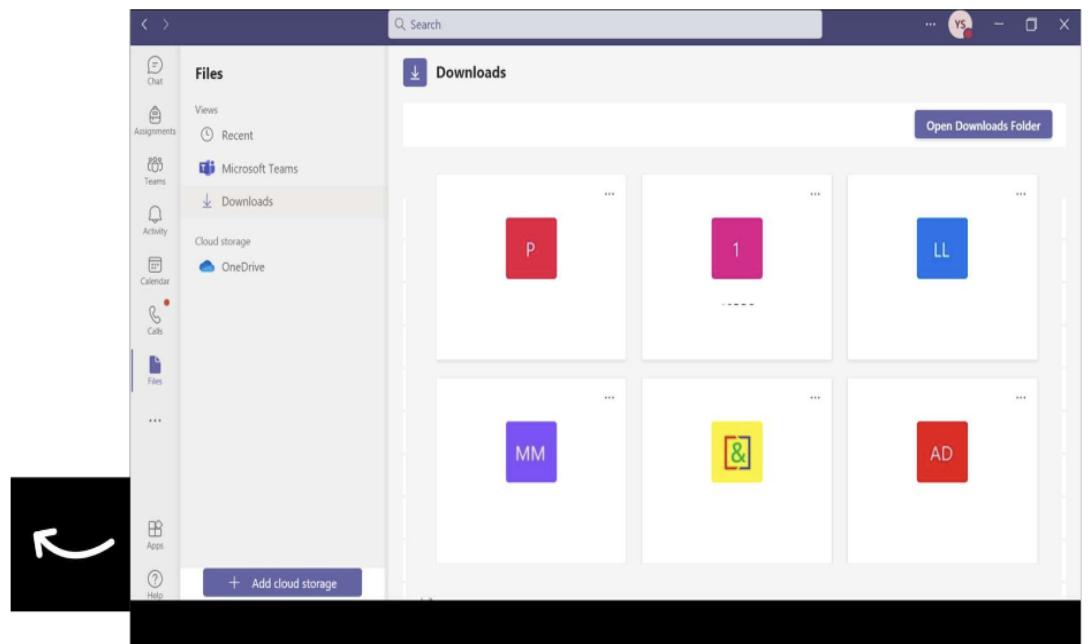
Download file structure is not organized and its confusing.



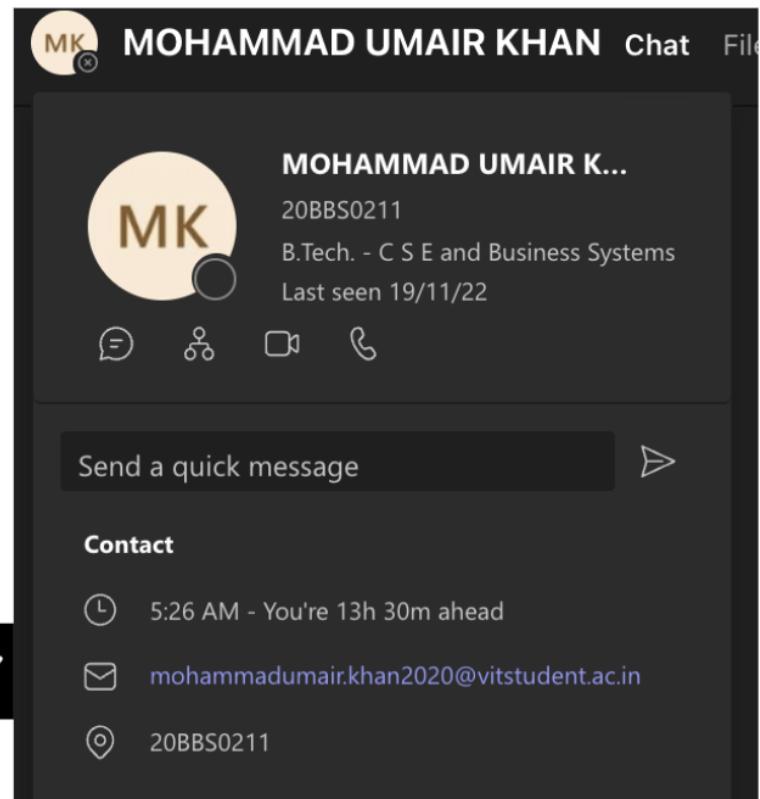
Type	Name	Downloaded	Status
Word	Conference-template-A4.doc	6h ago	Downloaded
Excel	DA Topic.xlsx	6h ago	Downloaded
PDF	Artificial_Intelligence_Rich_Knight.pdf	27-08-2021	Downloaded
Image	MicrosoftTeams-image.png	27-08-2021	Downloaded

Solution

Download file structure is organized.

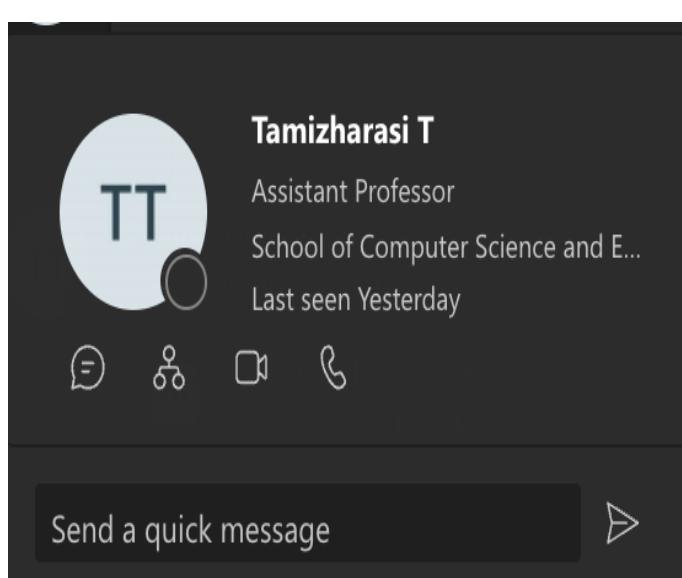


6. There is no privacy for personal details of the user, Many spammers and fraudsters use this details.

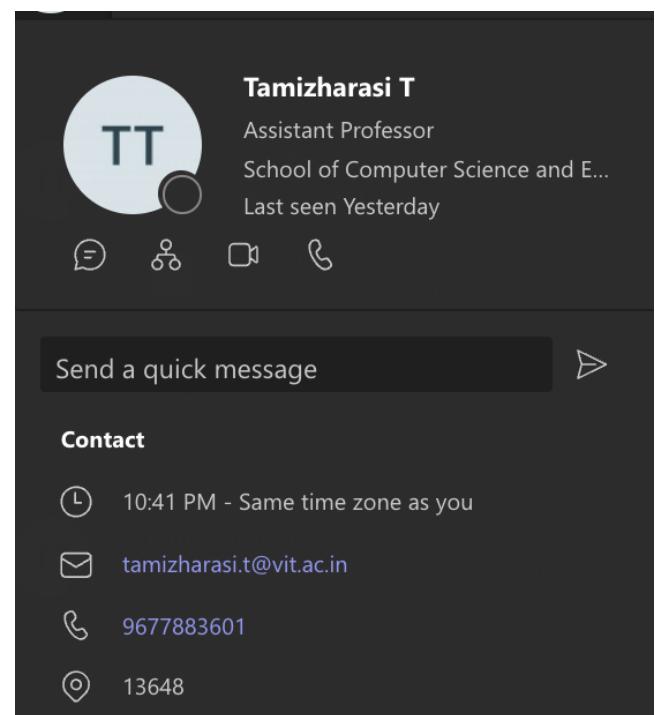


Solution

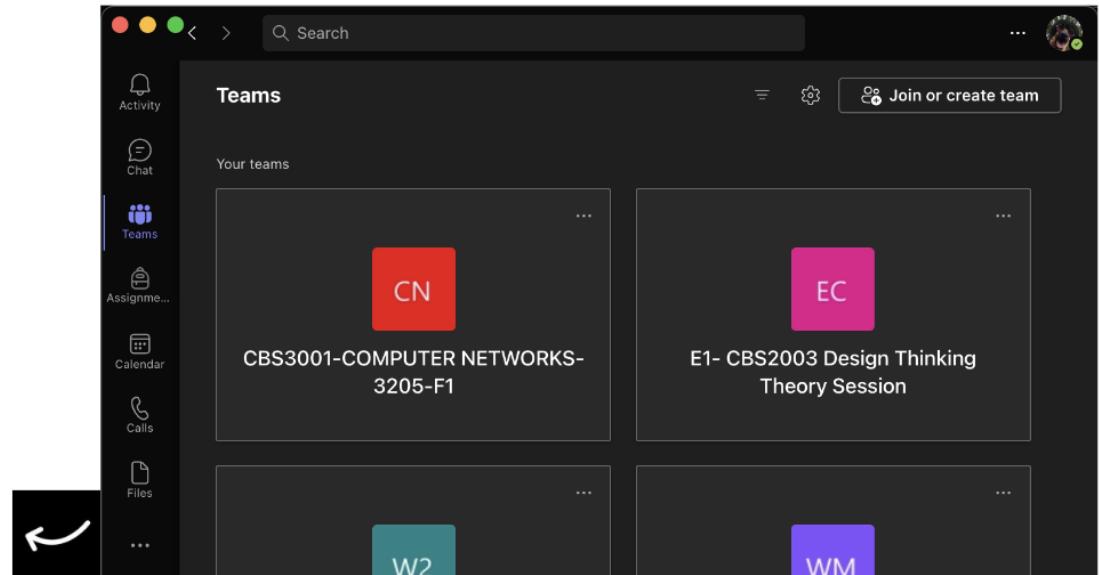
For normal people



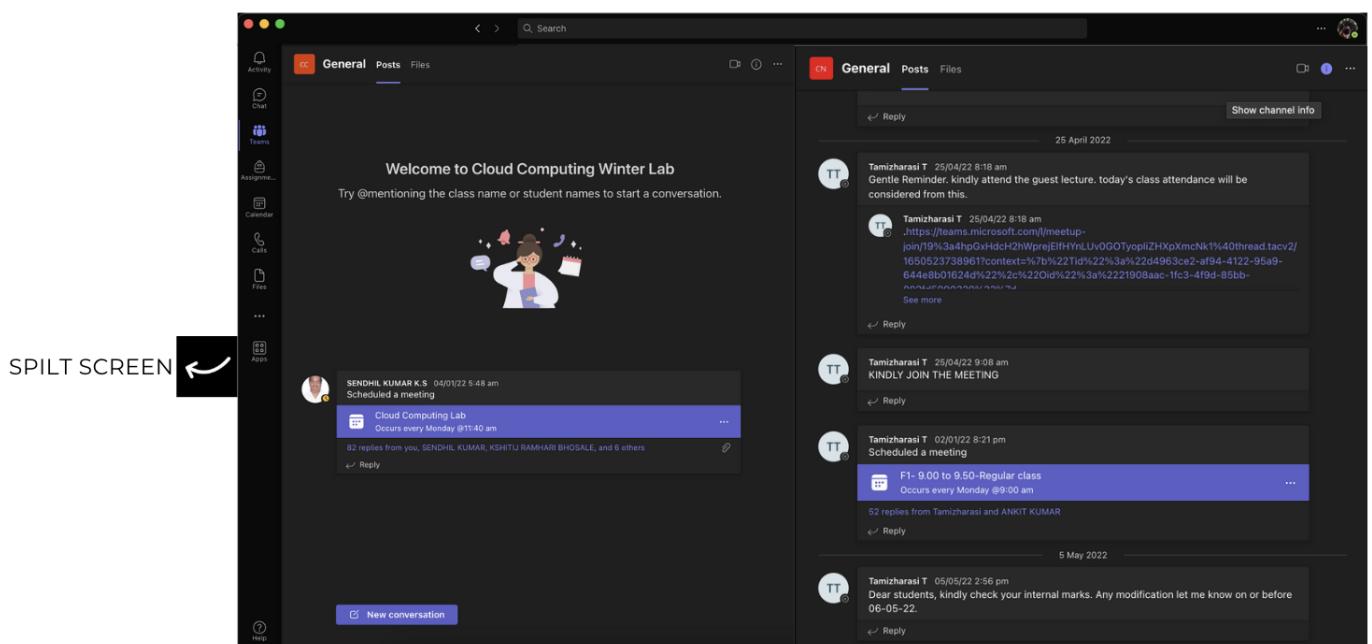
For members of that channel



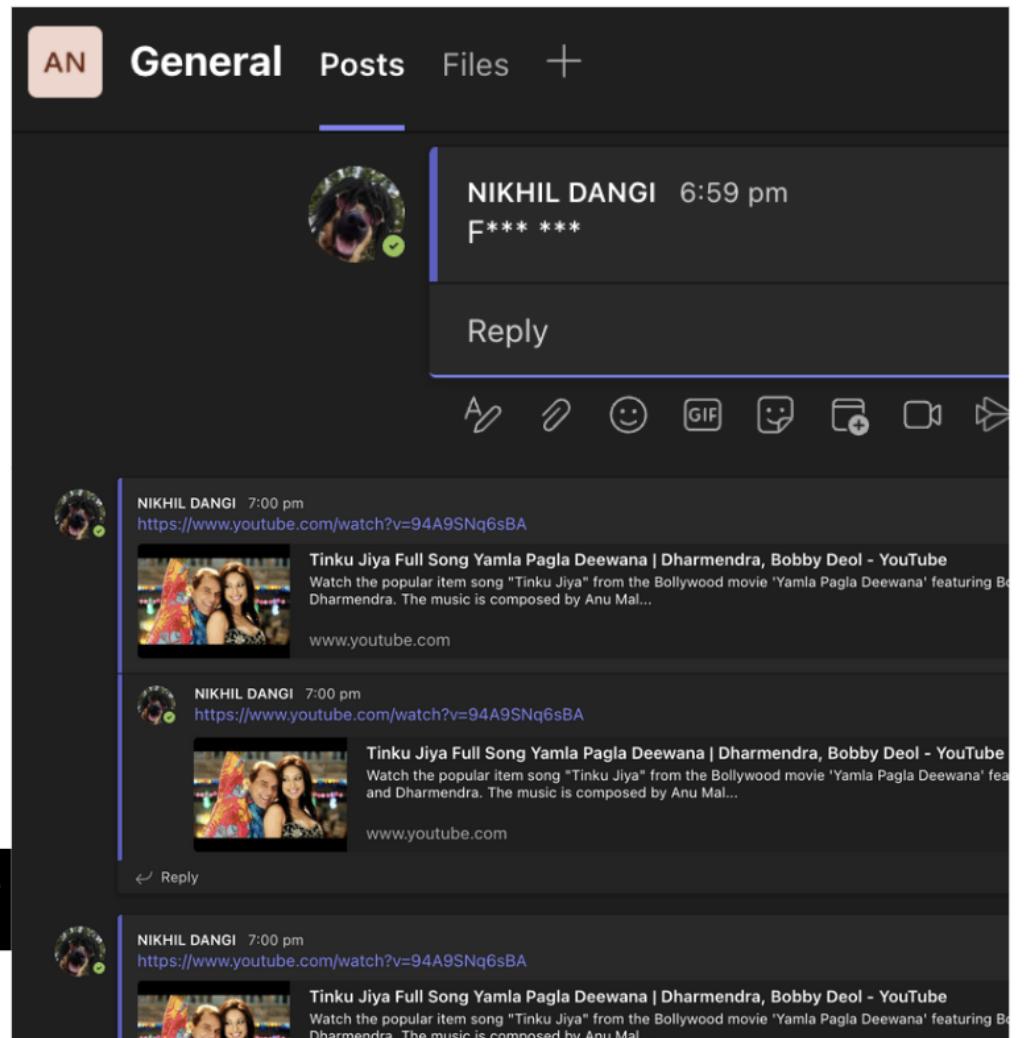
7. Not intuitive — new users especially, find it hard to navigate and figure out Teams as there are a lot of features and NO SPILT SCREEN.



Solution



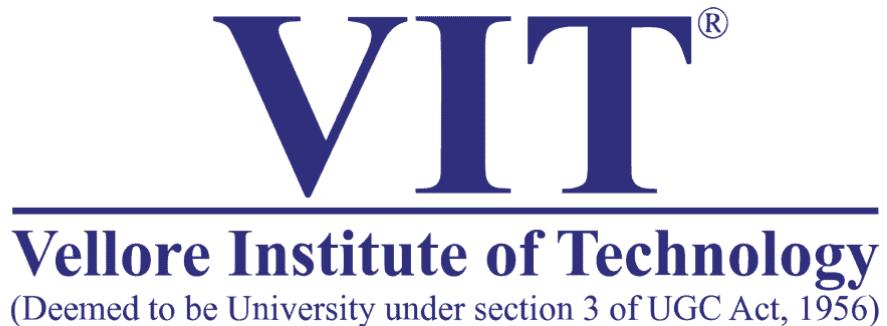
8. Lack of support during text conversations and also no moderator over the abusive, and spammy behaviour in teams.



8. Conclusion

In conclusion, the redesign of Microsoft Teams is an important initiative that can help to improve the functionality, performance, and user experience of the app. The redesign process involves a thorough analysis of the current app, the gathering of requirements from stakeholders, and the creation of prototypes and mockups to validate design concepts. The RAD model can be used as a framework for the redesign process, as it allows teams to quickly respond to changing requirements and to deliver high-quality software in a timely and efficient manner.

The success of the redesign of Teams will depend on a number of factors, including the effective collaboration of cross-functional teams, the use of best practices and industry standards, and the consideration of the needs and expectations of the app's users. By prioritizing these factors, teams can ensure that the redesign of Teams is a success, and that the app provides a comprehensive and user-friendly solution for communication, collaboration, and productivity.



DIGITAL ASSIGNMENT - II

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REDESIGNING MS Teams APP

1. Objective:

The objective of redesigning Microsoft Teams can vary depending on the specific needs and goals of the project, but some common objectives could include:

Improving user experience: One of the primary objectives of redesigning MS Teams could be to improve the user experience and make the application more intuitive, efficient, and effective for users.

Increasing functionality: Another objective could be to add new features and functionality to MS Teams, such as integrations with other applications, enhanced collaboration tools, or more advanced video conferencing features.

Improving performance: Another objective could be to improve the performance of MS Teams, such as reducing load times, minimizing crashes or glitches, and improving overall stability.

Enhancing security: Another objective could be to enhance the security of MS Teams, such as by improving user authentication and access controls, encrypting data, or implementing other security measures.

Reducing costs: Another objective could be to redesign MS Teams to reduce costs, such as by streamlining the code, improving scalability, or reducing maintenance and support requirements.

Objectives for the redesign of MS Teams:

1. Objective: Improve user satisfaction ratings by 15% within the next six months by redesigning the user interface to be more intuitive and user-friendly.
2. Objective: Increase adoption of new video conferencing feature by 25% within the next three months by redesigning the interface to make the feature more prominent and easier to use.
3. Objective: Improve application load times by 20% within the next six months by optimizing the code and implementing caching mechanisms.
4. Objective: Enhance security features of the application by adding two-factor authentication and end-to-end encryption by the end of the year.
5. Objective: Reduce support ticket volume related to application crashes by 50% within the next three months by identifying and resolving any stability issues and improving overall performance.

Overall, the objective of redesigning MS Teams is to improve the application to meet the changing needs and expectations of users and stakeholders, while addressing any technical or usability issues that may be present in the existing application.

2. SMART Methodology

SMART objectives for the redesign of MS Teams:

1. **Specific:** Improve the messaging feature in MS Teams
Measurable: Increase user engagement with messaging by 20%
Achievable: Add new features like message reactions and threaded conversations
Realistic: Within the available budget and technical resources
Time-bound: Within the next 6 months
2. **Specific:** Enhance the security of MS Teams
Measurable: Achieve a security audit rating of 95% or higher
Achievable: Implement stronger authentication and access controls
Realistic: Within the available budget and technical resources
Time-bound: Within the next 12 months
3. **Specific:** Improve collaboration features in MS Teams
Measurable: Increase usage of collaborative tools by 25%
Achievable: Add new features like co-authoring and live document editing
Realistic: Within the available budget and technical resources
Time-bound: Within the next 6 months
4. **Specific:** Increase accessibility in MS Teams
Measurable: Achieve an accessibility audit rating of 90% or higher
Achievable: Add new features like high-contrast mode and screen reader support
Realistic: Within the available budget and technical resources
Time-bound: Within the next 12 months
5. **Specific:** Improve application performance in MS Teams
Measurable: Reduce application load times by 30%
Achievable: Optimise the code and implement caching mechanisms
Realistic: Within the available budget and technical resources
Time-bound: Within the next 6 months

These SMART objectives provide clear targets for the redesign of MS Teams that are specific, measurable, achievable, realistic, and time-bound, which can help ensure the success of the project and provide a clear framework for evaluation.

3. Different Models

There are several software development models that can be used for the redesign of Microsoft Teams, depending on the project's specific needs and requirements. Some of the most commonly used models for redesigning software products include:

1. **Waterfall Model:** This model is a linear, sequential approach that emphasises a step-by-step approach to software development. Each stage of the project must be completed before moving to the next stage. The Waterfall model is typically best suited for projects where requirements are well-defined and change is unlikely.
2. **Agile Methodology:** This model emphasises flexibility and collaboration, allowing teams to respond to changing requirements and user feedback throughout the project. Agile is typically best suited for projects where requirements are likely to change and where collaboration between the project team and stakeholders is important.
3. **Rapid Application Development (RAD) Model:** This model emphasises rapid prototyping and iterative development, allowing teams to quickly develop and test software features. The RAD model is typically best suited for projects where speed and time-to-market are important.
4. **Spiral Model:** This model is a risk-driven approach that emphasises the need to manage risks throughout the software development process. The Spiral model is typically best suited for complex projects with a high level of risk.
5. **Lean Software Development:** This model emphasises continuous improvement and the elimination of waste in the software development process. The Lean model is typically best suited for projects where efficiency and cost reduction are important.

Each of these models has its own strengths and weaknesses and can be applied in different situations depending on the specific needs of the project. Ultimately, the choice of model will depend on the goals, timeline, and requirements of the project.

But for redesigning of MS Teams the best 3 models will be the waterfall model, agile model and RAD model. Now we will see each model in detail and compare them.

4. RAD Model

It is also suitable for projects where requirements can be modularized and reusable components are also available for development.

The model can also be used when already existing system components can be used in developing a new system with minimum changes.

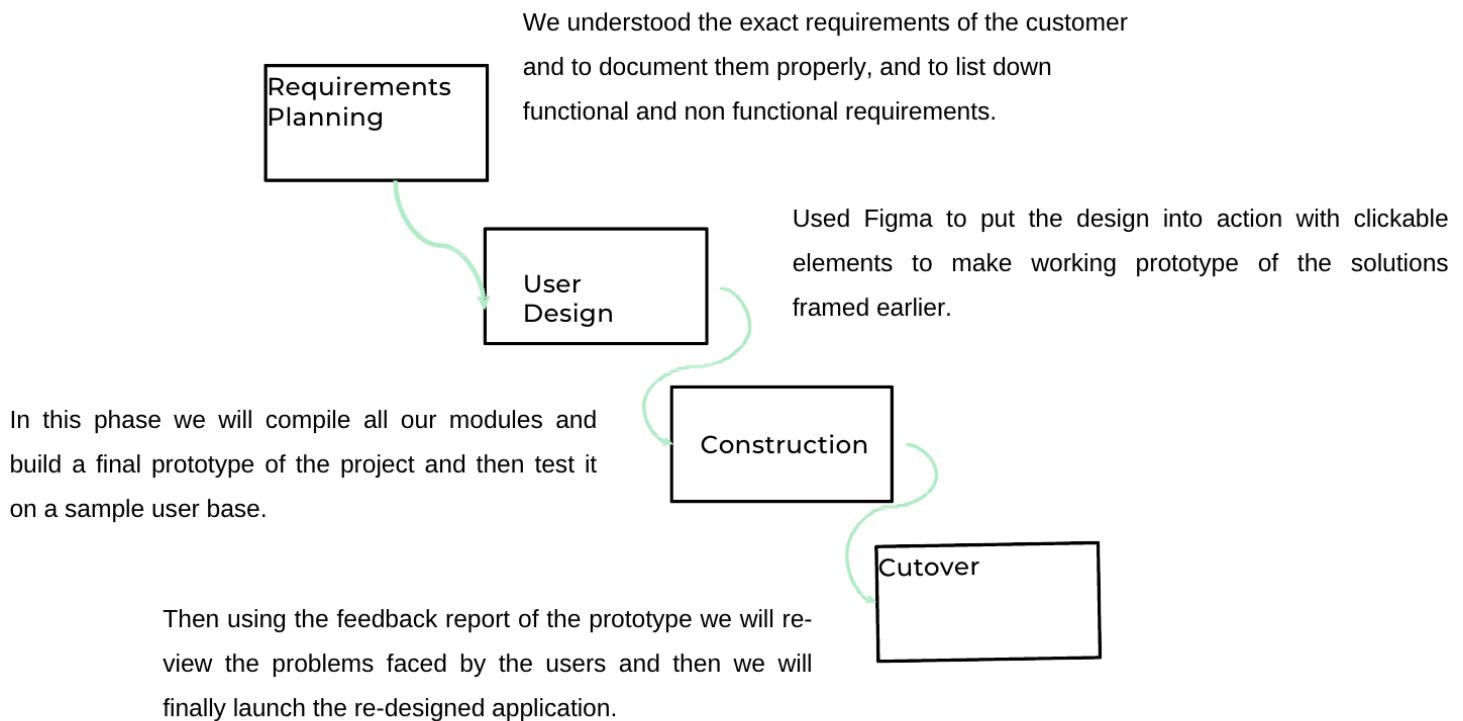
Model enables rapid delivery as it reduces the overall development time due to the reusability of the components and parallel development.

This model attempts to take a user-centred view and to minimise the risk caused by requirements changing during the course of the project.

The Rapid Application Development (RAD) model is a software development methodology that focuses on rapid prototyping and iterative development. Here are the steps in the RAD model for the redesign of MS Teams:

1. **Requirements Planning:** Gather and prioritise user requirements for the redesign of MS Teams.
2. **User Design:** Create a user interface design and prototype that reflects the requirements gathered in the previous step.
3. **Construction:** Develop the core application features and functionality using an iterative approach that incorporates feedback from users and stakeholders.
4. **Cutover:** Roll out the new application to users and monitor its performance.
5. **Feedback:** Collect feedback from users and stakeholders to improve the application and identify areas for future development.

The RAD model emphasises quick iterations and a focus on end-user involvement, which can help accelerate the development process and ensure that the redesigned MS Teams application meets user needs. By building a prototype early in the process and iterating based on feedback, the RAD model can help identify and resolve issues earlier in the development process, which can lead to a more successful redesign.



1. Requirement Planning: This phase involves gathering and analysing user requirements for the redesigned MS Teams application. The focus is on identifying user needs, pain points, and opportunities for improvement. The requirements are prioritised and used to guide the design and development of the application.
2. User Design: In this phase, the user interface (UI) and user experience (UX) design of the MS Teams application is developed based on the requirements gathered in the previous phase. Prototyping and testing are an integral part of this phase, allowing users and stakeholders to provide feedback and suggest changes.
3. Construction: This phase involves developing the core features and functionality of the redesigned MS Teams application. An iterative approach is followed, where the application is developed in sprints, with each sprint delivering a working prototype that incorporates feedback from users and stakeholders.
4. Cutover: In this phase, the redesigned MS Teams application is rolled out to users. The focus is on ensuring a smooth transition from the old application to the new one, and on providing adequate support and training to users.
5. Feedback: This phase involves collecting feedback from users and stakeholders to assess the performance and usability of the redesigned MS Teams application. The feedback is used to make improvements and identify areas for future development.

By following these phases, the Agile methodology can help ensure that the redesigned MS Teams application is developed based on a deep understanding of user needs and expectations, and that it delivers an improved user experience.

4.1 Requirement planning

Requirement planning is an important step in the redesign of MS Teams application, and it involves gathering and prioritising user requirements. Here are some steps to follow for requirement planning:

1. Identify stakeholders: Identify the stakeholders who will be involved in the redesign process. This can include end-users, IT staff, management, and other stakeholders.
2. Collect requirements: Collect requirements from stakeholders through interviews, surveys, focus groups, and other techniques. Document all requirements and prioritise them based on importance.
3. Analyse requirements: Analyse the requirements to identify any conflicts or overlaps, and determine which requirements are most important for the redesign.
4. Develop use cases: Develop use cases that describe how the application will be used by end-users, and how it will interact with other systems.
5. Validate requirements: Validate the requirements with stakeholders to ensure that they accurately reflect their needs and expectations.
6. Create a requirements document: Create a requirements document that summarises all the requirements and how they will be addressed in the redesign.

By following these steps, the redesign of MS Teams can be guided by a comprehensive understanding of user needs and expectations, which can help ensure the success of the project.

4.2 User Design

Used Figma to put the design into action with clickable elements to make working prototype of the solutions framed earlier. Figma Project link –

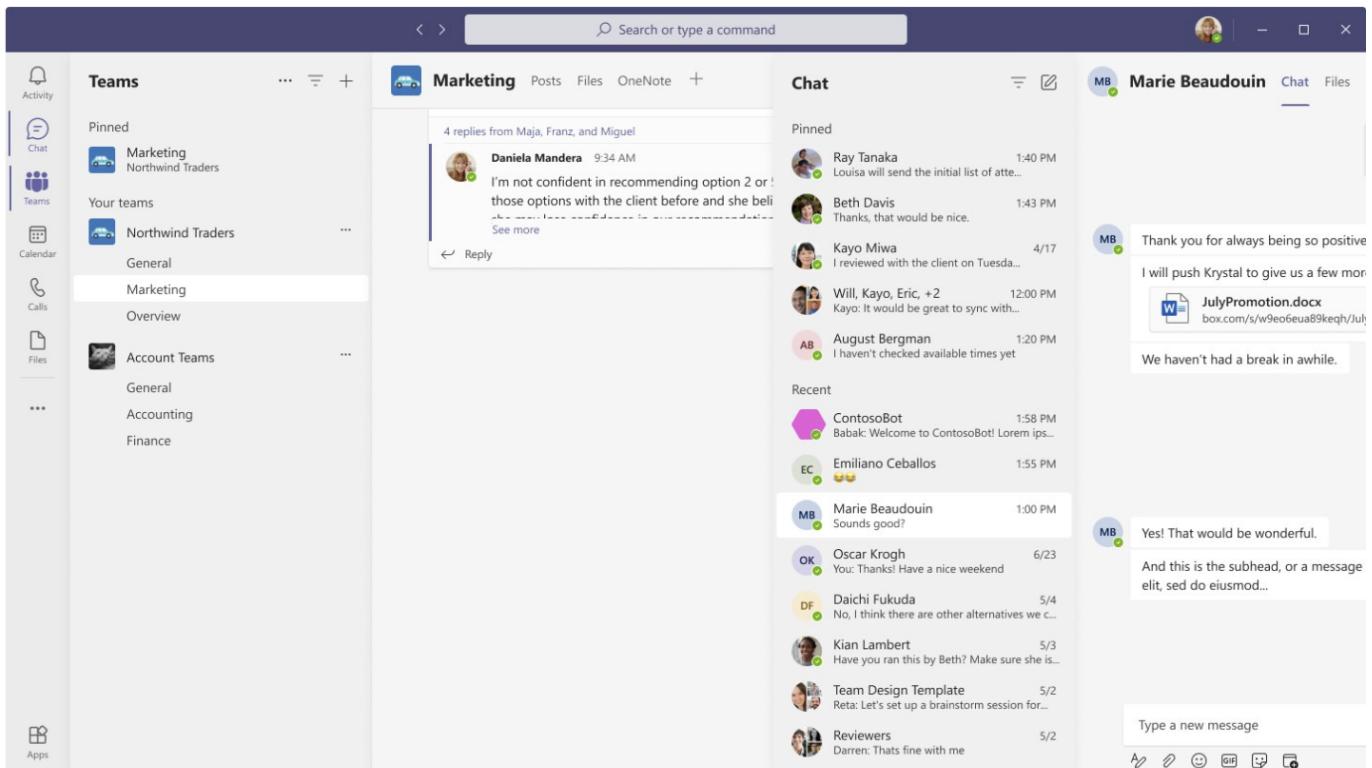
<https://www.figma.com/file/JA6awobFcIhCfRwopf3YRa/Usability-Project?node-id=0%3A1&t=PzOqKZ2yu95cgg9z-0>

User design, also known as user experience (UX) design, is an essential component of the redesign process for MS Teams. User design is a process that focuses on creating a positive and efficient user experience for the product's target audience. The ultimate goal is to ensure that users can easily and efficiently complete their tasks using the product.

In the redesign of MS Teams, user design involves several key steps. First, it is important to conduct user research to understand the needs, goals, and pain points of the product's target audience. This may involve conducting user interviews, surveys, or other forms of data collection.

Based on the insights gained from user research, the next step is to create user personas, which are fictional representations of the product's target audience. Personas help to humanize the user experience and provide a framework for making design decisions that align with user needs.

With user personas in place, the next step is to create user flows and wireframes that outline the user journey and the product's information architecture. These elements help to ensure that the product's layout and structure are intuitive and easy to use.



4.3 Construction

In this phase, refinement of the prototype and delivery takes place. It includes the actual use of powerful automated tools to transform process and data models into the final working product. All the required modifications and enhancements are too done in this phase. In this phase we will compile all our modules and build a final prototype of the project and then test it on a sample user base.

In the context of redesigning MS Teams using Agile methodology, construction is the phase where the actual development of the new product takes place. This is where the ideas and plans from the concept and inception phases are transformed into a working product.

During the construction phase, the development team works on building the new features and functionalities based on the requirements identified in the previous phases. The work is divided into smaller units of work called sprints, which typically last two to four weeks.

In Agile methodology, the development team uses an iterative and incremental approach, meaning that they continuously work on small parts of the product and make changes as they go. This allows for flexibility and adaptation to changes and feedback.

The construction phase also involves testing the product to ensure that it meets the requirements and functions as intended. The testing is typically done by the development team or by a separate quality assurance team.

Throughout the construction phase, the product owner and stakeholders have the opportunity to provide feedback and make changes to the product as it evolves. This helps to ensure that the final product is aligned with the needs of the target audience.

4.4 Cutover

All the interfaces between the independent modules developed by separate teams have to be tested properly. The use of powerfully automated tools and subparts makes testing easier. This is followed by acceptance testing by the user. Then using the feedback report of the prototype we will re-view the problems faced by the users and then we will finally launch the re-designed application.

In the context of redesigning MS Teams using Agile methodology, cutover refers to the process of transitioning from the old version of the application to the new version. The cutover phase is an essential part of the redesign process, as it marks the official launch of the new product. During the cutover phase, the development team and other stakeholders work together to ensure a smooth transition to the new version of MS Teams. This may involve training for end-users, as well as technical support and troubleshooting to address any issues that arise during the transition.

The cutover phase typically involves several steps, including:

1. Planning: The team develops a plan for the cutover, identifying the key tasks and milestones, and assigning roles and responsibilities.
2. Testing: The team conducts extensive testing to ensure that the new version of MS Teams is working as intended and that all data has been migrated successfully.
3. Deployment: The team deploys the new version of MS Teams to the production environment, which may involve shutting down the old version and transferring data and configurations to the new version.
4. Monitoring: The team monitors the new version of MS Teams to ensure that it is stable and performing as expected.
5. Support: The team provides support to end-users during the cutover phase, addressing any issues or questions that arise.

By following a well-planned cutover process, the team can minimize disruption and ensure a smooth transition to the new version of MS Teams. This helps to ensure that end-users are satisfied with the new version and that the overall redesign is a success.

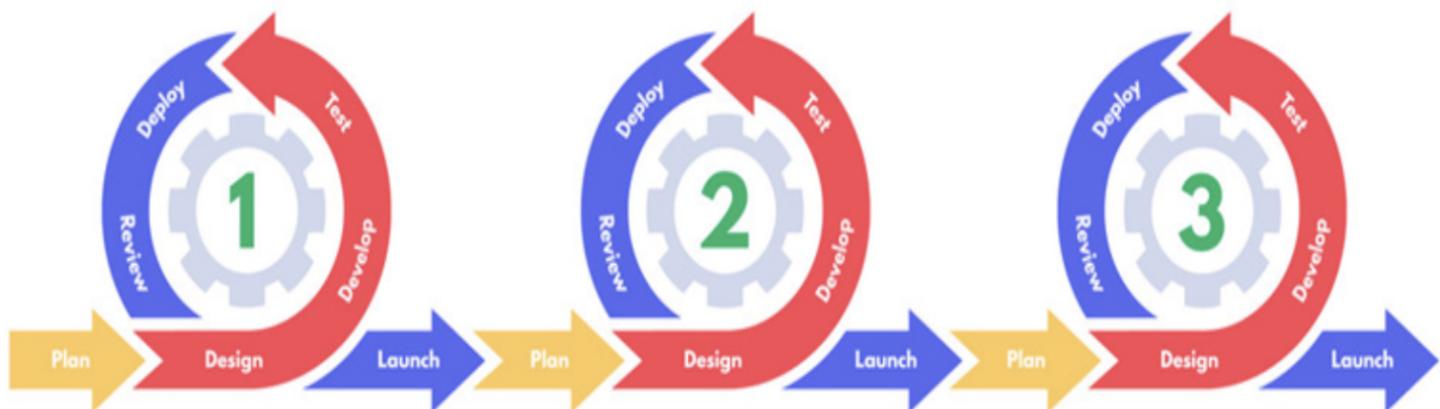
5. Agile Model

The Agile software development life cycle is the structured series of stages that a product goes through as it moves from beginning to end. It contains six phases: concept, inception, iteration, release, maintenance, and retirement.

The Agile model is an iterative and incremental approach to software development that emphasises flexibility, collaboration, and customer satisfaction. In the context of redesigning MS Teams, the Agile model involves breaking down the redesign project into smaller, more manageable chunks, and developing the application through a series of short sprints, with each sprint delivering a working prototype that can be tested and refined based on user feedback.

The Agile model places a strong emphasis on collaboration between the development team and users, stakeholders, and other members of the organisation. This allows for a more responsive and adaptable approach to development, with the ability to adjust the design and development of the application based on changing requirements or feedback.

The Agile model is well-suited to redesigning applications like MS Teams, where the user experience is a critical component of the application's success. By involving users and stakeholders in the development process, the Agile model helps to ensure that the redesigned application is more likely to meet their needs and expectations. Additionally, the iterative and incremental approach allows for quicker feedback and more rapid adjustments, resulting in a more efficient development process and a better end product.



5.1 Concept

The concept for redesigning MS Teams involves identifying the key areas of improvement for the application and setting overall goals for the redesign. This may involve conducting user research to understand the needs and pain points of existing users, analysing usage data to identify areas of low engagement or high churn, and reviewing feedback from stakeholders and internal teams.

The goal of the concept stage is to establish a clear vision and direction for the redesign, based on a deep understanding of user needs and business objectives. This may involve developing a set of user personas or scenarios, outlining the key features and functionality of the new application, and defining metrics for success.

Overall, the concept stage is focused on establishing a strong foundation for the redesign, by identifying the most critical issues to address and setting clear goals for what the redesigned application should achieve. This ensures that the development process is focused and efficient, and that the resulting application is more likely to meet the needs of users and stakeholders.

First up is the concept phase. Here, a product owner will determine the scope of their project. If there are numerous projects, they will prioritise the most important ones. The product owner will discuss key requirements with a client and prepare documentation to outline them, including what features will be supported and the proposed end results. It is advisable to keep the requirements to a minimum as they can be added to in later stages. In the concept stage, the product owner will also estimate the time and cost of potential projects. This detailed analysis will help them to decide whether or not a project is feasible before commencing work.

5.2 Inception

Once the concept is outlined, it is time to build the software development team. A product owner will check their colleagues' availability and pick the best people for the project while also providing them with the necessary tools and resources. They can then start the design process. The team will create a mock-up of the user interface and build the project architecture. The inception stage involves further input from stakeholders to fully flesh out the requirements on a diagram and determine the product functionality. Regular check-ins will help to ensure that all requirements are built into the design process.

In the context of redesigning MS Teams, the inception phase is the second stage of the Agile development process. In this stage, the focus is on gathering detailed requirements for the redesigned application and developing a roadmap for how the application will be developed. During the inception phase, the development team will work closely with stakeholders, including users, business leaders, and internal teams, to gather information about their needs and requirements for the application. This may involve conducting user interviews, focus groups, surveys, or other forms of research, as well as reviewing existing data on user behaviour and engagement with the existing application.

Based on this research, the team will develop a detailed roadmap for how the redesigned application will be developed, including a prioritised list of features and functionality, as well as a timeline and budget for the project. The team may also develop a set of wireframes or other design prototypes to help stakeholders visualise the proposed changes to the application.

Overall, the inception phase is critical to ensuring that the redesigned MS Teams application meets the needs of users and stakeholders, while also being feasible and achievable within the constraints of the project timeline and budget. By gathering detailed requirements and developing a clear roadmap for the project, the team can ensure that the development process is focused and efficient, and that the resulting application is more likely to be successful.

5.3 Iteration

Next up is the iteration phase, also referred to as construction. It tends to be the longest phase as the bulk of the work is carried out here. The developers will work with UX designers to combine all product requirements and customer feedback, turning the design into code. The goal is to build the bare functionality of the product by the end of the first iteration or sprint. Additional features and tweaks can be added in later iterations. This stage is a cornerstone of Agile software development, enabling developers to create working software quickly and make improvements to satisfy the client.

In the context of redesigning MS Teams, the iteration phase is a key part of the Agile development process. This stage involves the actual development of the redesigned application, broken down into a series of iterative cycles or sprints.

During each iteration or sprint, the development team will focus on a specific set of features or functionality for the application. This may involve developing new code, integrating third-party software or tools, or making changes to the user interface or user experience. The team will work closely together, using Agile development methodologies such as Scrum or Kanban, to ensure that the work is completed efficiently and effectively.

At the end of each iteration, the team will review their progress and assess whether they have met their goals for that cycle. They will then make any necessary adjustments to the scope or direction of the project, based on feedback from users or stakeholders, and plan the next iteration or sprint.

The iteration phase is critical to the success of the redesign project, as it allows the development team to break the work down into smaller, more manageable chunks and focus on delivering value to users in a continuous and iterative way. By working in short sprints and continuously reviewing progress and feedback, the team can ensure that the redesigned MS Teams application is responsive to the needs of users and stakeholders, and is more likely to be successful overall.

5.4 Release

The product is almost ready for release. But first, the quality assurance team needs to perform some tests to ensure the software is fully functional. These Agile team members will test the system to ensure the code is clean — if potential bugs or defects are detected, the developers will address them swiftly. User training will also take place during this phase, which will require more documentation. When all of this is complete, the product's final iteration can then be released into production.

The release phase in the context of redesigning MS Teams refers to the stage where the new version of the software is prepared for deployment to end-users. This phase involves finalising

the product, testing it, and making sure it meets all the requirements and quality standards set out in the project plan.

During the release phase, the development team will perform a series of tests to ensure the redesigned MS Teams application is fully functional, secure, and ready for deployment. This may involve functional testing, performance testing, security testing, and other types of testing to validate the software.

Once the application has passed all the necessary tests and is deemed ready for release, it will be packaged and deployed to the end-users. The deployment process may involve rolling out the new version of the application in stages to minimise the risk of any unforeseen issues, or it may be released to all users at once.

The release phase is an important part of the redesign process, as it marks the point where the redesigned application becomes available to the end-users. A successful release requires careful planning and testing to ensure that the application is stable, secure, and meets all the requirements set out in the project plan. Once the application is released, the development team will continue to monitor and support it in the maintenance phase to ensure ongoing success.

5.5 Maintenance

The software will now be fully deployed and made available to customers. This action moves it into the maintenance phase. During this phase, the software development team will provide ongoing support to keep the system running smoothly and resolve any new bugs. They will also be on hand to offer additional training to users and ensure they know how to use the product.

Over time, new iterations can take place to refresh the existing product with upgrades and additional features.

The maintenance phase in the context of redesigning MS Teams refers to the stage where the redesigned application is released to end-users, and the development team continues to provide ongoing support and updates to ensure the application's continued success.

During the maintenance phase, the development team will monitor the performance of the application and address any issues that arise. They may also make updates or improvements to the application based on user feedback or changes in technology.

The maintenance phase is critical to the success of the redesigned MS Teams application, as it ensures that the application continues to function as intended and provides value to end-users.

The development team may provide ongoing technical support to users, resolve any issues that arise, and make updates to the application as needed to ensure it remains relevant and useful.

The maintenance phase may continue for the life of the application, and as such, ongoing planning and resource allocation is necessary to ensure that the application remains up-to-date and meets the evolving needs of the end-users. The maintenance phase is an important part of the redesigning process, as it ensures that the application continues to deliver value and meets the goals set out in the project plan.

5.6 Retirement

There are two reasons why a product will enter the retirement phase: either it is being replaced with new software, or the system itself has become obsolete or incompatible with the organisation over time. The software development team will first notify users that the software is

being retired. If there is a replacement, the users will be migrated to the new system. Finally, the developers will carry out any remaining end-of-life activities and remove support for the existing software.

The retirement phase in the context of redesigning MS Teams refers to the stage where the redesigned application is no longer needed, and the development team removes the application from production.

The retirement phase may occur when the redesigned MS Teams application is replaced by a new application, when it is no longer needed, or when it becomes too costly to maintain. In this phase, the development team will work to decommission the application, including removing it from servers and databases, deleting user data, and archiving project documentation.

The retirement phase is an essential part of the application lifecycle, and it is critical to manage it effectively to avoid potential security or compliance risks. During the retirement phase, it is also essential to communicate with end-users and stakeholders to ensure they are aware of the application's retirement and to provide any necessary guidance or support to help them transition to a new solution.

The retirement phase is the final stage in the redesigning process, and it serves as a reminder that all applications have a limited lifespan. By effectively managing the retirement phase, the development team can ensure that the redesigned MS Teams application is retired securely and efficiently, and all related data and information are handled in accordance with legal and regulatory requirements.

6. SCRUM

SCRUM is a widely used framework in the Agile methodology for managing software development projects, including the redesigning of MS Teams. SCRUM emphasises teamwork, collaboration, and iterative development, making it an excellent fit for the redesigning process. The SCRUM framework involves several key components, including:

1. **Product backlog:** A prioritised list of features and functionality that the team will work on during the redesigning process.
2. **Sprint:** A fixed period of time, usually 1-4 weeks, during which the team works on a set of features from the product backlog.
3. **Sprint planning:** A meeting at the beginning of each sprint where the team determines what they will work on during the sprint.
4. **Daily stand-up:** A short meeting each day where the team discusses progress, identifies roadblocks, and plans for the day ahead.
5. **Sprint review:** A meeting at the end of each sprint where the team demonstrates the completed work and receives feedback from stakeholders.
6. **Sprint retrospective:** A meeting at the end of each sprint where the team reflects on their performance and identifies areas for improvement.

Using SCRUM in the redesigning of MS Teams can provide several benefits, including increased collaboration, flexibility, and transparency. The SCRUM framework encourages regular communication between team members and stakeholders, which can help ensure that everyone is on the same page and that the project is moving in the right direction.

In addition, SCRUM's iterative approach can help the team identify and address issues early in the redesigning process, reducing the risk of delays or costly errors. By using the SCRUM framework, the redesigning team can stay focused on delivering value to end-users, resulting in a more effective and efficient redesign of MS Teams.

Initiation: This phase involves defining the scope and goals of the redesign project, and establishing the project team, stakeholders, and requirements.

Planning: This phase involves creating a high-level plan for the redesign project, including defining the sprints, user stories, and product backlog.

Release: This phase involves deploying the redesigned Teams app to users, with comprehensive training and support to ensure a successful transition.

Sprint 0: This phase involves setting up the project infrastructure, including the development environment, tools, and processes.

Sprint 1 and Beyond: This phase involves executing the sprints, which typically last 2-4 weeks. During each sprint, the team works on a set of user stories, with the goal of delivering working software at the end of each sprint.

Review and Retrospective: This phase involves conducting a review of the sprint results and retrospectively analysing what worked well and what can be improved.

7. Why Agile over RAD

Flexibility: Agile methodology emphasises flexibility, allowing teams to respond to changing requirements and stakeholder feedback throughout the project.

Collaboration: Agile methodology emphasises collaboration among the project team, stakeholders, and users.

Continuous improvement: Agile methodology emphasises continuous improvement, allowing teams to refine and improve the redesigned Teams app based on feedback and results.

Incremental delivery: Agile methodology emphasises delivering working software in increments, allowing teams to deliver value to stakeholders and users early in the project.

User-centred design: Agile methodology emphasises a user-centred design approach, ensuring that the redesigned Teams app meets the needs and preferences of users.

Agile methodology and Rapid Application Development (RAD) are two different approaches to software development, including the redesigning of MS Teams. While both approaches aim to deliver software quickly and efficiently, they have significant differences in their philosophy and process.

Agile methodology is an iterative and flexible approach that emphasises collaboration, teamwork, and customer satisfaction. Agile development involves breaking down the project into smaller, more manageable parts, with a focus on delivering a minimum viable product (MVP) early on, and then building on that foundation through subsequent iterations or sprints.

On the other hand, RAD is a linear and sequential approach that prioritises rapid development and prototyping over extensive planning and documentation. RAD methodology emphasises creating a working model of the system as quickly as possible, followed by iterative refinement and improvement.

In the context of redesigning MS Teams, Agile methodology may be more suitable than RAD because it is better equipped to handle the complex and evolving nature of the project.

Redesigning a complex system like MS Teams requires significant collaboration, feedback, and flexibility, which are hallmarks of the Agile methodology. With Agile, the team can work in smaller iterations, receive feedback from users and stakeholders, and make changes quickly and efficiently.

Additionally, Agile methodology provides a higher degree of transparency and visibility, which can help stakeholders understand the project's progress and provide meaningful feedback. This helps ensure that the final product meets the users' needs and expectations, resulting in greater customer satisfaction.

In summary, Agile methodology is generally considered better than RAD for redesigning MS Teams due to its iterative and flexible approach, which provides greater collaboration, feedback, and transparency, resulting in a more effective and efficient redesign.

8. Waterfall Model

The waterfall model is a linear and sequential approach to software development that consists of a series of distinct phases, with each phase building upon the previous one. While this approach can be effective for certain types of projects, it may not be the best fit for the complex and rapidly evolving redesign of MS Teams.

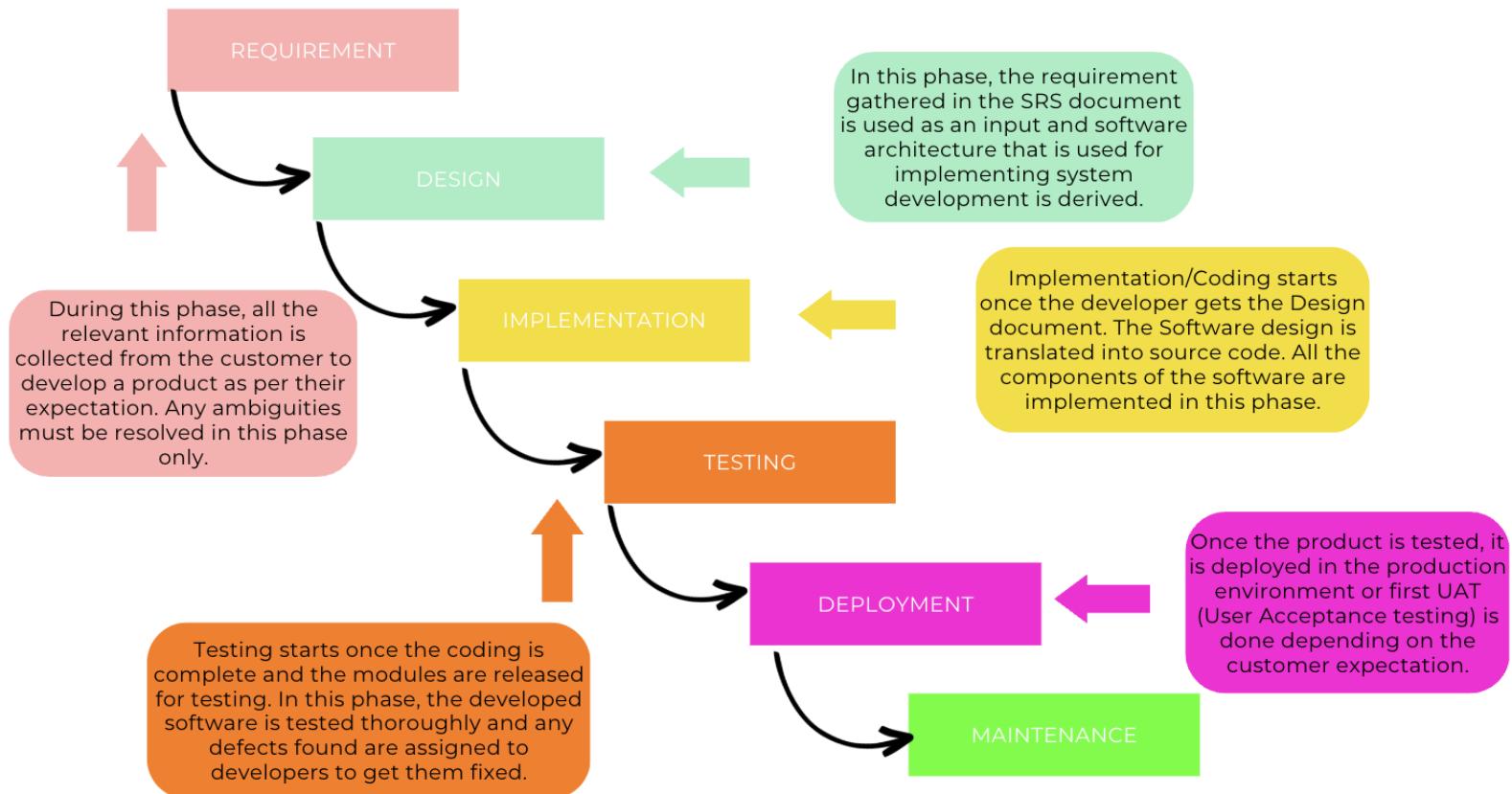
In the context of redesigning MS Teams, the waterfall model may not be the most effective approach due to the project's complexity and the need for collaboration, feedback, and flexibility.

The waterfall model's rigid structure can make it difficult to incorporate changes or new information that may arise during the redesign process.

However, if the project requirements are well-defined and stable, the waterfall model can provide a clear and structured approach to redesigning MS Teams. The model consists of several distinct phases, including requirements gathering, design, implementation, testing, and maintenance. Each phase must be completed before moving on to the next, making it essential to define and document the requirements accurately at the beginning of the project.

In summary, the waterfall model can be an effective approach for redesigning MS Teams if the requirements are stable and well-defined, and there is little need for flexibility or collaboration.

However, for a complex and evolving project like the redesign of MS Teams, the Agile methodology or another more flexible approach may be a better fit.



9. Comparison b/w RAD and Waterfall

The main difference between Rapid Application Development (RAD) and Waterfall models is their approach to the software development life cycle.

The Waterfall model follows a sequential approach, where the development team moves through the different phases of the project in a linear, step-by-step process. Each phase of the project must be completed before the next phase can begin. This means that the project moves from planning to execution, testing, and maintenance in a linear fashion.

In contrast, the RAD model takes an iterative approach to development, breaking the project into smaller, more manageable pieces. The RAD model emphasizes prototyping and getting early user feedback to refine the design, rather than waiting until the final product is complete to gather feedback.

While both models have their advantages, RAD is generally preferred when speed is a priority and the project requirements are not fully understood or likely to change. The RAD model allows for greater flexibility in the design process and quicker delivery of a working product. In contrast, the Waterfall model is generally preferred when the project requirements are well understood and unlikely to change, and when a more structured approach is necessary to ensure proper documentation and control.

Ultimately, the choice between RAD and Waterfall will depend on the specific needs of the project, the level of user involvement, the development team's experience and preferences, and other factors.

Waterfall Model v/s RAD Model

Waterfall Model	RAD Model
Waterfall model known as Classical/Traditional Model.	RAD stands for Rapid Application Development.
There is high amount risk in waterfall model.	There is low amount risk in RAD model.
In waterfall model large team size is required.	In RAD model small team size is required.
Waterfall model can't handle large project.	RAD model also can't handle large project but usually it is preferred between large and small project.
Any changes can be made in waterfall model only at the beginning.	Any changes can be made in RAD model anytime.

Waterfall Model	RAD Model
The product of Waterfall model is delivered after the completion of all stages.	The product of RAD model is delivered as soon as possible.
There is long waiting time for running software in waterfall model.	There is less waiting time for running software in RAD model, as its first version is released as soon as possible.
Waterfall model is not compatible with the change in client requirements.	RAD model may work with the change in client requirements.

10. Comparison b/w RAD and Agile Model

Both the Rapid Application Development (RAD) and Agile models have an iterative approach to software development. However, there are some differences between the two.

The RAD model emphasizes prototyping and getting early user feedback to refine the design, rather than waiting until the final product is complete to gather feedback. The RAD model also tends to have a more structured approach with a clear project plan, specific deadlines, and assigned roles for team members.

The Agile model, on the other hand, focuses on collaboration and flexibility. The Agile model involves breaking the project down into smaller, more manageable pieces, and prioritizing the most important features for development first. The Agile model relies on continuous user feedback, and project requirements are expected to evolve and change throughout the development process.

In terms of redesigning MS Teams, the Agile model may be better suited as it allows for more flexibility and the ability to adjust to changing requirements as the project progresses. Redesigning MS Teams may involve adding new features, changing existing features, and improving the user experience, all of which may require ongoing iteration and refinement. Additionally, the Agile model's emphasis on collaboration and continuous feedback may be beneficial for ensuring that the final product meets the needs and expectations of users.

11. Conclusion

In conclusion, there is no one-size-fits-all solution for redesigning Microsoft Teams. The best model for your project will depend on several factors such as the complexity of the project, the capabilities of your team, the requirements of your stakeholders, and the timeline for delivery. The Agile, Waterfall, Scrum, and Lean models all have their own strengths and weaknesses and can be used effectively for different types of projects. When choosing a model, it is important to assess the needs of your project, understand the capabilities of your team, and consider the unique constraints and challenges you face.

Ultimately, the goal is to choose a model that enables you to effectively manage your project, deliver high-quality results, and meet the needs of your stakeholders. It is important to remain flexible and open to changes as the project progresses and to be prepared to adjust your approach as needed.



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DIGITAL ASSIGNMENT - III

Winter Semester 2022-23

LAB

CBS3011--Usability Design of Software Applications
PARTHIBAN K

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Heuristic Principles:

Introduction:

Heuristic principles are general guidelines that help designers create usable and effective software applications. These principles are based on research and experience, and they serve as a set of best practices for designing interfaces that are easy to use, learn, and remember.

The term "heuristic" comes from the Greek word "heuriskein," which means "to find." In the context of usability design, a heuristic principle is a rule of thumb that helps designers find and solve problems related to user experience.

Some common heuristic principles in usability design include:

Visibility of system status: The user should always be informed about what is happening in the system and how long it will take.

Match between system and the real world: The system should speak the user's language, with words, phrases, and concepts familiar to the user.

User control and freedom: The user should be able to undo or redo their actions, and exit the system easily.

Consistency and standards: The system should follow established conventions and principles of design, and be consistent across different interfaces.

Error prevention: The system should be designed to prevent errors from occurring in the first place, by making it clear what actions will result in specific outcomes.

Recognition rather than recall: The system should minimise the user's need to remember information from one part of the interface to another.

Flexibility and efficiency of use: The system should provide shortcuts, accelerators, and other features that allow experienced users to work more quickly and efficiently.

Aesthetic and minimalist design: The system should be visually appealing and contain only the essential elements needed to accomplish the user's goals.

Help users recognize, diagnose, and recover from errors: The system should provide clear and concise error messages that help users understand what went wrong and how to fix it.

Help and documentation: The system should provide clear and accessible help documentation that is easy to find and use.

By applying these heuristic principles, designers can create software applications that are intuitive, efficient, and enjoyable to use.

In redesigning of MS Teams, we came across with 5 heuristic principles:

- **Visibility of system status:**

This principle requires that the system clearly communicates its state and status to the user. A real-life example in the context of redesigning Microsoft Teams could be the display of notifications for new messages or updates to tasks. These notifications should be clear, prominent, and easily accessible so that users are always aware of what is happening in the platform.

- **Match between system and the real world**

The system should be designed to match the mental model of the user and the real world. For example, in Microsoft Teams, the interface could be designed to use common icons and symbols that users are familiar with from other applications, making it easier for them to understand and use

- **User control and freedom**

Users should have control over their actions and the ability to undo them if necessary. For instance, in the redesign of Microsoft Teams, a user-friendly undo and redo option could be provided, allowing users to easily revert to a previous version of a document or conversation if they make a mistake.

- **Consistency and standards**

The design should be consistent and follow established standards, making it easy for users to understand and use. In the case of Microsoft Teams, this could involve using a consistent colour scheme, font, and overall layout throughout the application, so that users can easily find what they need and understand how to use it.

- **Error prevention and recovery**

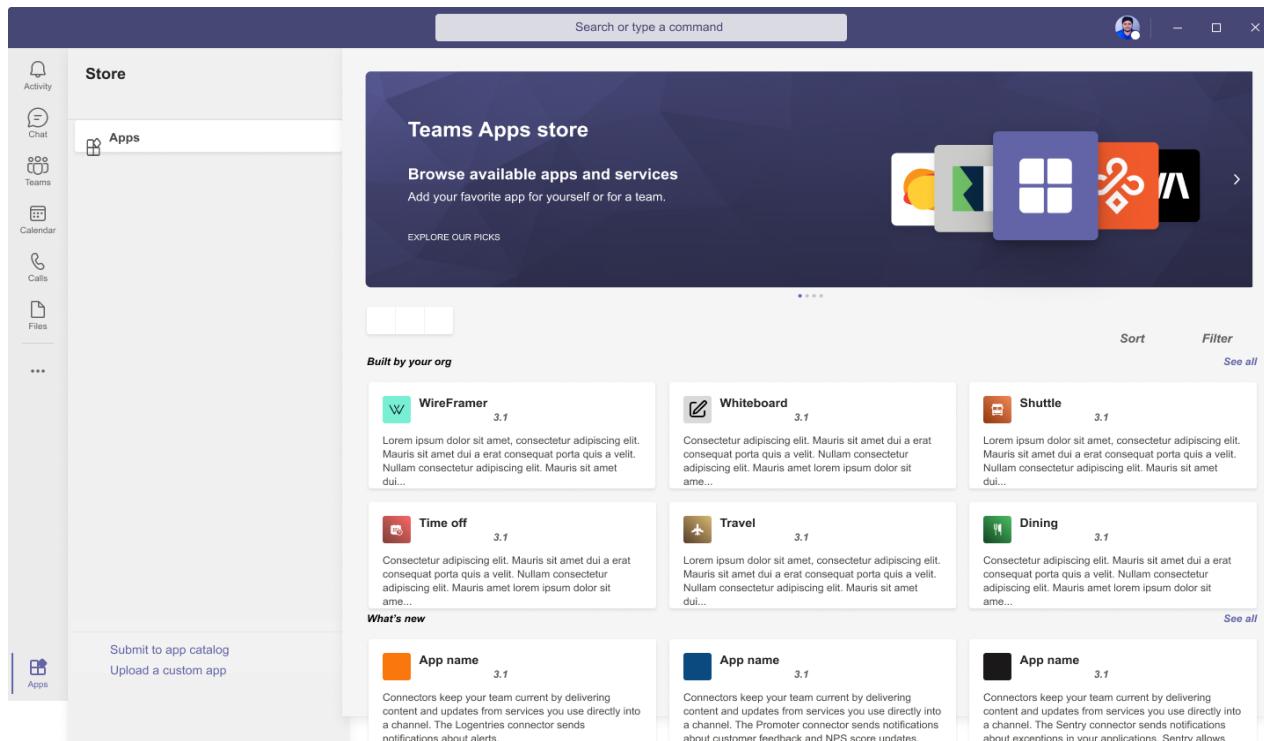
The design should prevent errors from occurring and provide effective recovery options if they do occur. For example, in Microsoft Teams, the redesign could include error messages and confirmation dialogs to prevent accidental deletions or changes, and an effective recovery mechanism for any lost data. This would help ensure that users do not lose any important information or have to redo work due to a mistake.\

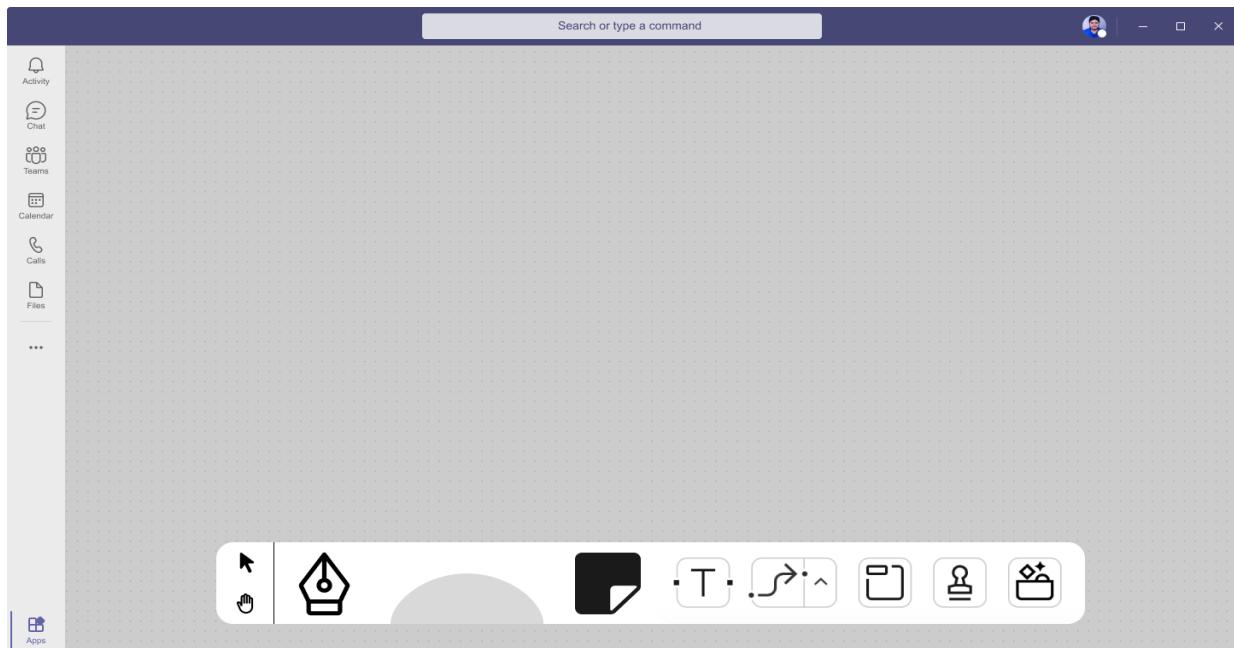
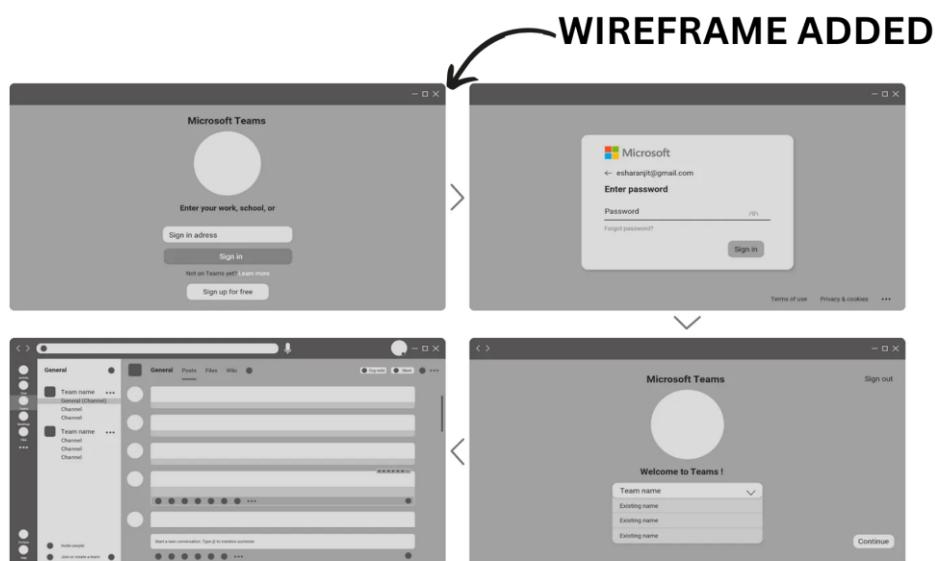
3 FEATURES THAT CAN BE ADDED INTO MICROSOFT TEAMS:

I) Improved collaboration features

The redesign could include new or improved collaboration features such as shared task lists, real-time co-authoring of documents, and integration with other collaboration tools like Trello or Asana.

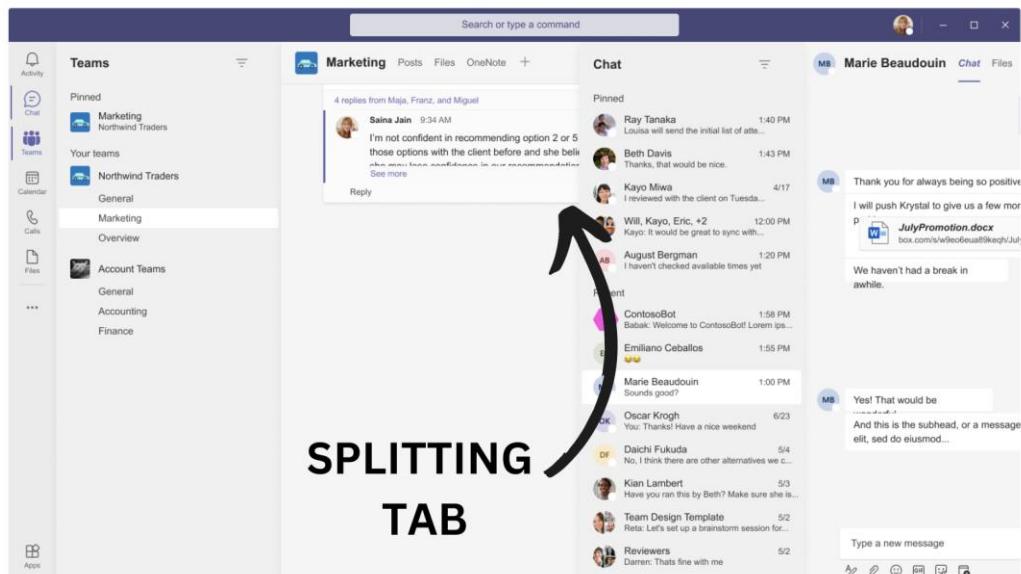
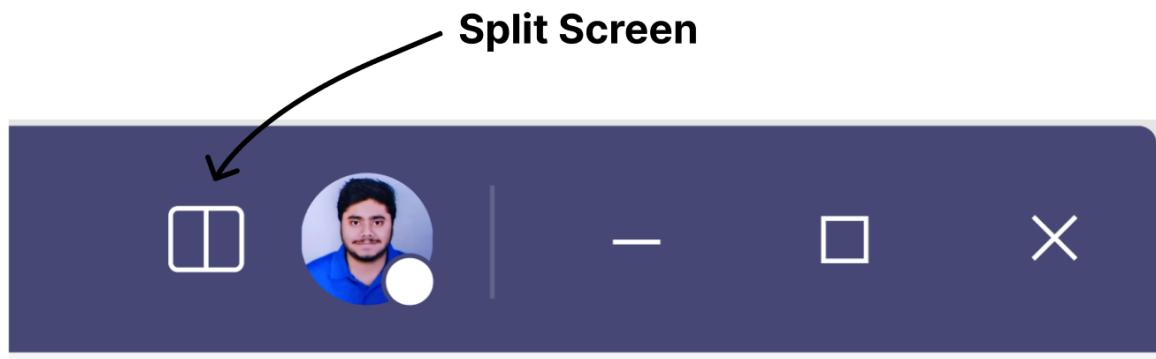
MS Teams could add new collaboration tools, such as whiteboarding, brainstorming, and mind-mapping tools, to help users work more effectively together.





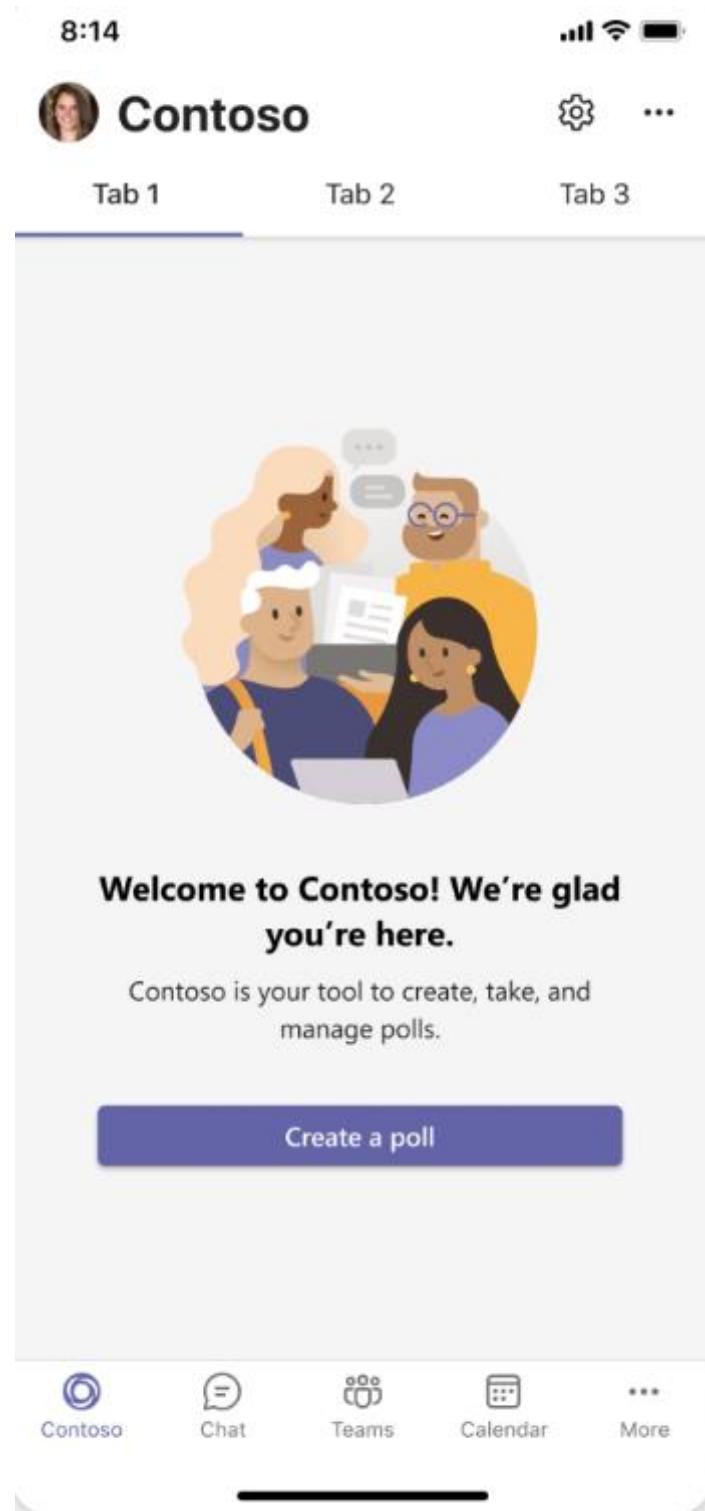
II) Customizable user interface

The redesign could include a customizable user interface that allows users to rearrange, add or remove panels, or change the overall look and feel of the application to meet their specific needs. For example , in this case if the user needs a wide screen for seeing the messages as well as attending the meet, i.e. multi task , we have introduced a new feature of splitting the application into two halves.



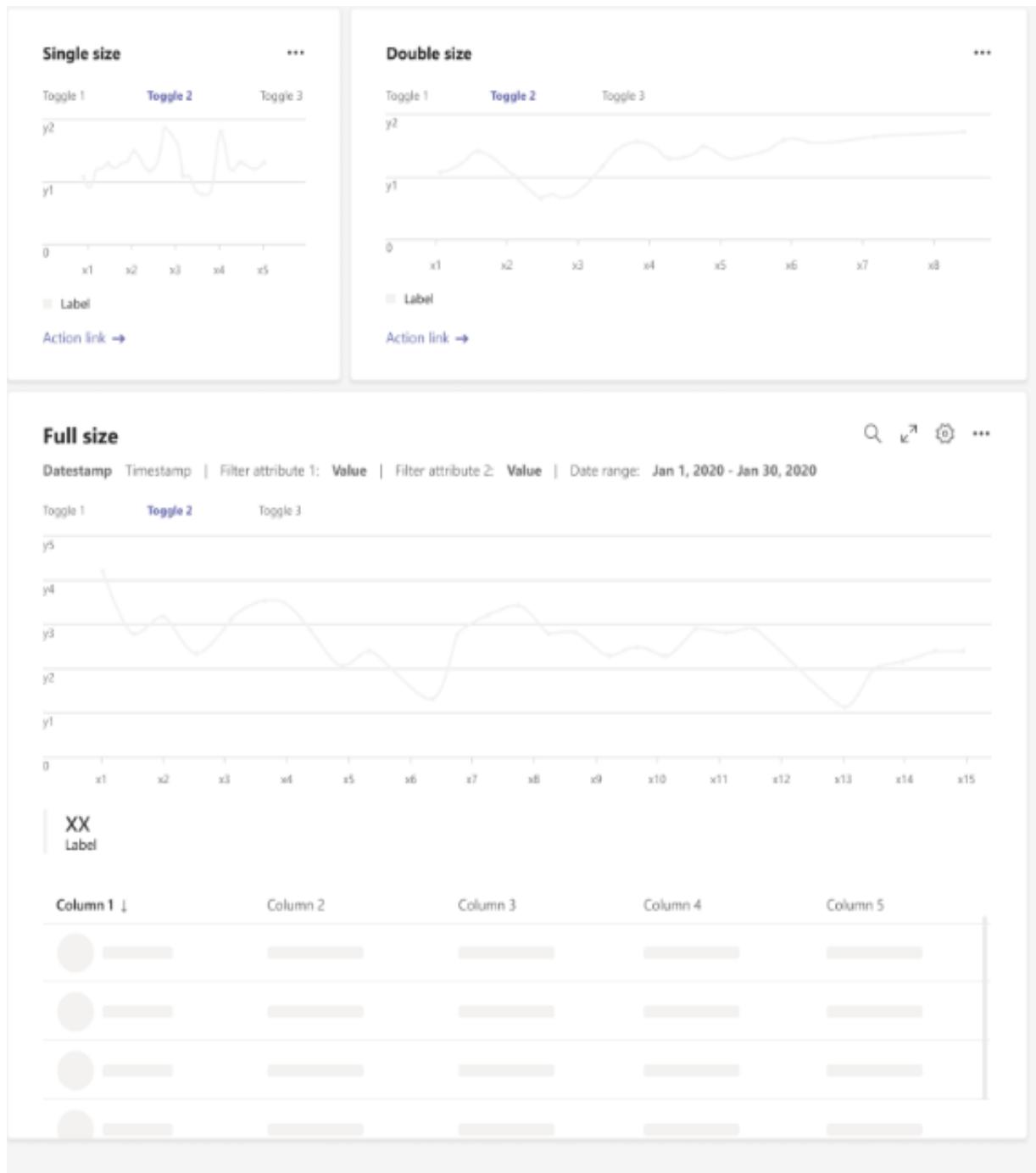
III) Mobile Optimization

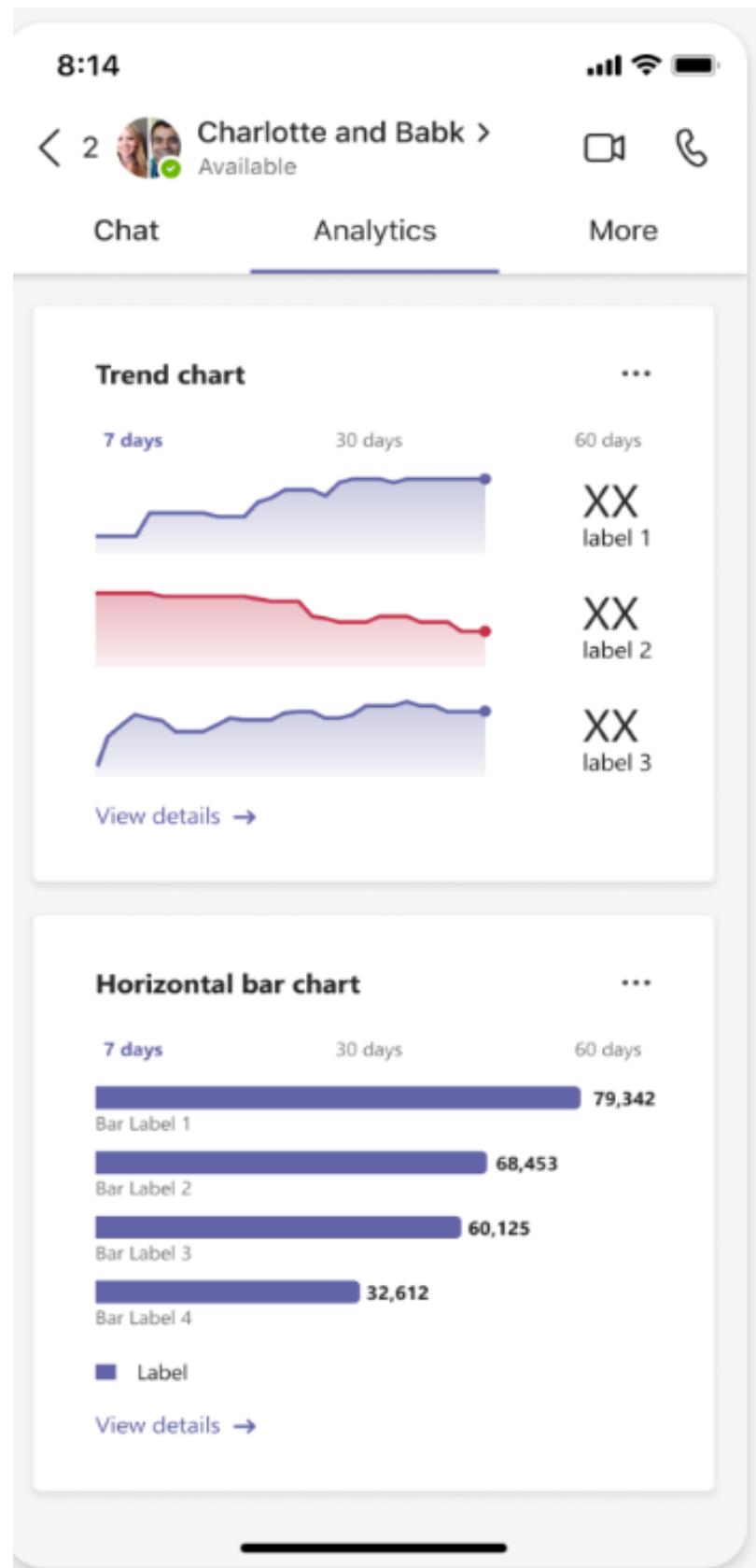
The redesign could include improved mobile support, making it easier for users to access and use Microsoft Teams on their smartphones and tablets. Here, we have created different tabs for different uses of the users that can be done simultaneously.



IV) Creating a dashboard

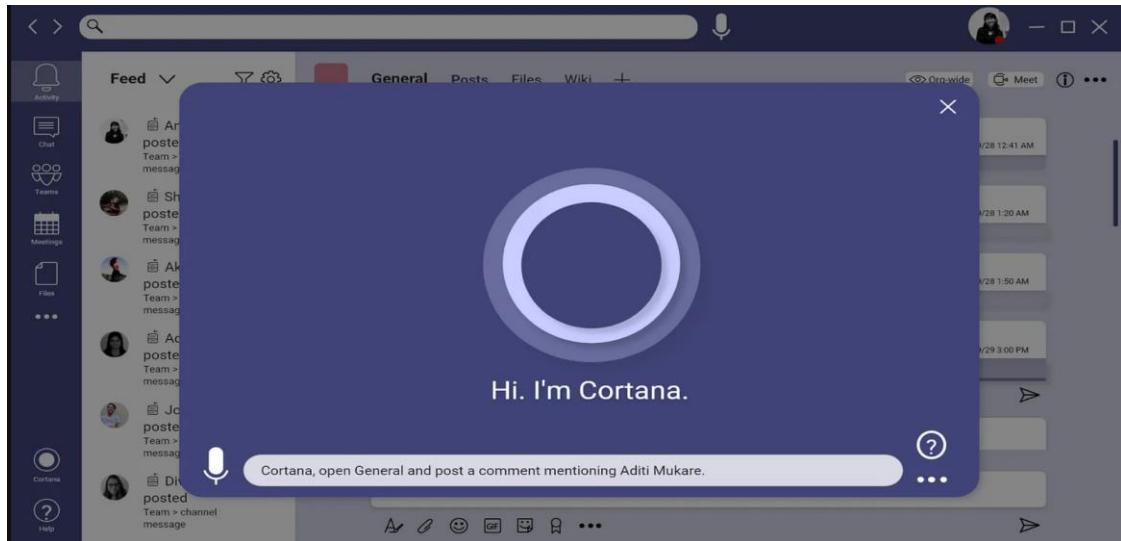
The dashboard displays different types of content in a central location. It will help the users to analyse data, report metrics and organise different information in one place. It will basically help to visualise the data and display complex information without providing any difficulty to the user.





V) Voice support system for blind people

We have integrated CORTANA, an artificial intelligence voice assistant with Microsoft Teams which will help the blind people to navigate through the application.



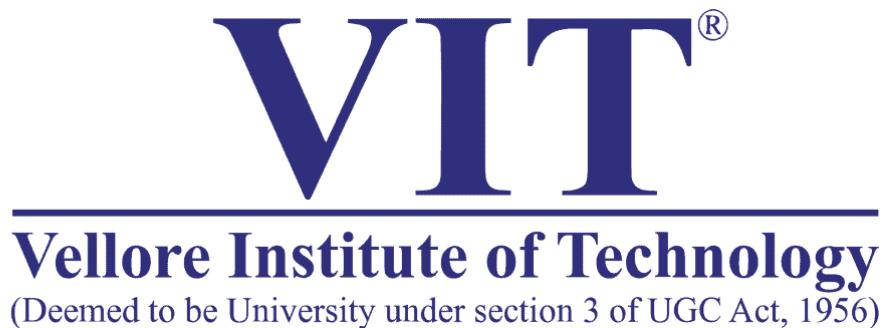
VI) LinkedIn integration now available in Teams

You can now see LinkedIn profiles in one-on-one chats. To view someone's profile, select the LinkedIn tab of the chat if they have one available. While taking interviews, it becomes easy for the recruiter to take a glance at the interviewee details.

A screenshot of the Microsoft Teams application interface, specifically showing a one-on-one chat with a LinkedIn integration. The top navigation bar includes "Ray Tanaka", "Chat", "Files", "Organization", "Activity", "LinkedIn" (which is highlighted with a red box), and a "+" sign. Below this, the LinkedIn profile for "Ray Tanaka" is displayed, showing his photo, name, title ("User Research Specialist at Contoso"), location ("New York, New York"), and connection count ("234 connections"). A "Highlights" section shows "6 connections in common" with "Mona Kane, Henry Brill, and 4 others". Below this, a link "3 more on LinkedIn" is visible. The Teams sidebar and feed are visible on the left and top of the main window.

CONCLUSION

In conclusion, the redesign of MS Teams has the potential to greatly enhance the user experience for individuals and organisations alike. By focusing on user feedback and incorporating modern design principles, Microsoft can improve the platform's functionality, accessibility, and overall aesthetic. The proposed redesign includes features such as an updated navigation menu, customizable themes and backgrounds, and streamlined communication and collaboration tools. These changes can make MS Teams more intuitive and efficient to use, while also allowing users to personalise their experience to fit their unique needs and preferences. Furthermore, the redesign can help position MS Teams as a leader in the increasingly competitive field of workplace communication and collaboration platforms. By providing a modern and user-friendly interface, MS Teams can attract and retain users, and ultimately help organisations improve their productivity and efficiency. Overall, the redesign of MS Teams is an exciting development for individuals and organisations looking to streamline their communication and collaboration processes. With its new and improved features, MS Teams has the potential to become an even more essential tool for modern workplaces.



DIGITAL ASSIGNMENT - IV

Winter Semester 2022-23

LAB

CBS3011--Usability Design of Software Applications
PARTHIBAN K

Done By :

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Empathy map:

Who is the user?

Corporate professionals, teams, and organisations who use MS Teams for communication, collaboration, and project management.

What do they want to accomplish?

Efficient and seamless communication and collaboration with colleagues and stakeholders, organised project management, access to relevant information, and improved productivity.

What are their pain points and frustrations?

Complex navigation and user interface that leads to confusion and difficulty in finding features and functions.

Inefficient search functionality that makes it difficult to find specific messages, files, or conversations.

Limited customization options for personalization and branding.

Difficulties with integrating and syncing with other tools and applications.

Limited support for video conferencing, screen sharing, and other collaborative features.

What are their emotions and feelings?

Frustration, annoyance, impatience, confusion, and stress due to the difficulties and inefficiencies in using MS Teams.

What do they see and hear?

Visual clutter, difficult navigation, and confusing user interface. They hear colleagues complaining about the difficulties and inefficiencies in using MS Teams.

What are their influences?

The need to communicate and collaborate with colleagues and stakeholders, and the desire for improved productivity and efficiency.

What are their goals and motivations?

To improve communication and collaboration with colleagues and stakeholders, access relevant information easily, and improve productivity and efficiency.





I need teams to be more Collaborative.

Provide bot help to understand the teams. Better management of files and channels.

Grammaraly and bot moderators will be good.

Can we have Collaborative platform to work?

Can MS Teams be used for Multitask?

Can Files be more organized?

Can the teams made more Interactive?

Feel

Think

DO

Say

Providing moderation makes its more easy and comfortable.

Should be more convient to understand and use.

More useful features like Moderator bots would help.

Checks demo videos, ratings and Reviews.

Goes through other apps and understands which is better for what feature.

Takes help of bots and tutorials to understand.

POV : Point of View

Situation 1:

A company has recently adopted a hybrid work model, with employees working both remotely and on-site. They have been using MS Teams for a while, but the current design does not fully support their new way of working. The company needs a redesign of MS Teams that better facilitates collaboration between remote and on-site employees, while also maintaining productivity and efficiency.

USER	NEED	INSIGHT
<p>The users are employees of the company, ranging from managers to entry-level staff.</p>	<p>The users need a tool that provides a seamless experience for collaboration and communication regardless of their location, and allows for effective management of tasks and projects.</p>	<p>The company could conduct a survey or focus group to gather feedback from employees on their experience using MS Teams, and identify pain points and areas for improvement. Additionally, researching best practices for hybrid work and collaboration tools that support it can provide valuable insights for the redesign.</p>

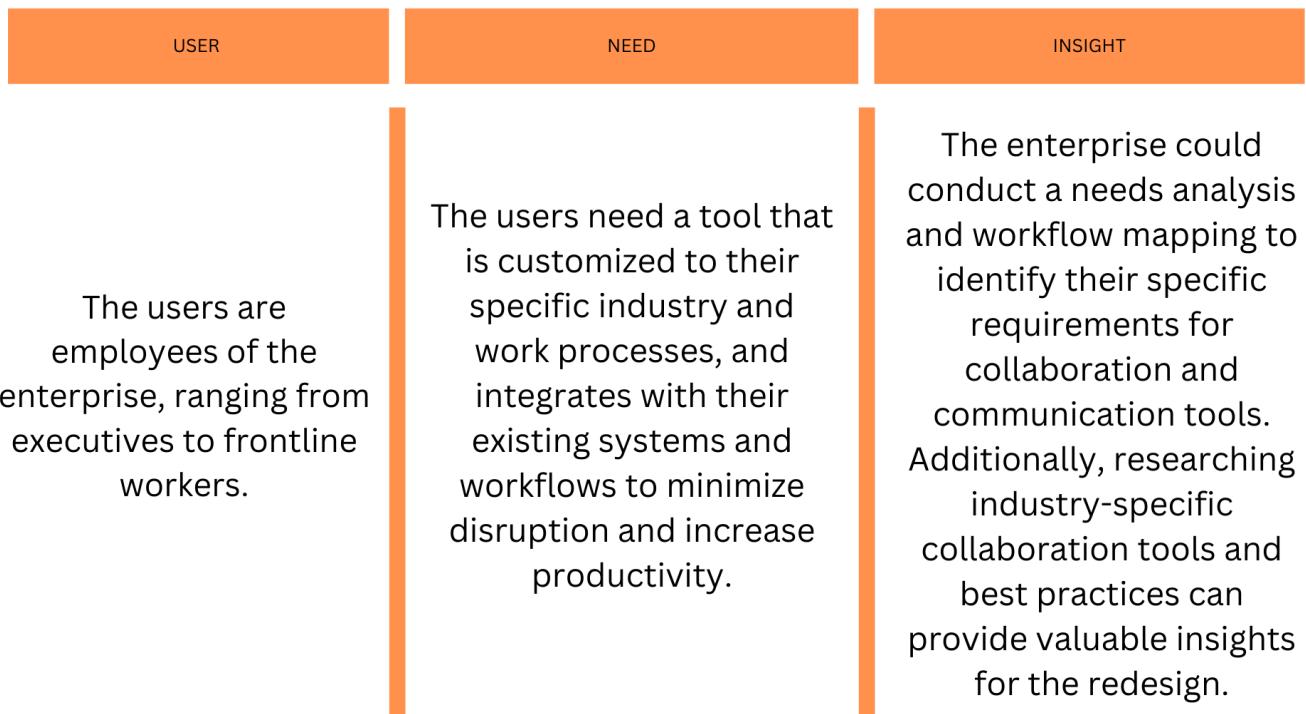
Situation 2:

A small business owner has been using MS Teams to manage communication and collaboration with remote contractors and freelancers. However, the current design is overwhelming and confusing, with too many features that the business owner does not need. The business owner needs a redesign of MS Teams that is simpler and more intuitive to use.

USER	NEED	INSIGHT
<p>The user is a small business owner who is not very tech-savvy and needs a tool that is easy to use and understand.</p>	<p>The user needs a tool that provides the necessary features for collaboration and communication with contractors and freelancers, but without the complexity and confusion of the current design.</p>	<p>The business owner could conduct a usability test with a few contractors or freelancers to gather feedback on their experience using MS Teams. Additionally, researching best practices for user-centered design and simplicity in collaboration tools can provide valuable insights for the redesign.</p>

Situation 3:

A large enterprise has been using MS Teams for a while, but the current design does not fully meet the unique needs of their industry and work processes. They need a redesign of MS Teams that is tailored to their specific requirements and integrates with their existing systems and workflows.



RoadMap

A roadmap for the redesign of MS Teams from a user perspective could involve several phases.

Firstly, it would involve gathering feedback from users through surveys, interviews, and usability testing to identify pain points and areas for improvement in the current design.

The next phase would be to prioritise the user needs and requirements, based on their feedback and the company's strategic objectives. This could involve mapping out user journeys and workflows to understand how MS Teams fits into their daily tasks and processes.

Once the needs and requirements are identified, the design team could begin creating wireframes and prototypes of the new design, incorporating user feedback and best practices for user-centred design.

The new design would then go through several rounds of testing and refinement, with continuous feedback from users to ensure that it meets their needs and expectations.

Finally, the new design would be launched with proper training and support for users, to ensure a smooth transition and adoption of the new tool. Regular user feedback and iteration would continue to ensure that MS Teams remains a valuable and user-friendly tool for collaboration and communication.



Journey Map

A journey map for the redesign of MS Teams from a user perspective would depict the user's experience of using the current design of MS Teams and the pain points that they encounter, as well as the desired outcomes and expectations of the redesign. The journey map would identify the different touchpoints where the user interacts with MS Teams, such as setting up an account, joining a team, participating in a chat, or working on a project. It would also highlight the emotions, behaviours, and needs of the user at each touchpoint, as well as the context in which they use MS Teams, such as their work environment and tools. The journey map would help the design team to identify opportunities for improvement and innovation, and to ensure that the redesigned MS Teams meets the needs and expectations of its users at every step of their journey.



Ankit Kumar

19

Lucknow

Student

Complicated

Scenario

- Users struggle with finding specific features on the cluttered interface.
- Different users prioritize features differently depending on their job function or industry.

Expectations

- The new design will simplify the interface and improve search functionality to make it easier for users to find what they need.
- The new design will offer customization options for users to prioritize features based on their specific needs.

Phases	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Tasks	<ul style="list-style-type: none">Identify pain points in the current MS Teams design.	<ul style="list-style-type: none">Prioritize the identified pain points.	<ul style="list-style-type: none">Implement new features and design changes.	<ul style="list-style-type: none">Evaluate user feedback and usage metrics to measure the effectiveness of the redesign.	<ul style="list-style-type: none">Continuously optimize the design based on user feedback and usage metrics.
Thoughts	Users may be frustrated with the cluttered interface and difficulty in finding specific features.	Users may prioritize features differently depending on their job function or industry.	Users may be resistant to changes if they are not clearly communicated or if they disrupt their workflow.	Users may have varying opinions on the new design, and usage metrics may fluctuate during the transition period.	Users' needs and preferences may change over time, and new technologies and trends may emerge.
Emotions					
Opp.	Simplify the interface and improve search functionality to make it easier for users to find what they need.	Offer customization options for users to prioritize features based on their specific needs.	Provide clear communication and training materials to ensure a smooth transition to the new design.	Collect and analyze user feedback and usage metrics to identify areas of improvement and make necessary adjustments.	Regularly gather user feedback and evaluate usage metrics to ensure that the design remains relevant and user-friendly.



Vansh Bajaj

24



Kolkata

Student



Married



Arkadeep

18



Delhi

Student



Single

Scenario

Users may have evolving needs and preferences, leading to a potential lack of relevancy and engagement with the MS Teams interface over time.

Expectations

By continuously gathering user feedback and evaluating usage metrics, the redesigned MS Teams interface will remain relevant, innovative, and responsive to emerging trends and user needs.

Phases	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Tasks	<ul style="list-style-type: none"> Identify technical limitations in the current MS Teams design. 	<ul style="list-style-type: none"> Prioritize the identified technical limitations. 	<ul style="list-style-type: none"> Implement new features and design changes. 	<ul style="list-style-type: none"> Evaluate technical performance and user feedback to measure the effectiveness of the redesign. 	<ul style="list-style-type: none"> Continuously optimize the technical implementation based on user feedback and performance metrics.
Thoughts	The current design may not support all the desired features, or may be prone to bugs and glitches.	Some limitations may be more urgent than others, and some features may be more complex to implement than others.	Implementing new features and design changes could require significant development time and resources.	Technical performance may affect user experience, and user feedback may reveal new technical limitations.	New technologies and trends may emerge, requiring updates and improvements to the technical implementation.
Emotions					
Opp.	Conduct a technical review to identify limitations and areas for improvement.	Work with the development team to prioritize technical limitations and features based on their impact on functionality.	Work with the development team to plan and execute the implementation of new features and design changes.	Monitor technical performance and collect user feedback to identify areas of improvement and make necessary adjustments.	Regularly review technical performance and gather user feedback to ensure that the technical implementation remains robust and reliable.

Scenario

Stakeholders may have different priorities and goals for the MS Teams redesign, leading to conflicting ideas and potential delays.

Expectations

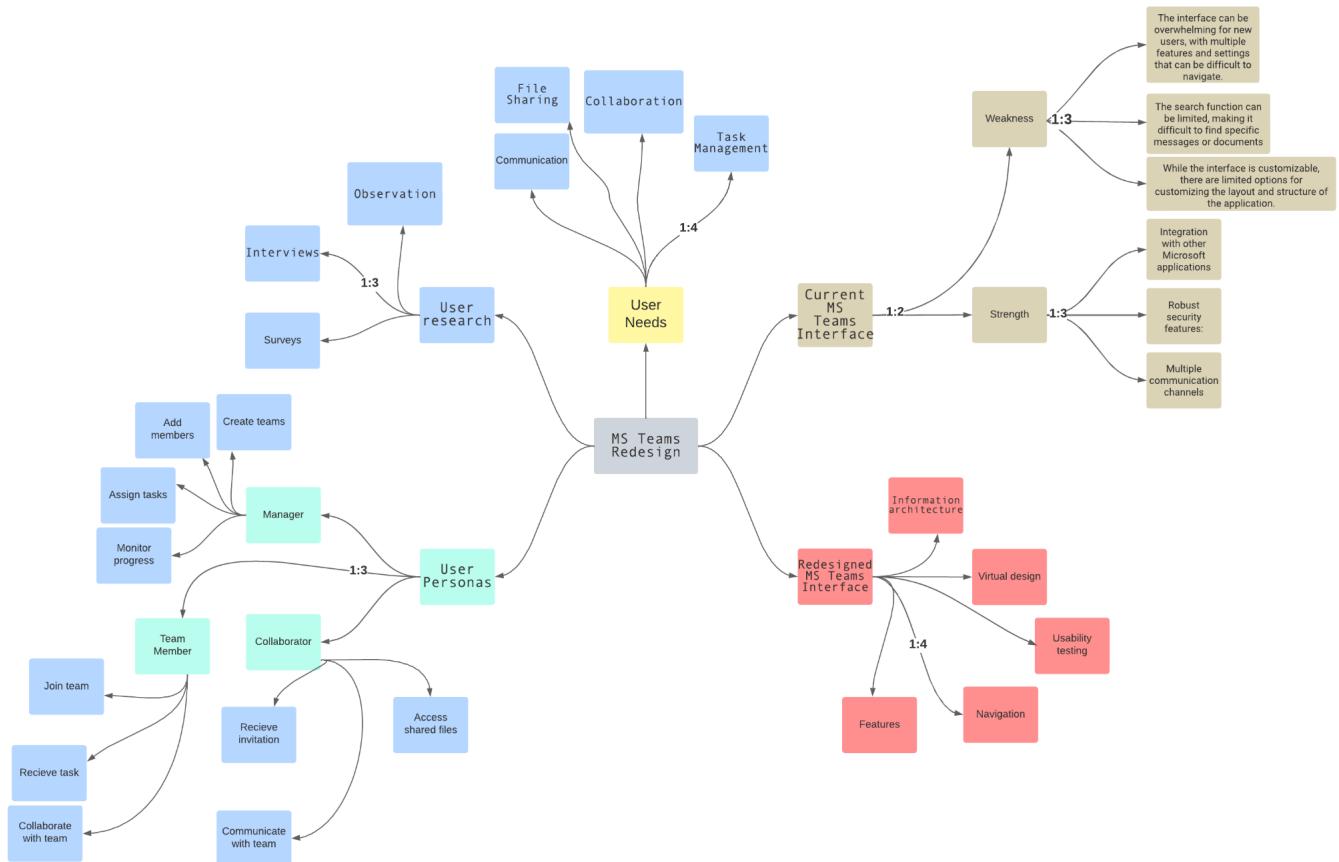
By emphasizing collaboration and communication among stakeholders, the redesigned MS Teams interface will align with organizational goals, improve team efficiency, and promote buy-in.

Phases	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Tasks	<ul style="list-style-type: none"> Identify stakeholders in the current MS Teams design. 	<ul style="list-style-type: none"> Prioritize the identified pain points. 	<ul style="list-style-type: none"> Implement new features and design changes. 	<ul style="list-style-type: none"> Evaluate user feedback and usage metrics to measure the effectiveness of the redesign. 	<ul style="list-style-type: none"> Continuously optimize the design based on user feedback and usage metrics.
Thoughts	Stakeholders may have different perspectives on what the pain points are and how to prioritize them.	Stakeholders may have different priorities based on their role or department.	Stakeholders may have different expectations for the new design and how it should be implemented.	Stakeholders may have different interpretations of user feedback and usage metrics.	Stakeholders may have different ideas for optimizing the design and how to prioritize them.
Emotions					
Opp.	Encourage stakeholder collaboration through workshops or meetings to ensure all perspectives are considered and prioritize pain points based on consensus.	Foster collaboration and communication among stakeholders to reach a consensus on the priority of pain points.	Involve stakeholders in the design and implementation process to ensure their expectations are met and provide regular updates on progress.	Encourage stakeholder collaboration in analyzing user feedback and usage metrics to gain a holistic understanding of the effectiveness of the redesign.	Foster collaboration and communication among stakeholders to ensure all optimization ideas are considered and prioritize them based on consensus.

Mind Map

- Users need a tool that provides seamless communication, streamlined collaboration, and personalization.
- To achieve this, the redesign should focus on improving the user interface, simplifying navigation, and enhancing the user experience.
- The redesign should incorporate user feedback and best practices in collaboration and communication tools to ensure that it meets the needs of diverse users.
- It should also support different work scenarios, such as hybrid work and remote collaboration, by providing features for video conferencing, document sharing, task management, and integration with third-party apps.
- Personalization features should allow users to customize their notification settings, interface, and preferences, and provide a consistent experience across devices.
- Overall, the redesign should prioritise user-centric design, ease of use, and functionality to ensure that MS Teams remains a valuable and indispensable tool for users.

https://lucid.app/lucidspark/d2e00990-176e-4c32-859b-6324ef87a360/edit?viewport_loc=-308%2C-413%2C3684%2C1788%2C0_0&invitationId=inv_a5c7b45d-757a-4783-ab6a-db46f8a05fcc



Storyboarding

The storyboard for the redesign of MS Teams from a user perspective would start with identifying the pain points and needs of users through research and feedback. It would then move to visualising the new user interface and user flows using storyboarding techniques such as sketching and wireframing. The storyboard would focus on enhancing the user experience by simplifying navigation, improving collaboration features, and enhancing accessibility. It would also incorporate feedback from user testing to ensure that the redesign meets the needs of a diverse range of users.

To elaborate further, the storyboard for the redesign of MS Teams from a user perspective would first begin with identifying the user needs and pain points. This can be done through various research methods such as user surveys, interviews, and usability testing. The feedback obtained from these sources would help in understanding the challenges faced by users while using the application and the features they require to make their work easier and more efficient.

Once the user needs are identified, the storyboard would move on to visualising the new user interface and user flows. This would involve creating sketches and wireframes of the various screens and workflows within the application. The focus would be on making the application more intuitive and easy to use, by simplifying the navigation, enhancing the collaboration features, and improving accessibility.

The storyboard would then incorporate feedback obtained through user testing to ensure that the redesign meets the needs of a diverse range of users. It would also take into consideration the latest design trends and best practices in the industry to create a modern and visually appealing design that enhances the overall user experience.

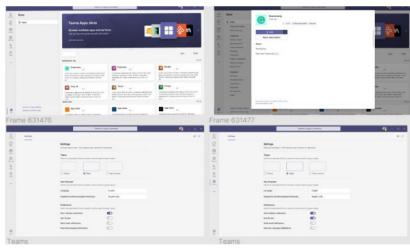
Finally, the storyboard would outline the implementation process and the steps required to roll out the redesigned application to users. This would involve testing the application in a controlled environment before releasing it to a wider audience, and providing adequate training and support to users to ensure a smooth transition to the new application.



STEP-1: Identify the Goals

Start by understanding the purpose of the app and the objectives of the redesign. Identify the key features that need improvement and set goals for the new design.

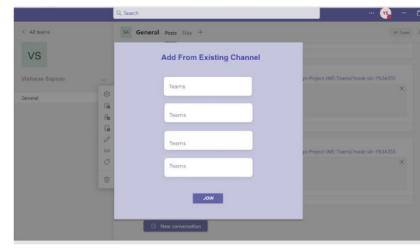
OBSERVATIONS: We searched for the Drawbacks in the already existing MS Teams Application



STEP-2: Gather User Feedback

Collect user feedback and analyze the pain points and areas of improvement that users have suggested. This will help you understand what users expect from the app and what changes will make the app more user-friendly.

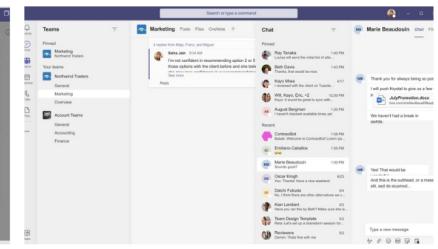
OBSERVATIONS: We took reviews and filtered out the most arriving problem and how can we sort it out.



STEP-3: Sketch out the new Design

Create rough sketches of the new design or layout of the app. These sketches should include the changes that you plan to make to the existing design. You can use pen and paper, or digital tools like Sketch or Adobe XD, Canva

OBSERVATIONS: Then we used hand drawn and computerized iterations of all the modified and required changes



STEP-4: Prototype the Modifications

After the sketch is made and all the changes are finalized, test them out by making a working prototype that depicts all of the modifications.

OBSERVATIONS: We made the final working prototypes and executed all the action plans

STEP-5: Test the Results

Test the storyboard with a group of users or stakeholders to get feedback and make improvements.

OBSERVATIONS: When all the final changes are made, then we test the results for the finalization.

STEP-6: Revise the Outputs

Based on the feedback received, revise the storyboard as needed. Make changes to the design or layout of the app and update the storyboard accordingly.

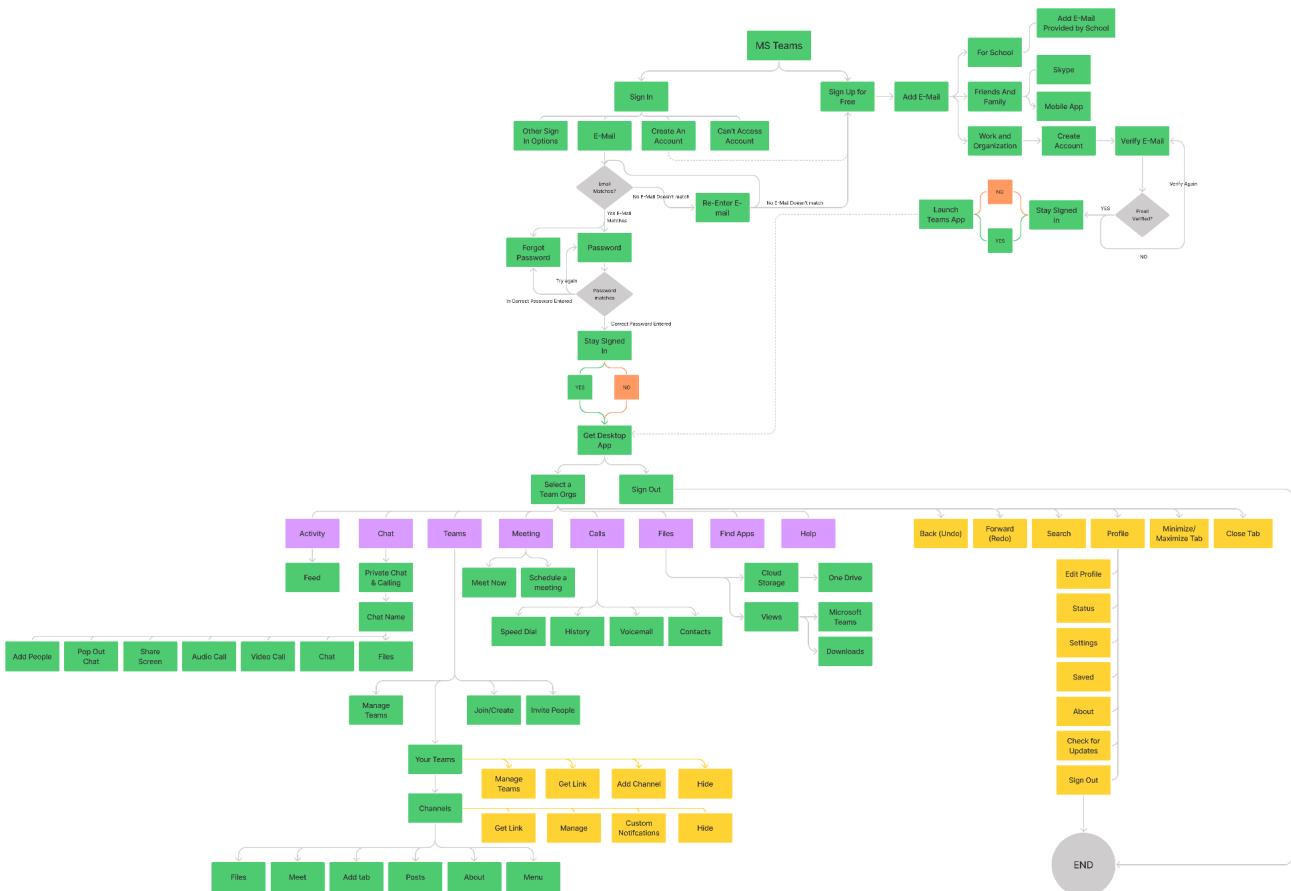
OBSERVATIONS: Then finally we complete our product and it's out for the general use

User Task Flow

As a user of MS Teams, the first step in redesigning the platform is to identify the key user tasks and flows that need to be improved. This can be done by conducting user research to gather feedback and insights on the existing platform, identifying pain points and areas for improvement. Once the key tasks and flows are identified, the redesign process can focus on simplifying and streamlining these processes, improving the overall user experience, and addressing any usability issues that users may encounter. Throughout the redesign process, it is important to maintain a user-centric approach, keeping the needs and preferences of users at the forefront of all decision-making.

To further elaborate on the user task flow for the redesign of MS Teams, it is essential to prioritise the most critical user tasks and flows to address in the redesign process. This could involve conducting a task analysis to understand how users navigate and utilise the platform, identifying pain points, and determining which tasks are most frequently performed. From there, the redesign can focus on simplifying these tasks and improving the user experience by incorporating intuitive design, reducing clutter, and streamlining the navigation. It is also essential to consider the needs of different user groups and tailor the redesign to meet their specific needs. Regular user testing and feedback gathering should be incorporated throughout the redesign process to ensure that the final product meets the needs of the user and is intuitive and easy to use.

<https://www.figma.com/file/gWUHWAwDg5w8PYajFBhsUQ/MS-Teams-Redesign-User-Task-Flow-Diagram?node-id=0%3A1&t=Tyu9vAynHdjjwTel-1>

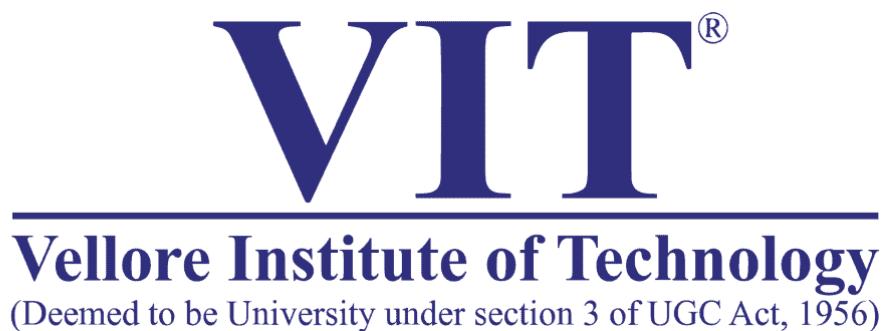


Conclusion

In conclusion, to successfully redesign MS Teams from a user perspective, it is essential to use various tools and methods to understand user needs, pain points, and preferences. These tools include empathy maps, point of view statements, road maps, journey maps, mind maps, storyboarding, and user task flows.

Empathy maps help to identify and understand user needs, while point of view statements help to focus on the user's perspective and goals. Road maps provide a high-level overview of the redesign process, while journey maps provide a detailed visualisation of the user's experience. Mind maps and storyboarding help to explore and refine ideas, while user task flows help to prioritise the most critical tasks and identify areas for improvement.

Using these tools and methods, a user-centric approach can be taken to redesign MS Teams, resulting in a platform that is intuitive, efficient, and meets the needs of its users. Regular user testing and feedback gathering throughout the redesign process is crucial to ensure that the final product meets the needs of the user and is easy to use.



DIGITAL ASSIGNMENT - V

Winter Semester 2022-23

LAB

CBS3011--Usability Design of Software Applications
PARTHIBAN K

Done By :

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PERSONAS:

Personas are fictional representations of typical users that are created to help designers and developers understand the needs, goals, behaviours, and attitudes of the target audience for a product or service. In the context of redesigning MS Teams, personas can be used to create a deeper understanding of the needs and behaviours of different types of users and to guide the design process to better meet their needs.

Personas for the redesign of MS Teams might include representations of different types of users, such as:

- Busy professionals who need to manage multiple projects and teams within MS Teams
- Remote workers who rely on MS Teams for communication and collaboration
- IT administrators who need to manage and maintain the MS Teams environment for their organisation
- Casual users who use MS Teams primarily for social interactions with colleagues
- Power users who rely heavily on MS Teams for productivity and workflow management
- Each persona would be based on research and data gathered about the target audience and would include information about their goals, motivations, frustrations, habits, and preferences. Personas can help the redesign team to empathise with the users, identify pain points and opportunities for improvement, and make design decisions that are more user-centred.

Using personas in the redesign of MS Teams can help to create a more intuitive, user-friendly, and effective interface that meets the needs of a diverse range of users.



Ankit Kumar

"I'm Satisfied and Microsoft Teams continues to improve user experience but it's not flawless"

Age: 19
Job Title: Student
Phone: 906XXXXXXX
Location: Lucknow

PERSONALITY

Introvert	Extrovert
Analytical	Creative
Busy	Time rich
Messy	Organized
Independent	Team player

Motivation

Ease of use	Customer Support
Functionality	

BEHAVIOR TRAITS

PASSIONATE	EMPATHETIC
CURIOS	ADVENTUROUS

Biography

Ankit always thinks a little more clearly when he takes time for himself. He is very serious about his career. Works on multiple projects for academics as well as hackathons and open source contributions.

Loves to have team meets and discuss new things he learnt that week.

Goals

How can our service help

- Learn and educate people.
- To have a nice and interaction platform. to have all his files orgnaized from the teams.
- Reminders for the assigments which he always misses deadlines.

Frustration/Pain points

Interests that can influence decision

- Compared to Zoom The experience did sufferer from latency issues.
- Teachers who you zoom could customize a digital setting allowing users different privacy features.
- Microsoft offers enhanced privacy but it is difficult to customize a unique user experience.

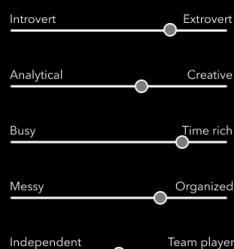


Vansh Bajaj

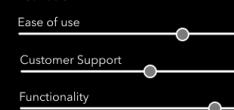
Age: 20
Job Title: Student
Phone: 906XXXXXXX
Location: Kolkata

"This is my favorite application and it is an amazing tool. I highly recommend it."

PERSONALITY



Motivation



BEHAVIOR TRAITS

PASSIONATE EMPATHETIC
CURIOS ADVENTUROUS

Biography

He currently lives in Kolkata. He is Versatile, avid lover of sports and always thriving to get better everyday. He is good team player and always is supportive when it comes to team work.

Goals

How can our service help

- Need of an amazing collaboration product.
- To do Live events to its integration of applications.
- The Video Conferencing is stellar and Microsoft keeps adding more functionality.
- Need of split screen for better workload management.
- File system to be arranged.

Frustration/Pain points

Interests that can influence decision

- Unlike Zoom, the ability for webinars is lacking.
- Zoom has everyone beat here and Teams really could use this feature for Live Events.
- Also, Teams needs to integrate with Microsoft Bookings.
- Teams needs to integrate with Google calendar and voice assistants

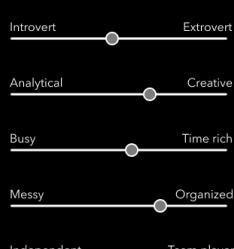


Arkadeep

Age: 19
Job Title: Student
Phone: 906XXXXXXX
Location: Delhi

"Microsoft Teams is great for interacting with your peers online. But needs to be more intuitive and interactive."

PERSONALITY



Motivation



BEHAVIOR TRAITS

PASSIONATE EMPATHETIC
CURIOS ADVENTUROUS

Biography

Arkadeep is a graphic designer for a student community. He spends most of his time thinking about how to facilitate a better design, while continuously talking to new and potential designers for insights. Loves to have team meets and discuss new things he learnt that week.

Goals

How can our service help

- Learn and educate people.
- To have a nice and interaction platform.
- to have all his files orgnaized from the teams.
- Reminders for the assignments which he always misses deadlines.

Frustration/Pain points

Interests that can influence decision

- I have two accounts for Microsoft Teams on my phone, but it only gives me notifications for the account I am logged into
- I have to constantly go back and forth between my work and school account. When I started using teams.
- I had technical difficulties setting up my account and joining calls but it is fairly simple to use afterward.



Arpit Bansal

"I love the new design of Microsoft Teams! It's much more user-friendly and easier to navigate. The customization options are also great and allow me to tailor the interface to my specific needs."

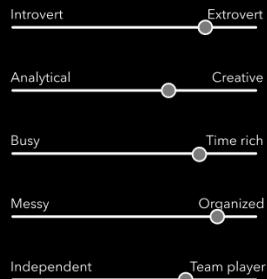
Age: 35

Job Title: Project Manager

Phone: 906XXXXXX

Location: Delhi

PERSONALITY



Motivation



BEHAVIOR TRAITS

PASSIONATE **EMPATHETIC**
CURIOS **ADVENTUROUS**

Biography

Arpit Bansal is a 35-year-old project manager who leads a team of 10 employees. He is highly organized and always on-the-go. He spends most of his time in meetings, coordinating tasks, and making sure deadlines are met.

Goals

How can our service help

- Manage tasks and projects efficiently
- Stay on top of deadlines and meetings
- Collaborate with his team seamlessly
- Collaborate with team members effectively

Frustration/Pain points

Interests that can influence decision

- Difficulty in finding specific tasks and messages in the cluttered interface
- Limited customization options to fit his workflow and preferences
- Overwhelmed by the constant flow of notifications and messages
- Difficulty in finding specific files and messages amidst the high volume of communication



Deepanshu

"Microsoft Teams has definitely improved my productivity. The new features and design changes make it easier for me to collaborate with my team and stay on top of my tasks."

Age: 42

Job Title: small business owner

Phone: 906XXXXXX

Location: Jaipur

PERSONALITY



Motivation



BEHAVIOR TRAITS

PASSIONATE **EMPATHETIC**
CURIOS **ADVENTUROUS**

Biography

Deepanshu is a 42-year-old small business owner who manages a team of 5 employees. He is constantly on-the-go, attending meetings, networking events, and managing his team. He relies heavily on technology to stay organized and manage his business.

Goals

How can our service help

- Manage his business efficiently from anywhere
- Communicate with his team and clients seamlessly
- Stay on top of finances and invoicing
- Stay connected to the team despite the remote setup
- Maximize productivity and focus

Frustration/Pain points

Interests that can influence decision

- Difficulty in managing different tasks and projects within the same interface
- Limited visibility into team members' progress and workload
- Time-consuming manual processes for invoicing and financial tracking
- Distractions from non-work related notifications and messages

SCENARIOS

Scenarios are stories that describe how users might interact with a product or service in their real-life context. In the context of redesigning MS Teams, scenarios can be used to create a more human-centred design approach and to guide the design process to better meet the needs of users. Here are some example scenarios for the redesign of MS Teams:

- Sarah is a project manager who works remotely and relies heavily on MS Teams to communicate and collaborate with her team. She needs to be able to easily access her team's shared files and documents, manage tasks and deadlines, and stay up-to-date on project progress.
- John is an IT administrator who is responsible for managing MS Teams for his organisation. He needs to be able to easily manage user access and permissions, monitor usage and adoption, and troubleshoot any technical issues that arise.
- Lisa is a sales representative who is always on-the-go and needs to be able to use MS Teams from her mobile device. She needs to be able to easily join meetings, make calls, and send messages while on the move.
- Mark is a customer support representative who needs to be able to quickly access customer information, view chat histories, and escalate issues to his colleagues when necessary. He needs to be able to manage multiple chats simultaneously and provide quick and effective solutions to customers.
- Emily is a new employee who is just getting started with MS Teams. She needs to be able to easily navigate the interface, set up her profile and notification settings, and find and join the teams and channels relevant to her role.

These scenarios can help the redesign team to create a more user-centred design approach that addresses the real-world needs and challenges of different types of users. They can guide the design process and help the team to identify pain points, opportunities for improvement, and new features or functions that would be valuable to users.

USABILITY TESTING:

https://docs.google.com/forms/d/e/1FAIpQLSfDVt_NBwjXcSb5nH6mLrJQ7YWvtd3Lx9ixEHqiELN8Lqx-Wg/viewform

User testing is a type of user research that helps you understand how people interact with your product. You can then use this information to improve your product design. But to get the most from this research, it's essential to ask the right questions.

A wrong set of questions can nullify the benefits of the usability session and lead product development down the wrong path. The right user experience testing questions help you gather unbiased user opinions, which ultimately leads to better user experiences.

Usability testing is a crucial step in the redesigning of MS Teams as it helps to ensure that the new design is user-friendly and meets the needs of the users. It involves testing the new design with a group of representative users to identify any usability issues and gather feedback on the design.

The process of usability testing for MS Teams redesign can be broken down into the following steps:

1. Define the testing objectives and plan the usability testing process.
2. Recruit representative users who are familiar with MS Teams.
3. Develop testing scenarios that are relevant to the users' tasks and goals.
4. Conduct usability testing sessions with the users while observing and recording their behaviour and feedback.
5. Analyse the data collected during the testing sessions to identify usability issues and areas for improvement.
6. Make necessary changes to the design based on the findings from the usability testing.
7. Repeat the testing process until the design meets the desired level of usability.

USER TESTING SURVEY QUESTION:

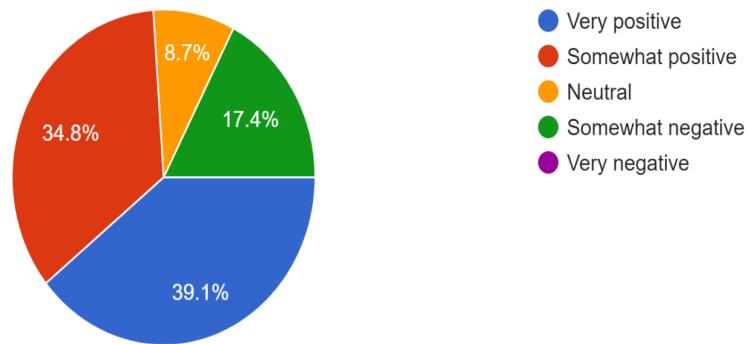
1. What is your overall impression of the new design of MS Teams?
2. Can you find the option to create a new channel?
3. How easy was it for you to join a meeting using the new interface?
4. Was it clear where you could go to access your chat history?
5. Were you able to find the option to start a new chat with a colleague?
6. Did you encounter any issues when trying to share a file with someone?
7. Was it easy for you to locate the search bar?
8. Were you able to easily adjust your notification settings?
9. Was it clear where to go to update your profile information?
10. Did you have any difficulty finding the option to switch between different teams or organisations?
11. Was it easy to access your calendar within MS Teams?
12. Were you able to quickly locate and use the help resources available?
13. Did you find the new interface visually appealing?
14. Did you experience any slow loading times or lag when navigating through the app?
15. Was it clear how to start a video call with someone?
16. Was it easy to add someone new to a team or channel?
17. Did you encounter any issues when trying to mute yourself or others in a call?
18. Was it easy to locate and use the settings options available?
19. Did you find it easy to navigate through different channels and conversations?
20. Was it clear where to go to access your recent files?
21. Did you encounter any difficulties when trying to switch between different devices while using MS Teams?
22. Were you able to easily locate and use the search function within a conversation or channel?
23. Was it clear where to go to view your activity feed?
24. Did you encounter any issues when trying to add a reaction to a message?
25. Was it easy to locate and use the option to leave a team or channel?

ANALYSIS OF SURVEY RESPONSES:

https://docs.google.com/spreadsheets/d/1J4lsqfthJGszZ6AuAgQF_CbJFOfQRzQw91JimwywzM/edit?resourcekey#gid=1523942076

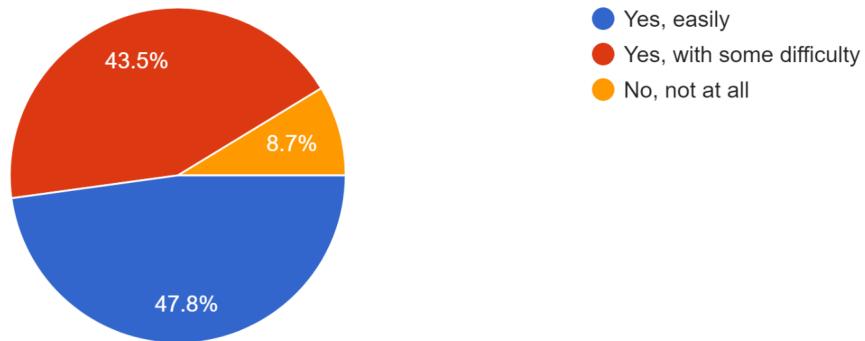
What is your overall impression of the new design of MS Teams?

23 responses



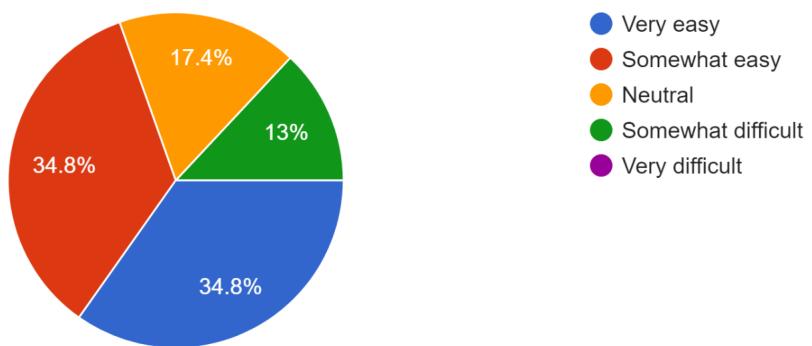
Can you find the option to create a new channel?

23 responses



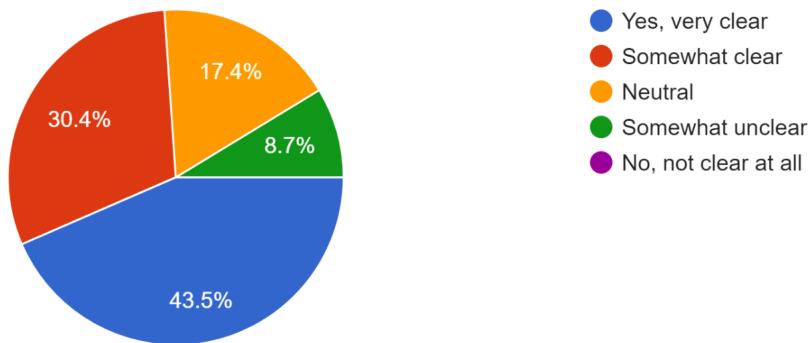
How easy was it for you to join a meeting using the new interface?

23 responses



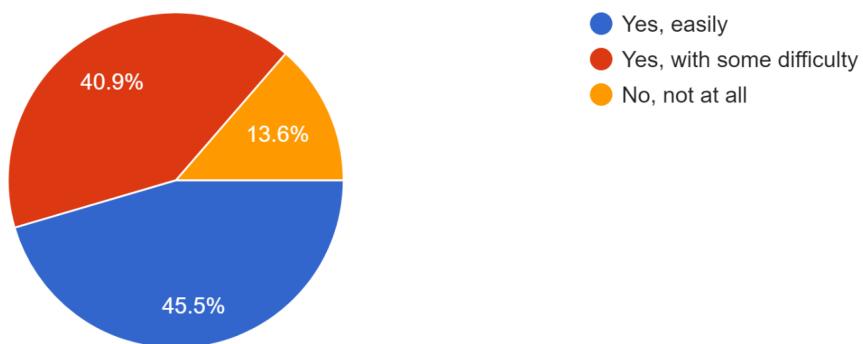
Was it clear where you could go to access your chat history?

23 responses



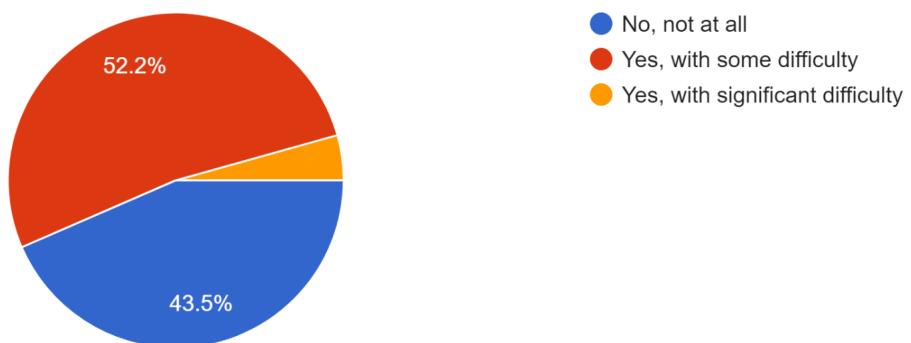
Were you able to find the option to start a new chat with a colleague?

22 responses



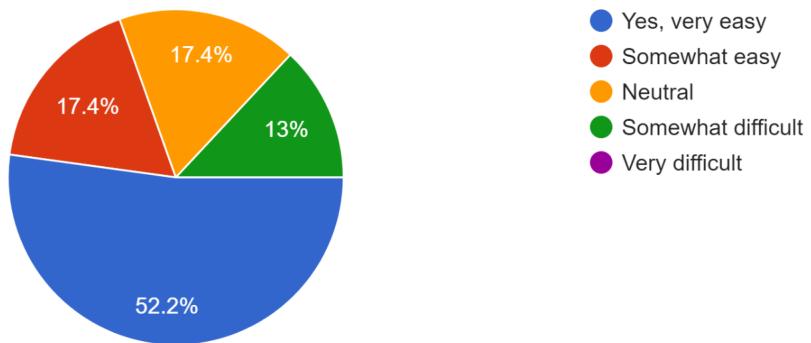
Did you encounter any issues when trying to share a file with someone?

23 responses



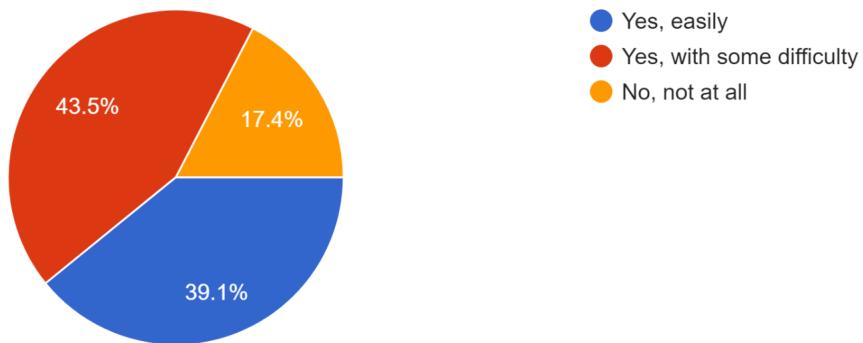
Was it easy for you to locate the search bar?

23 responses



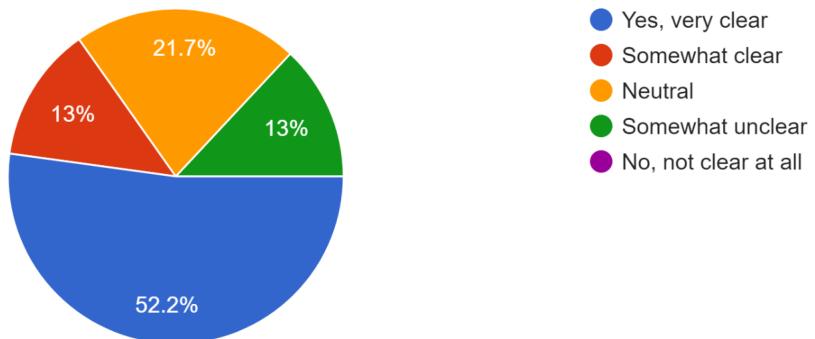
Were you able to easily adjust your notification settings?

23 responses



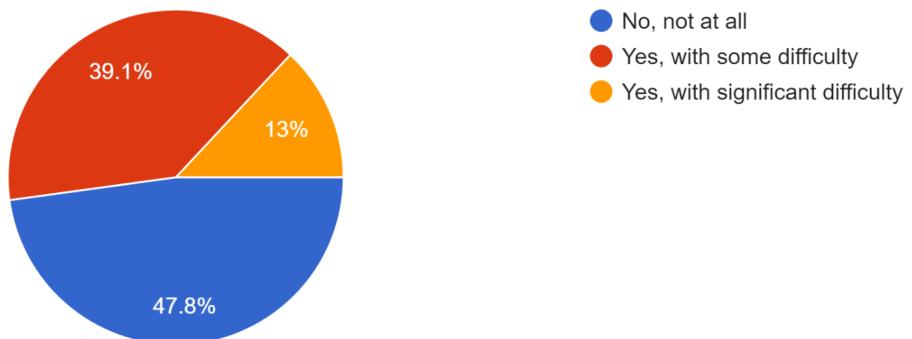
Was it clear where to go to update your profile information?

23 responses



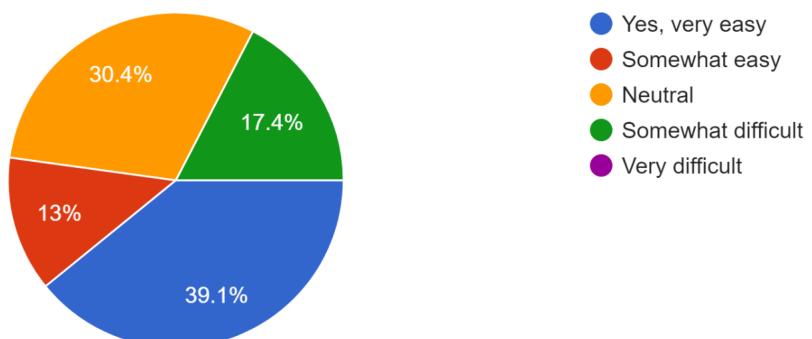
Did you have any difficulty finding the option to switch between different teams or organizations?

23 responses



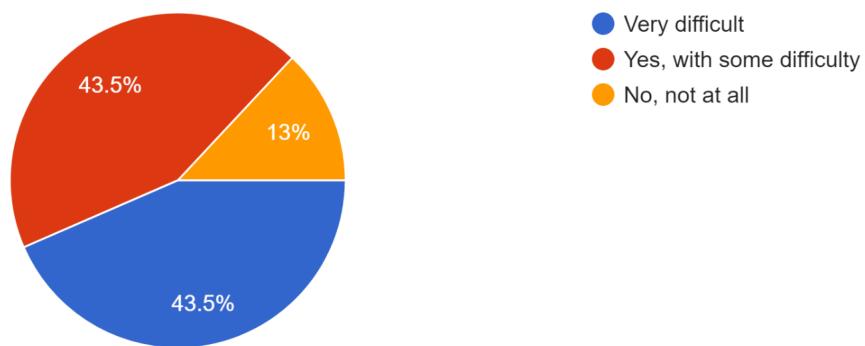
Was it easy to access your calendar within MS Teams?

23 responses



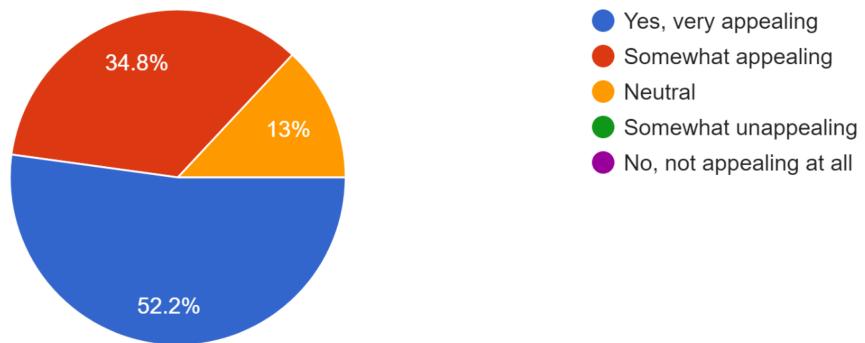
Were you able to quickly locate and use the help resources available?

23 responses



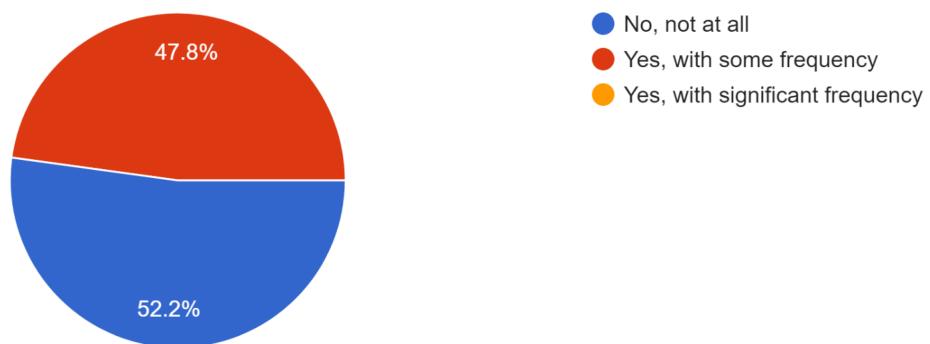
Did you find the new interface visually appealing?

23 responses



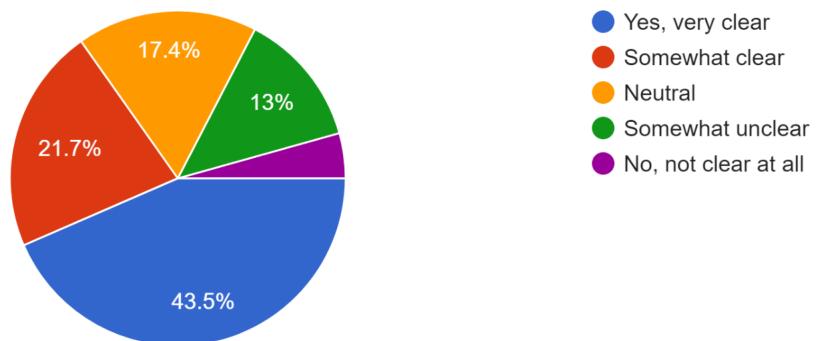
Did you experience any slow loading times or lag when navigating through the app?

23 responses



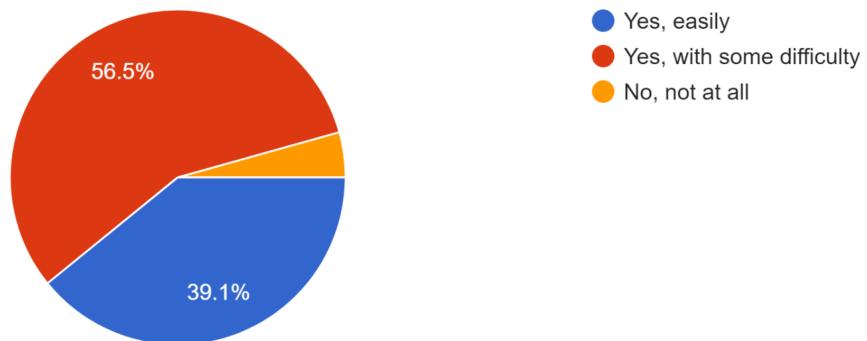
Was it clear how to start a video call with someone?

23 responses



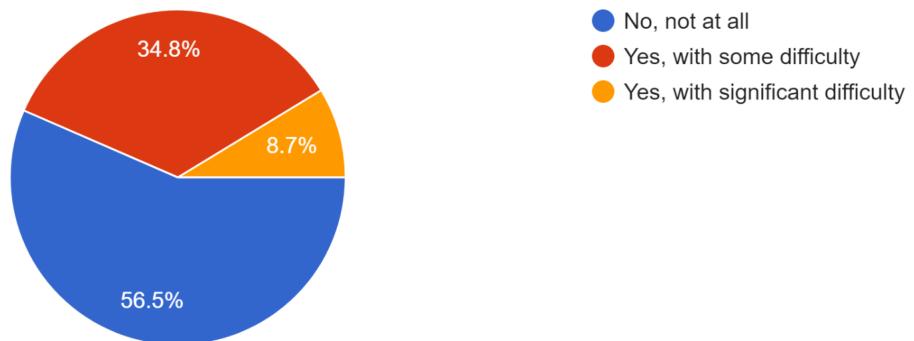
Was it easy to add someone new to a team or channel?

23 responses



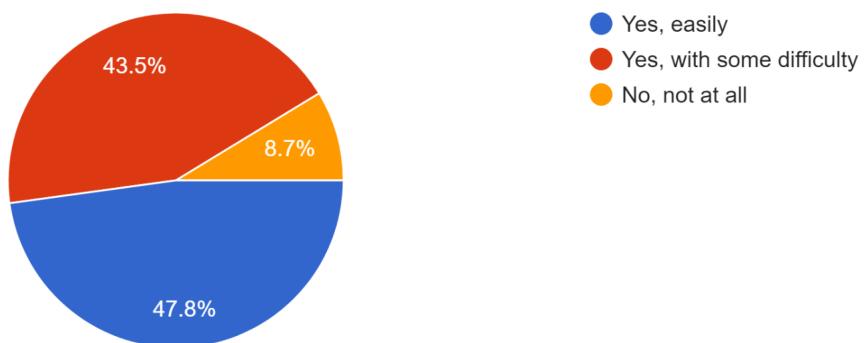
Did you encounter any issues when trying to mute yourself or others in a call?

23 responses



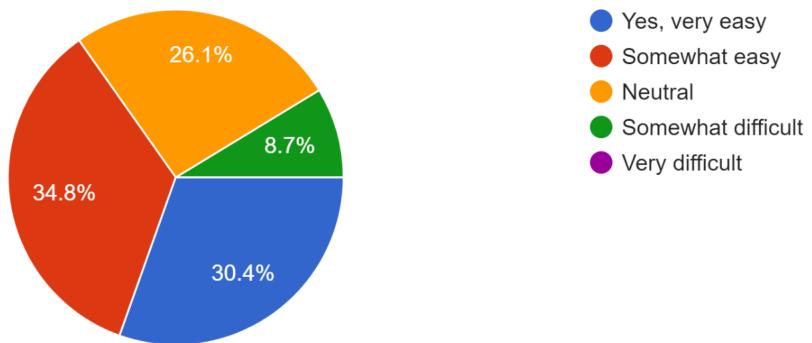
Was it easy to locate and use the settings options available?

23 responses



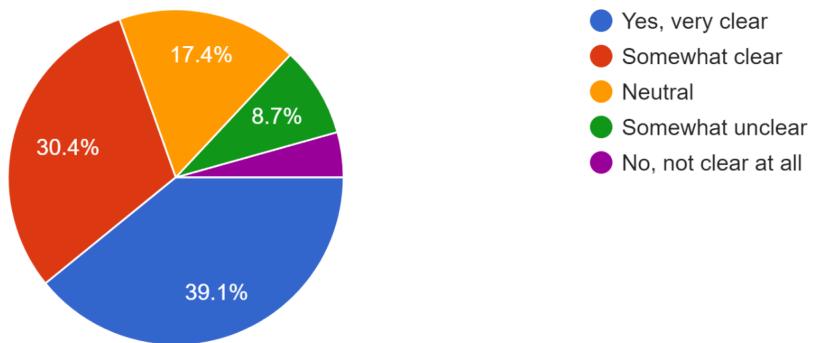
Did you find it easy to navigate through different channels and conversations?

23 responses



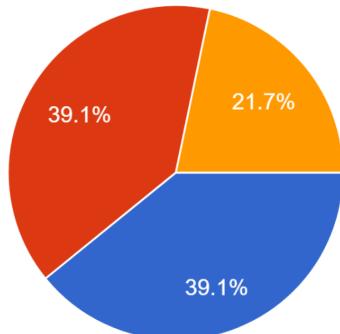
Was it clear where to go to access your recent files?

23 responses



Did you encounter any difficulties when trying to switch between different devices while using MS Teams?

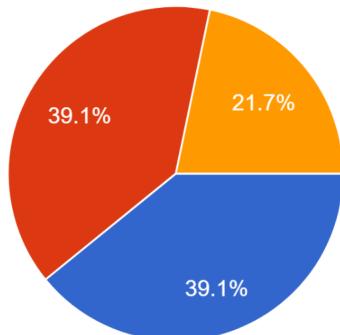
23 responses



- No, I did not have any difficulties switching between devices.
- Yes, it was difficult to switch between devices.
- It was not immediately clear how to switch between devices.

Did you encounter any difficulties when trying to switch between different devices while using MS Teams?

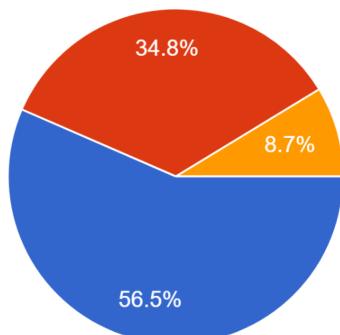
23 responses



- No, I did not have any difficulties switching between devices.
- Yes, it was difficult to switch between devices.
- It was not immediately clear how to switch between devices.

Was it clear where to go to view your activity feed?

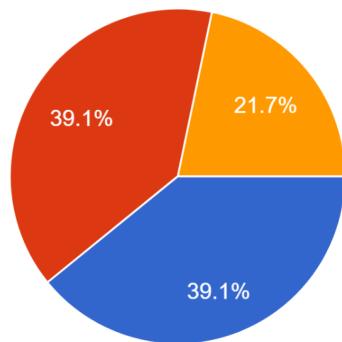
23 responses



- Yes, it was clear where to go to view my activity feed.
- No, I had trouble finding where to view my activity feed.
- I found the location of the activity feed, but it was not immediately clear to me.

Did you encounter any issues when trying to add a reaction to a message?

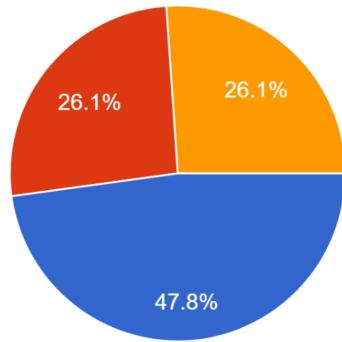
23 responses



- No, I did not encounter any issues adding a reaction to a message.
- Yes, I had difficulty adding a reaction to a message.
- It took me a little bit of time to figure out how to add a reaction to a message.

Was it easy to locate and use the option to leave a team or channel?

23 responses



- Yes, it was easy to locate and use the option to leave a team or channel.
- No, I had trouble finding where to leave a team or channel.
- I found where to leave a team or channel, but it was not immediately clear to me.

TEST PLAN

Objective:

The objective of this usability test is to evaluate the redesigned MS Teams interface to identify any usability issues, gather user feedback on the new design, and assess whether users are able to easily navigate and use the new features and functions.

Methodology:

The usability test will be conducted in a lab setting with a sample of 10 participants. Participants will be asked to complete a set of tasks using the redesigned MS Teams interface while verbalising their thoughts and actions. Participants will also be asked to provide feedback on their overall impressions of the new design and whether they encountered any difficulties or issues during the test.

Tasks:

1. Join a meeting with a colleague using the new interface
2. Start a new chat with a colleague
3. Share a file with a colleague
4. Find and join a new team
5. Access your chat history
6. Adjust your notification settings
7. Switch between different teams or organisations
8. Access your calendar within MS Teams
9. Use the help resources available
10. Add a reaction to a message in a channel

Metrics:

The usability test will be measured based on the following metrics:

- Success rate: The percentage of participants who are able to complete each task successfully
- Task completion time: The time taken by participants to complete each task
- Errors: The number of errors made by participants while completing each task
- User satisfaction: Participants will be asked to rate their overall satisfaction with the new design on a scale of 1 to 5

Data Analysis:

Data from the usability test will be analysed to identify any usability issues and to gather feedback on the new design. Task completion rates, completion time, and errors will be recorded and analysed for each task. Participant feedback will be summarised and analysed to identify common themes and issues.

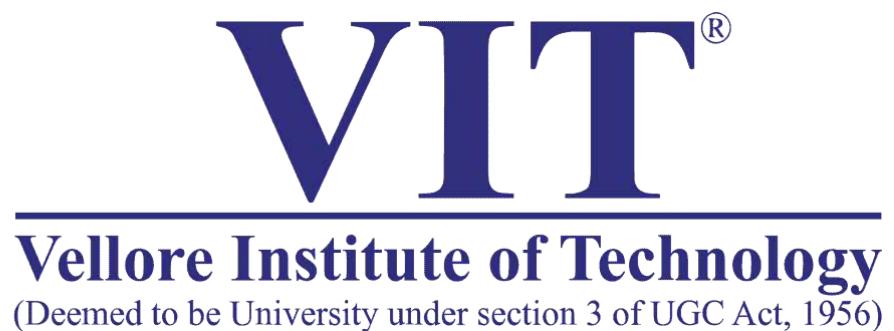
Deliverables:

The following deliverables will be produced from the usability test:

- Usability test report summarising the results of the test
- Recommendations for addressing any usability issues identified
- User feedback on the new design and recommendations for further improvements

Timeline:

The usability test will take approximately 2 weeks to complete, including participant recruitment, testing, and data analysis. The final report will be delivered 1 week after the completion of the testing.



DIGITAL ASSIGNMENT - VI

Winter Semester 2022-23

LAB

CBS3011--Usability Design of Software Applications

PARTHIBAN K

Done By :

Nikhil Dangi	20BBS0208
Ankit Kumar	20BBS0206
Umair Khan	20BBS0211
Vishwas Saproo	20BBS0217

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AFFINITY DIAGRAM

An affinity diagram is a visual tool that helps to organise and synthesise large amounts of data or ideas. It is often used in brainstorming sessions or design thinking processes to group related ideas and identify themes or patterns. In the context of redesigning MS Teams, an affinity diagram can be used to identify pain points or areas of improvement by categorising feedback or ideas from users or stakeholders into different groups such as confusing, useful/clear, and expectation/ideas. Once the data has been organised, it becomes easier to identify common themes and prioritise areas for improvement in the redesign process.

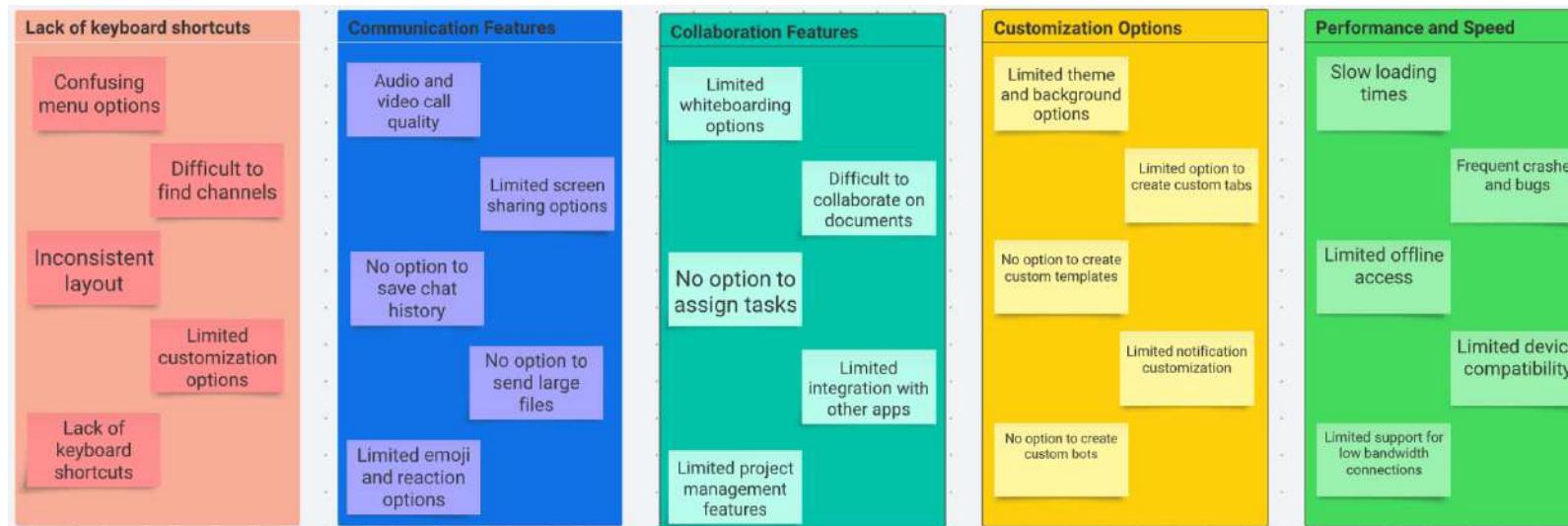
Link for Affinity Diagram:

[https://www.figma.com/file/sGJ16O5IWuA713YXRkLyT9/Affinity-Diagram-\(Community\)?node-id=0%3A1&t=V6sgrPgXNHLdBTcq-1](https://www.figma.com/file/sGJ16O5IWuA713YXRkLyT9/Affinity-Diagram-(Community)?node-id=0%3A1&t=V6sgrPgXNHLdBTcq-1)



Link for below Affinity Diagram:

https://lucid.app/lucidspark/6cdaf820-e0df-4d87-bf54-0a3430176dd1/edit?viewport_loc=859%2C117%2C4393%2C2265%2C0_0&invitationId=inv_917bcbbb-3cf1-4842-9c54-133d30fe9b4b



USER TASK FLOW DIAGRAM

A user flow can be interpreted in many ways. It can be regarded as an overview that describes where users can navigate in your product. It can also mean the actual quality and experience of the path users take to accomplish a task.

Or it can mean the actual sequence of steps the user takes to complete a task.

Flowcharts can be useful in visualising these routes users take when they are using your solution (i.e. website or app).

Such tools that help with visually tracing the steps of interaction between user actions and program interfaces are called user flow diagrams or user flow map.

A User Task Flow Diagram is a visual representation of the steps or tasks that a user takes to accomplish a particular goal or complete a specific task within a system or application, in this case, MS Teams. The purpose of creating a user task flow diagram is to identify the user's journey through the application and understand how they interact with the various features and functions.

The flow diagram typically begins with the user's initial goal, such as starting a new chat or scheduling a meeting, and shows the steps they need to take to achieve that goal. Each step is represented by a box or node, and the arrows between the boxes indicate the flow of the user's actions.

For example, a user task flow diagram for starting a new chat in MS Teams might include the following steps:

1. Open MS Teams application
2. Select the 'Chats' tab
3. Click the 'New Chat' button
4. Search for or select the desired contact or group
5. Type in the message
6. Click 'Send'

The user task flow diagram can help designers and developers identify potential usability issues, such as steps that may be confusing or redundant, and make improvements to enhance the user experience. It can also be used to test the usability of the application with real users to ensure that it meets their needs and expectations.

USER FLOW DIAGRAM FOR MS TEAMS REDESIGN

The user is presented with the MS Teams app with the Sign In/Sign Up option shown at the start. The user selects the option for Sign in and is navigated to the page which consists of Sign in Options. There are multiple options to sign in, if the user can't sign in then he/she is taken to create an account page where he/she has to choose the type of account and is navigated to those pages.

Now after Signing in the user is navigated to the home page where the user can choose to go to teams, chats, activity, meeting or files.

When the user chooses any one of them, consider the user chooses to visit a meeting, now he can join an ongoing meet or can start a meeting (that can be scheduled too).

If the user selects chats, the user can chat, voice call, video call or share screen, there are various ways users can be navigated.

Step 1: Understand Customer Journey

Step 2: Identify Your Goals and Your User's Goals

Step 3: Identify Where Your Users are Coming From

Step 4: Identify the Information the Visitor Needs

Step 5: Visualise Your User Flows

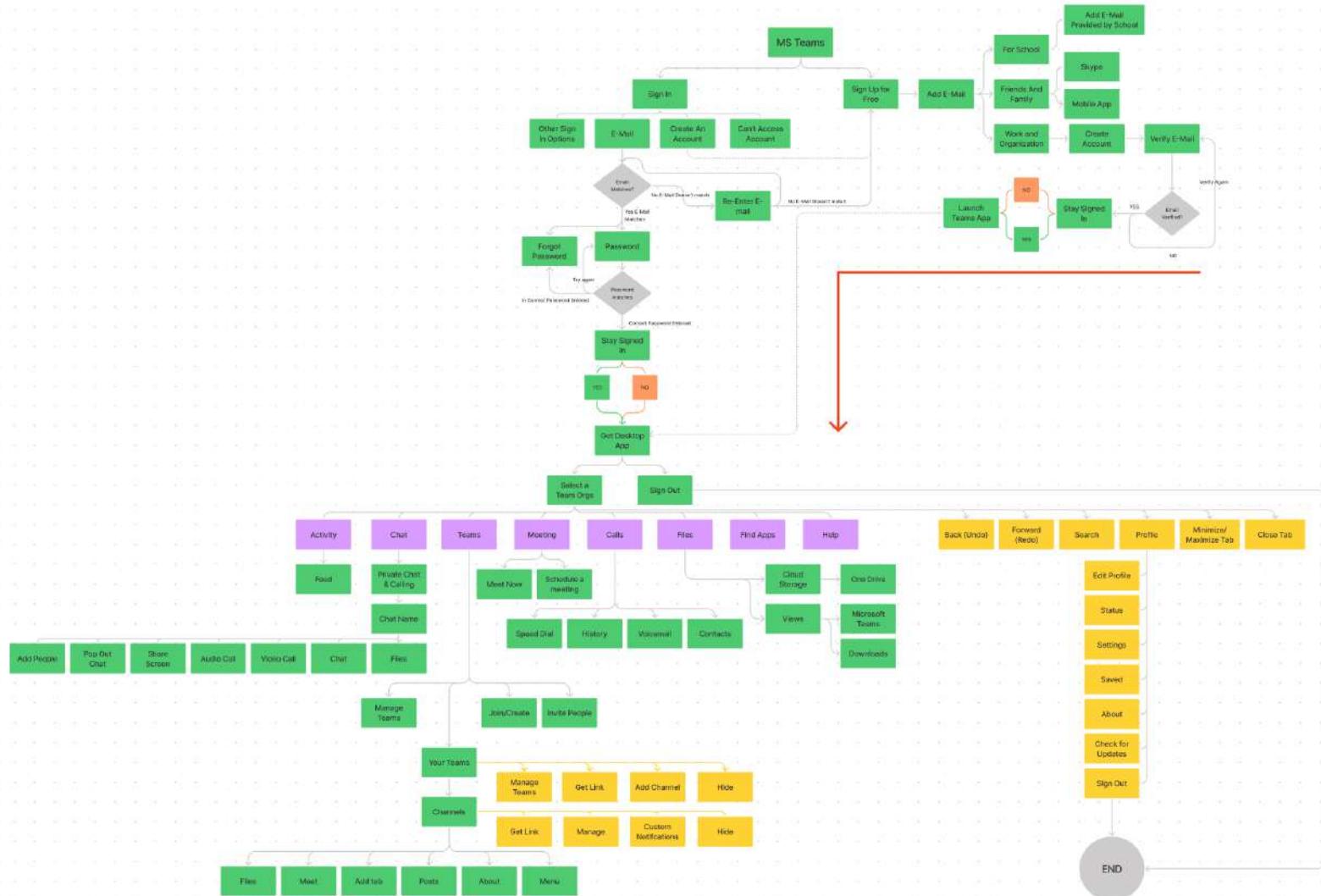
Step 6: Prototype Your Flow

Step 7: Review, Refine and Test

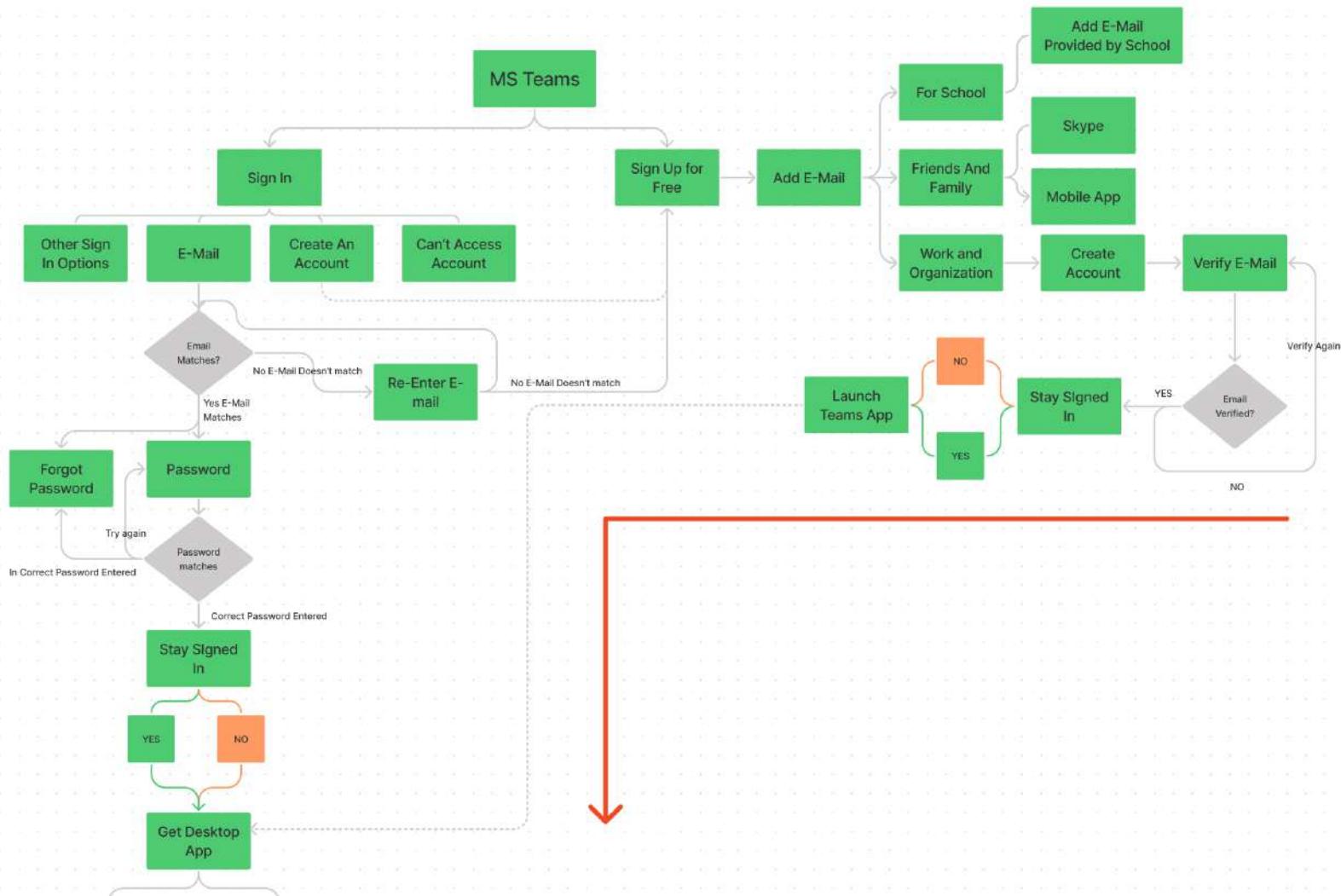
FIGMA LINK FOR USER FLOW DIAGRAM OF MS TEAMS REDESIGN

<https://www.figma.com/file/gWUHWAwDg5w8PYajFBhsUQ/MS-Teams-Redesign-User-Task-Flow-Diagram?node-id=0%3A1&t=WY3lmmodqboJDr2u-1>

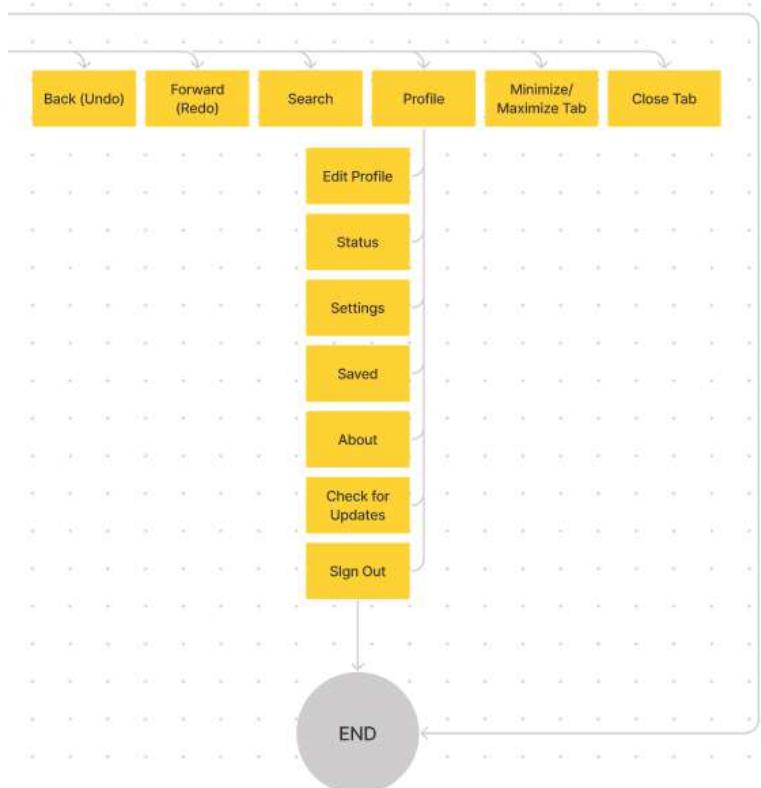
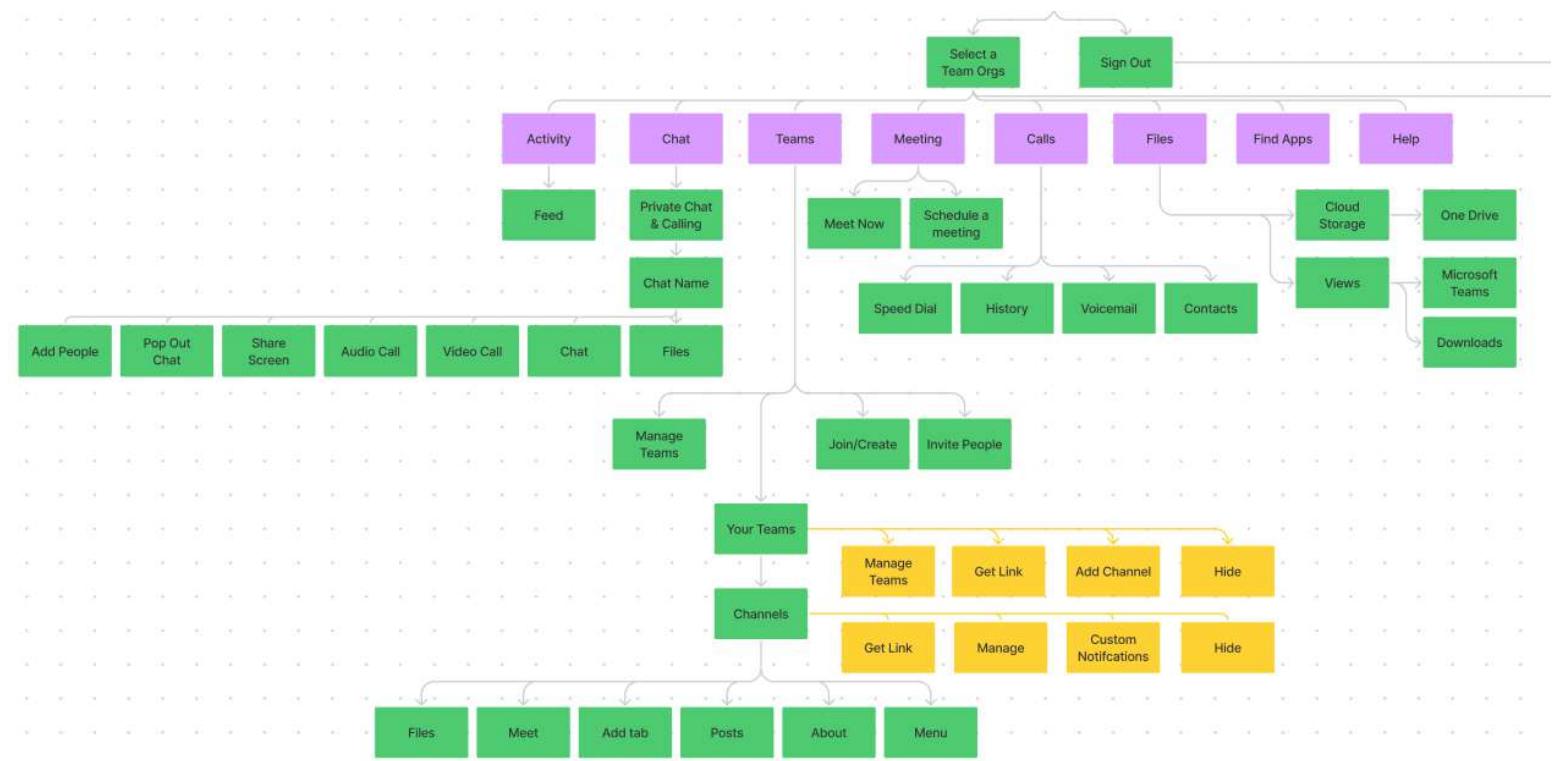
USER FLOW DIAGRAM



USER FLOW DIAGRAM - SIGN-IN / SIGN-UP



USER FLOW DIAGRAM - AFTER LOGGING INTO TEAMS



CONCEPT DEVELOPMENT

Concept development for redesigning MS Teams involves generating and refining ideas for new features, design elements, and user experiences that will improve the functionality, usability, and appeal of the software. The concept development process typically involves several steps:

1. Brainstorming: A group of designers, developers, and other stakeholders come together to generate a broad range of ideas for improving MS Teams. This can be done through structured brainstorming sessions, surveys, or other ideation methods.
2. Idea selection: Once a wide range of ideas have been generated, they are evaluated based on their feasibility, desirability, and viability. The most promising ideas are selected for further development.
3. Concept development: The selected ideas are further refined and developed into more detailed concepts, including sketches, wireframes, and prototypes. These concepts are evaluated and iterated upon based on user feedback and testing.
4. Prioritisation: The concepts are prioritised based on their potential impact, feasibility, and resources required for implementation.
5. Implementation: The most promising concepts are implemented into the new design of MS Teams. This involves working closely with developers and other stakeholders to ensure that the new features and design elements are implemented effectively and efficiently.

Throughout the concept development process, it is important to stay focused on the user and their needs. This involves continually gathering feedback from users and iterating on the concepts based on that feedback. It also involves understanding the user's workflows, pain points, and goals, and designing the new features and design elements with those in mind.

Concept development for redesigning of MS Teams in detailed steps can be viewed. Concept development is a set of activities that are carried out early in the systems engineering life cycle to collect and prioritise operational needs and challenges, develop alternative concepts to meet the needs, and select a preferred one as the basis for subsequent system or capability development and implementation. Fundamentally, teams have to explore and define open-ended problems in order to retrieve answers needed to undertake purposeful actions. The exploration and definition procedure creates stepwise understanding of sub-problems as open-ended problems typically have interdependencies. In the case of our project, the technique we adopted was that of analysing brainstorm ideas.

1) Please describe any problems or issues you have with our current App?

- Teams has a well planned structure, however new users often find it very hard to navigate this platform as there are a lot of features and movement is slightly constricted.
- When you create a new team, you don't get a heads up on a team name that is already taken unless you type in the team name in the search bar. This creates confusion and you end up with teams sharing the same name.
- Teams doesn't allow you to add an existing channel into another team. So, if you want a similar structured channel in another team, you will have to repeat the entire process which is unnecessary and time consuming.
- Multitasking is something we all tend to do when we have a lot of work. When one is in the flow of working, it's inconvenient to keep switching from one screen to another.

2) Will Re-Designing solve the problem?

- Yes, We decided to show a tutorial when you open the application to educate the users on the different services provided by Teams.
- We planned to add a pop-up notification if a team name is repeated while creating a new one.
- We have added a feature where you have the option to add an existing channel from another team.
- To resolve this multitasking issue, we have introduced a split-screen feature where you can work on two things side by side. So you could have a channel open on one half of the screen and a chat open on the other half or anything you would want to work on.

3) How much would they like to use MS teams now?

Users would love to use MS teams more often now, The redesign had some very necessary and efficient changes. It will be very easy to use and work around with. Features that have been added will be great for managing the workspace and helping the user have a better experience of the app. It is more detail oriented, organised and easy to manage.

4) Please list your favourite features if there. if not mention features you would like to be included in our App.

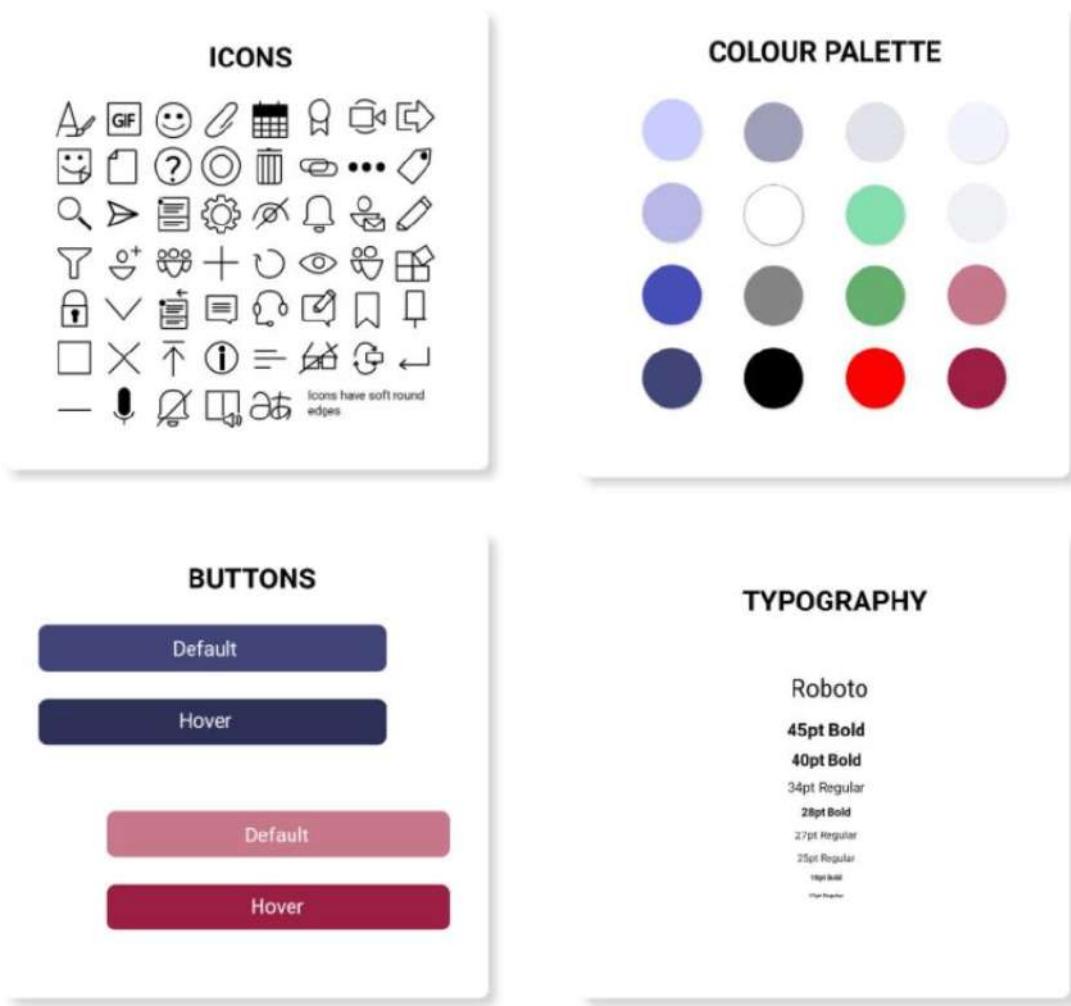
The screen couldn't be split into two so that two tabs could be open simultaneously, so a split screen would be nice. Many teams have the same name and so it causes confusion, something can be done for this.

5) What Redesigned Feature would they like?

Split Screen Feature - The interface will provide an option for splitting the screen wherein the user can have two tabs open side-by-side for example, the Teams tab and the chat tab can be worked on simultaneously through this option.

To Add as Existing channel - When creating a new channel in a new team, the opportunity to add an existing channel from another team will be provided.

- 6) Do you have a colour scheme in mind, or colours that you want to exclude?
After Discussing and Brainstorming we have decided on the style guide.



- 7) What are the different use cases for which you use the application?

Microsoft Teams is a universal communication and collaboration platform that combines persistent workplace chat, video meetings, file storage, and application integration. Having an excellent team space is key to being able to make creative decisions and communicate with one another. Shared workspace software makes this much easier to achieve. No additional cost for Microsoft 365 users. Teams also has a wide range of 3rd party apps that integrate into Teams, so that users can work efficiently. Integration of all the tools in a single place.

- 8) How well do they navigate through app features after redesigning?

Users find it to be good and pretty easy to work one's way around and very interactive hence very easy to use.

9) Would you like us to include some additional elements in the site e.g. chatbot?

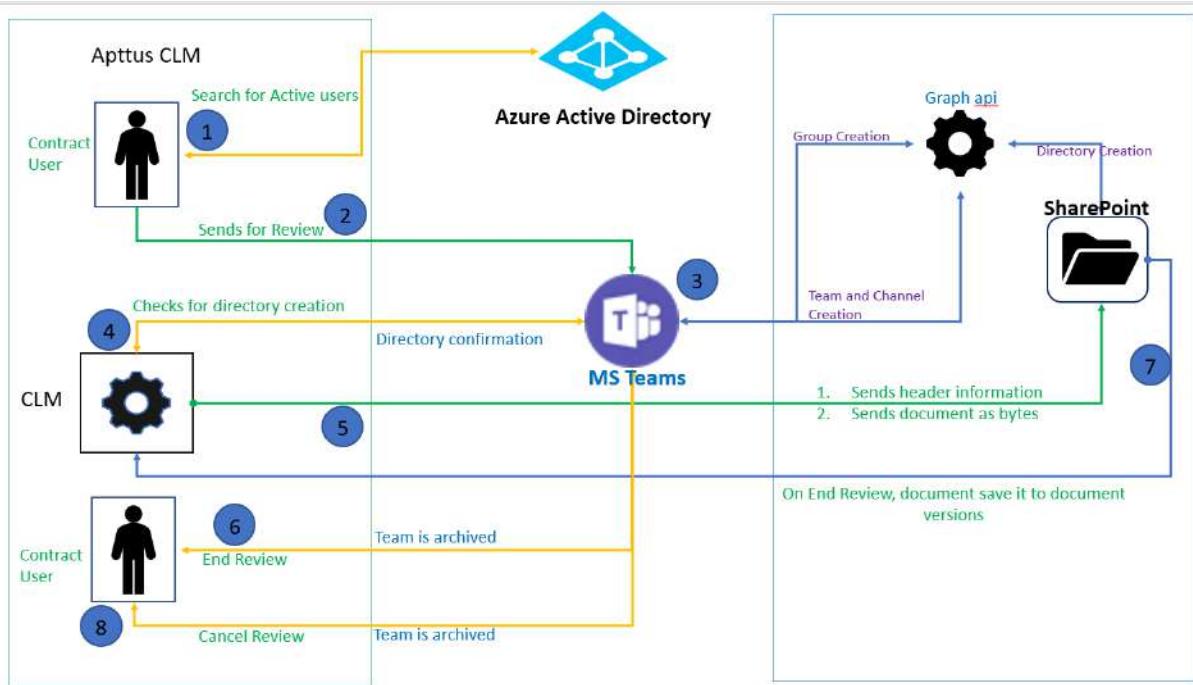
Having a bot to help you adopt MS Teams, schedule your meeting or post an important message in Teams and much more. This is the feature we have added. The bots we are currently familiar with are capable of only a few things. What if we had Cortana handle everything for us? She could do everything you've instructed her to do or even using her artificial intelligence does more smart things for you. Cortana could learn from you and other users using machine learning capability and will have personalised communication with you.

10) Do you find the new decisions/changes in our app helpful or not?

Users find it to be good and pretty clean. This UI seems so easy to use for any new user because the interactivity helps the user to guide through the process.

The Concept development activity helped us to study their present stature, existing forum & customer base, and the vision laid out. Then, using a web design process and an understanding of UX and UI, we added essential features to their existing interface. We also recreated a platform for better and more engaging user experience with the help of research and analysis.

A tutorial will be provided when you first start the application to educate the users on the different services imparted by Teams and how to use them. When creating a new channel in a new team, the opportunity to add an existing channel from another team will be provided. The interface will provide an option for splitting the screen wherein the user can have two tabs open side-by-side for example, the Teams tab and the chat tab can be worked on simultaneously through this option.



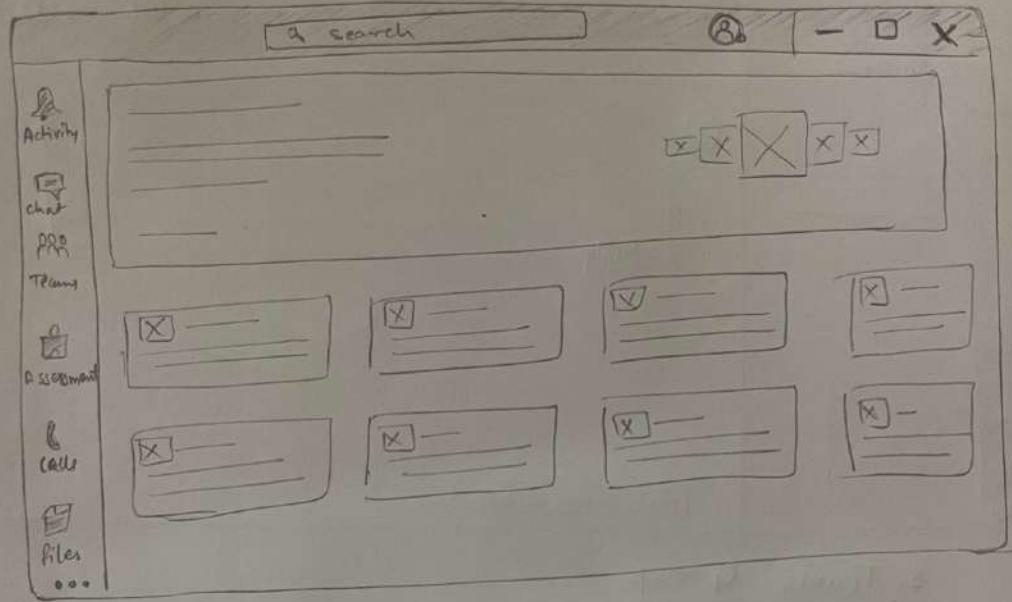
Paper Prototyping of MS Teams:

To create a paper prototype, follow these steps:

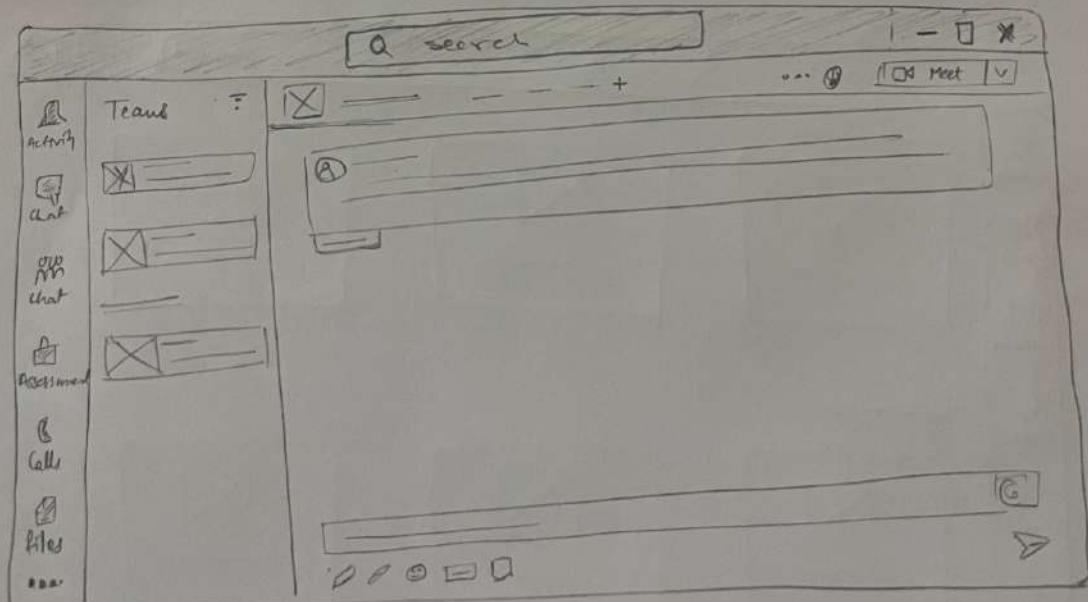
- Define the key functionalities: Identify the core functionalities that the new design should include. For example, in the case of MS Teams, these might include messaging, video conferencing, file sharing, etc.
- Sketch the screens: Sketch out the screens for each of the core functionalities. This can be done on paper or a whiteboard.
- Cut out the screens: Once the screens have been sketched, cut them out.
- Create interaction paths: Decide how the user will navigate through the screens. Create paths that show the different actions the user might take.
- Test the prototype: Invite users to test the prototype. Ask them to perform common tasks and observe how they interact with the screens.
- Iterate and refine: Based on feedback from users, refine the design and iterate until the prototype meets the needs of users.

PAPER WIREFRAMING

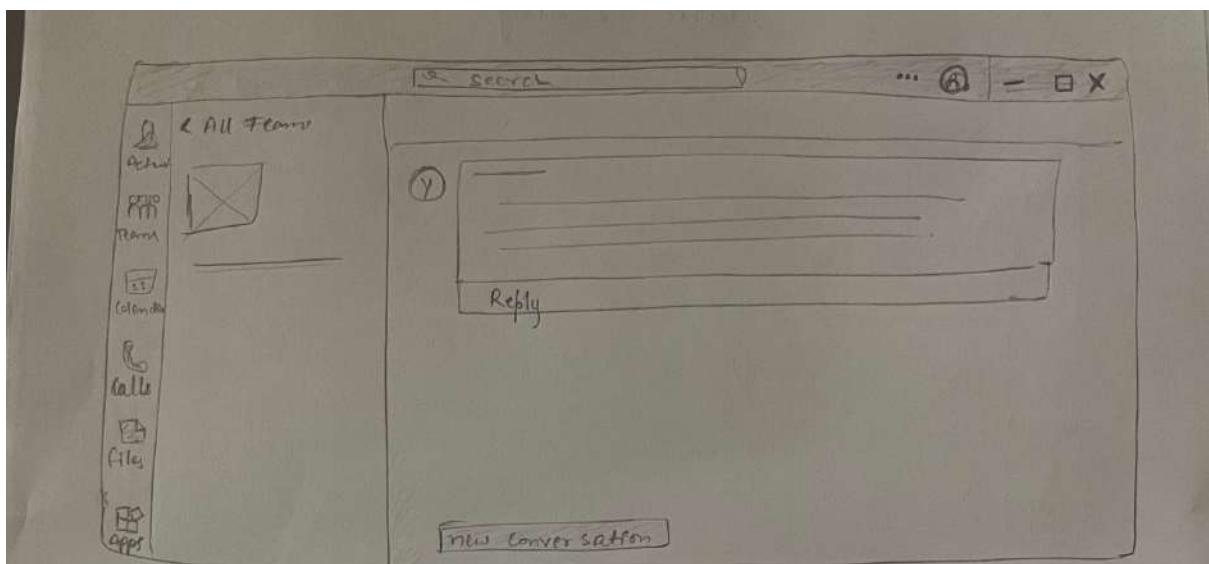
Wire framing



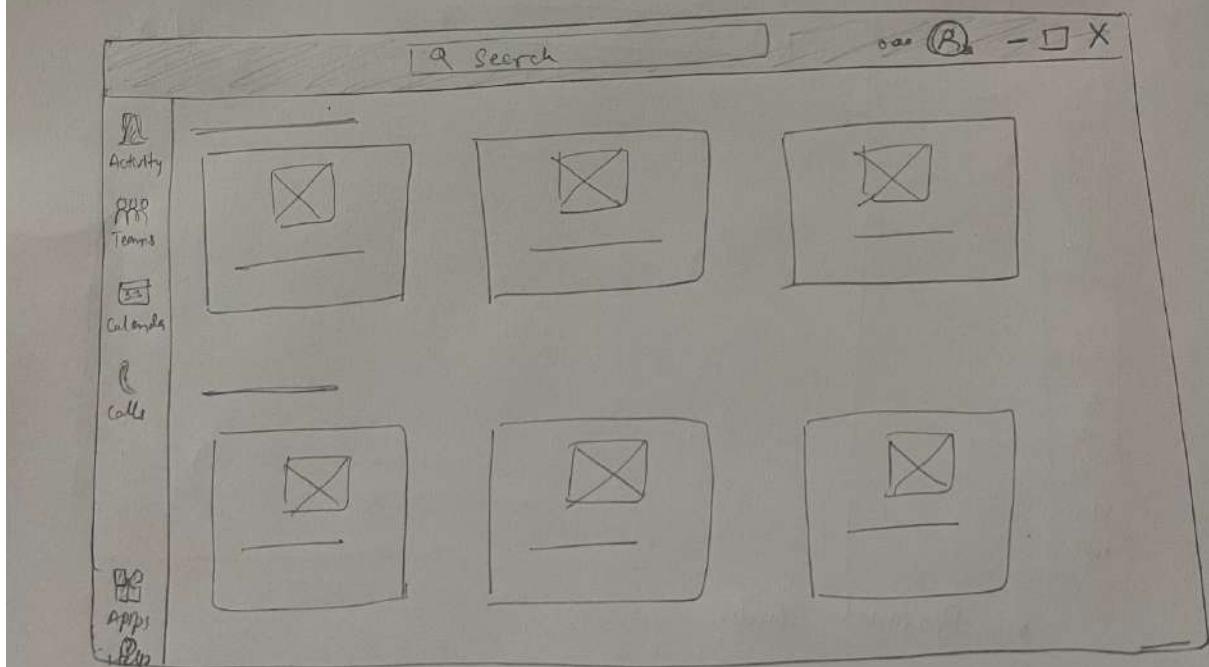
1. Home Screen



2. Personal chat

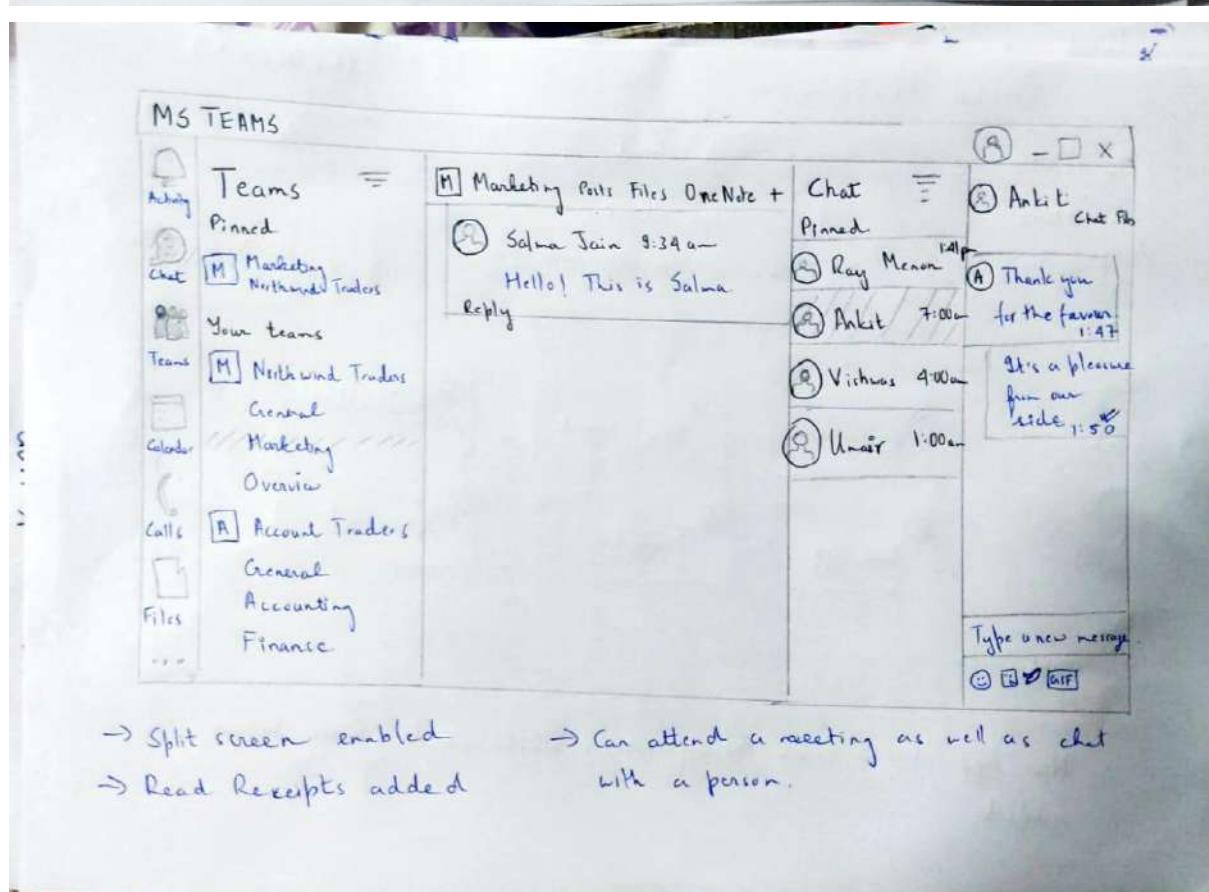
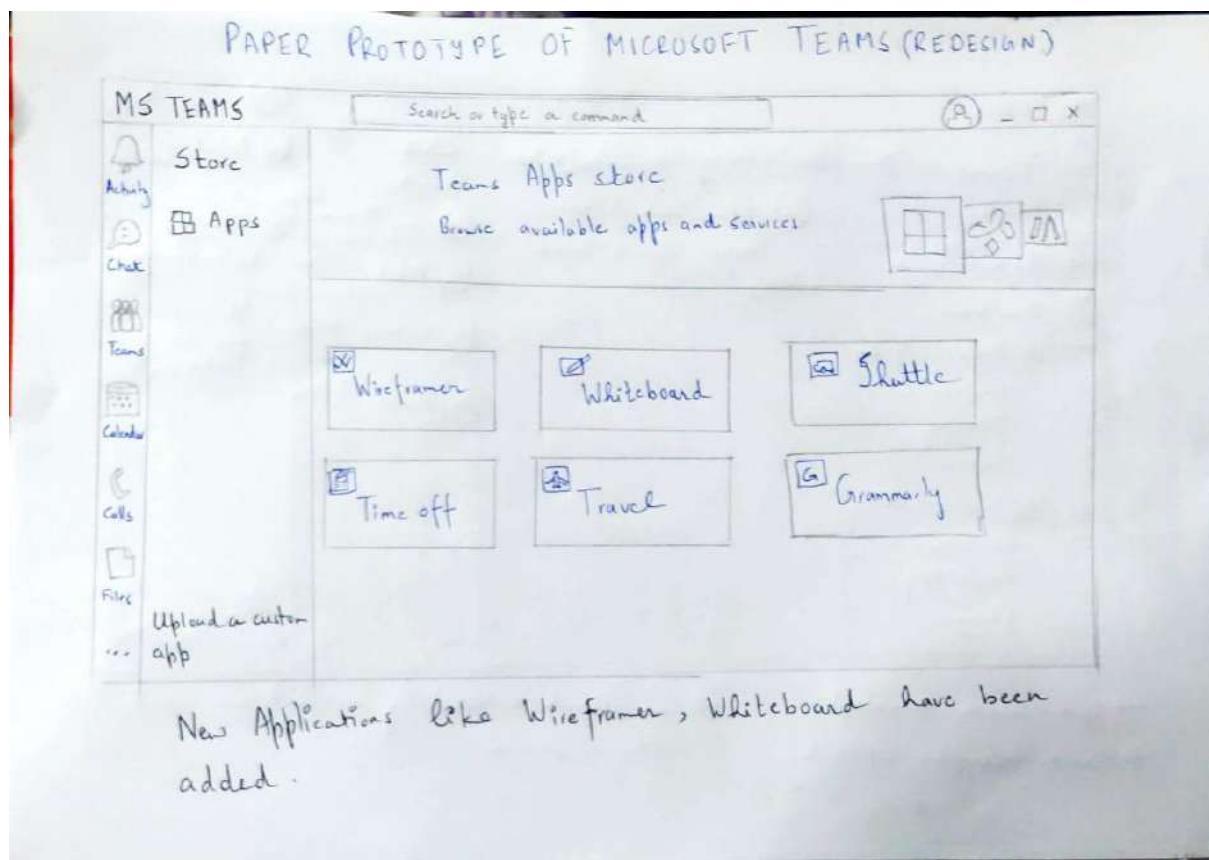


3. Teams Group



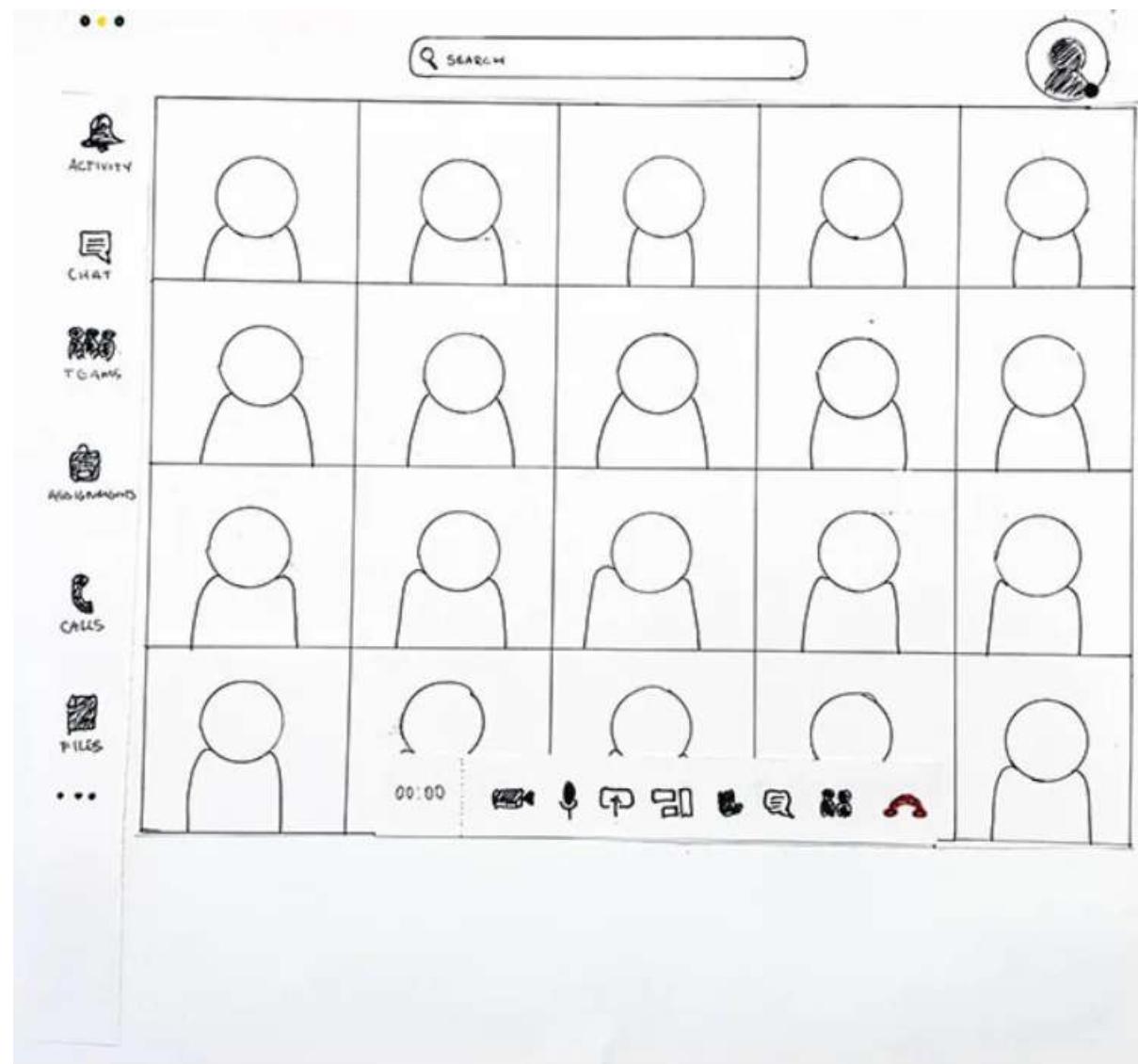
4. All Teams Group

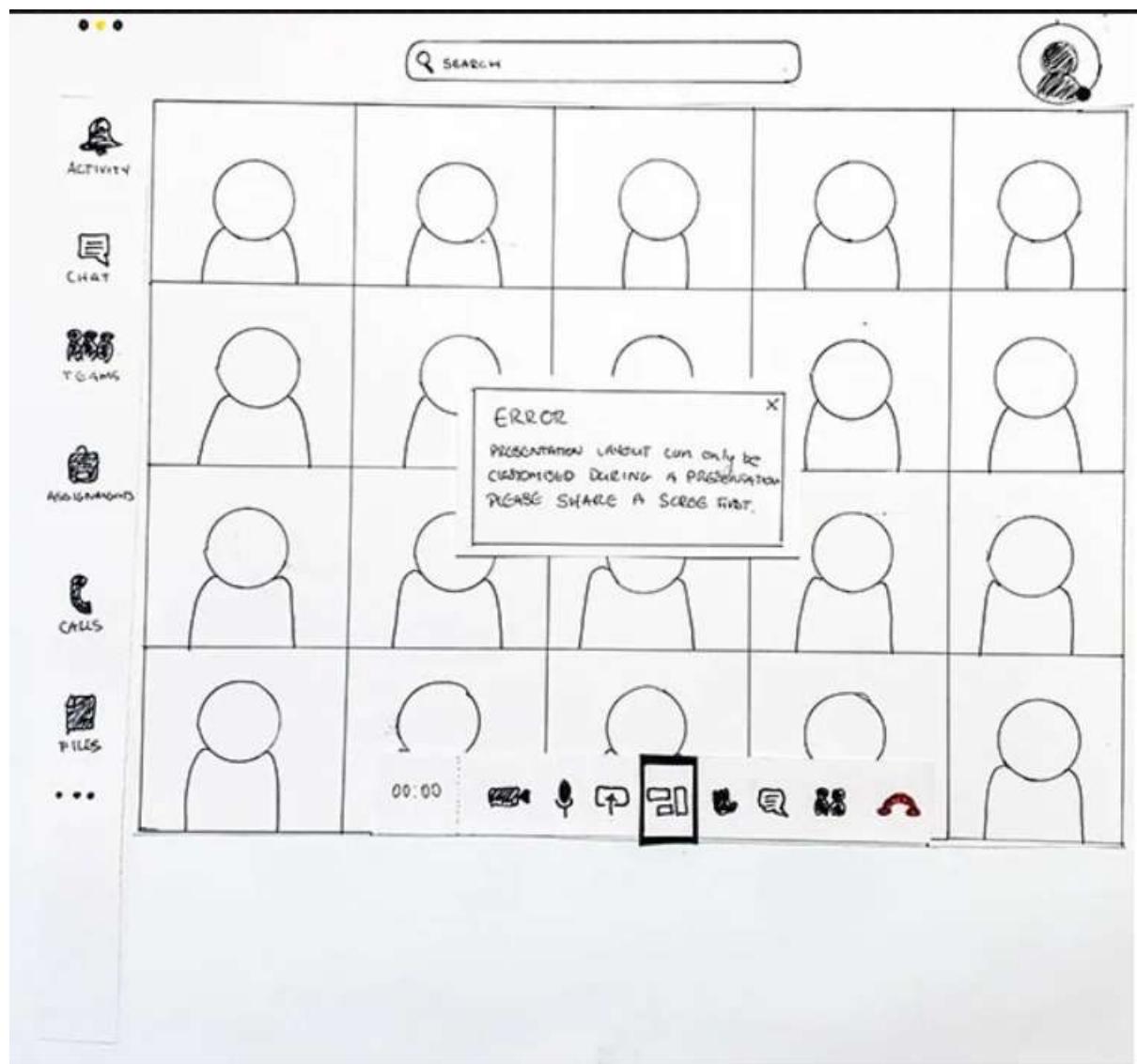
PAPER PROTOTYPE

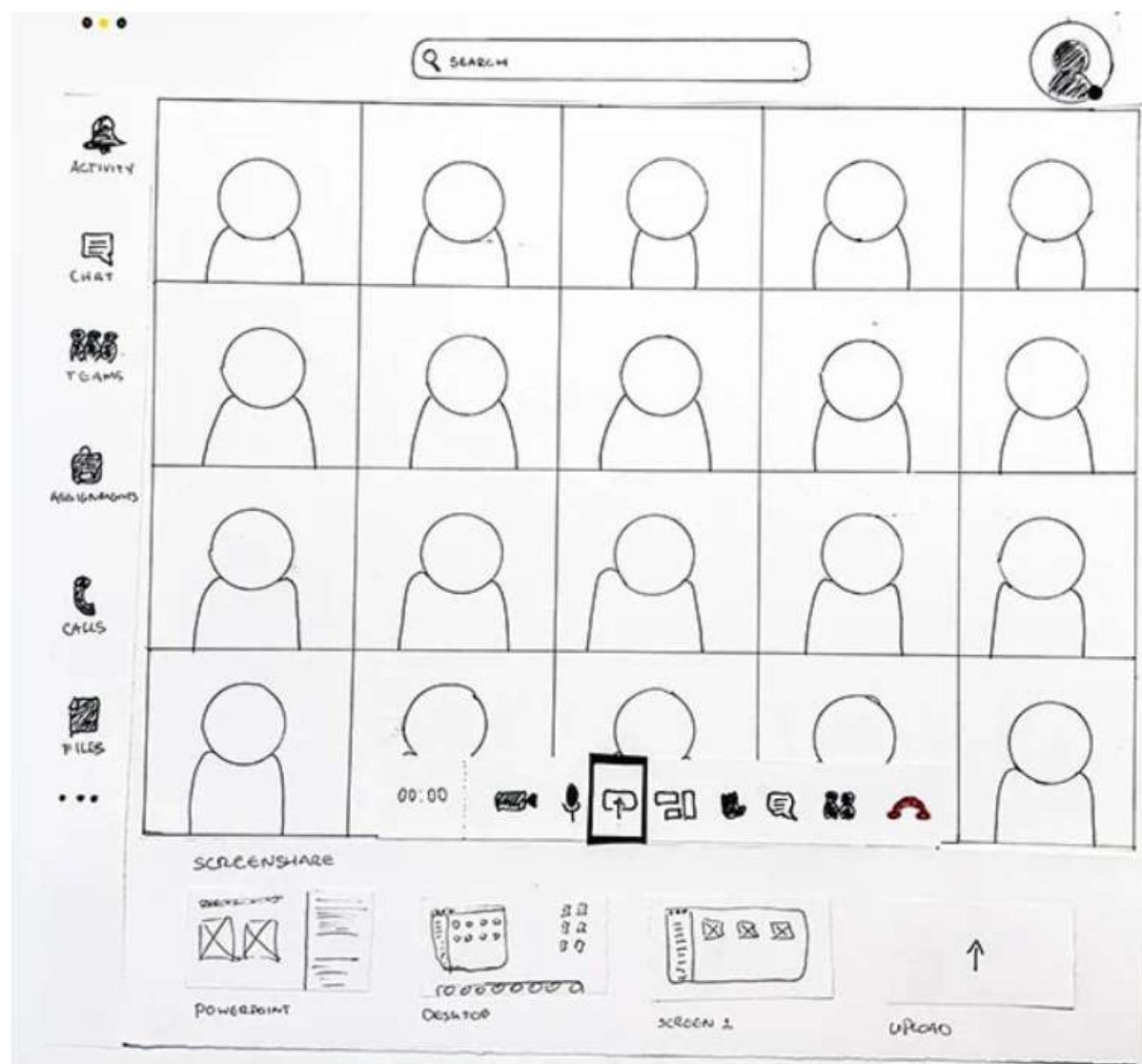


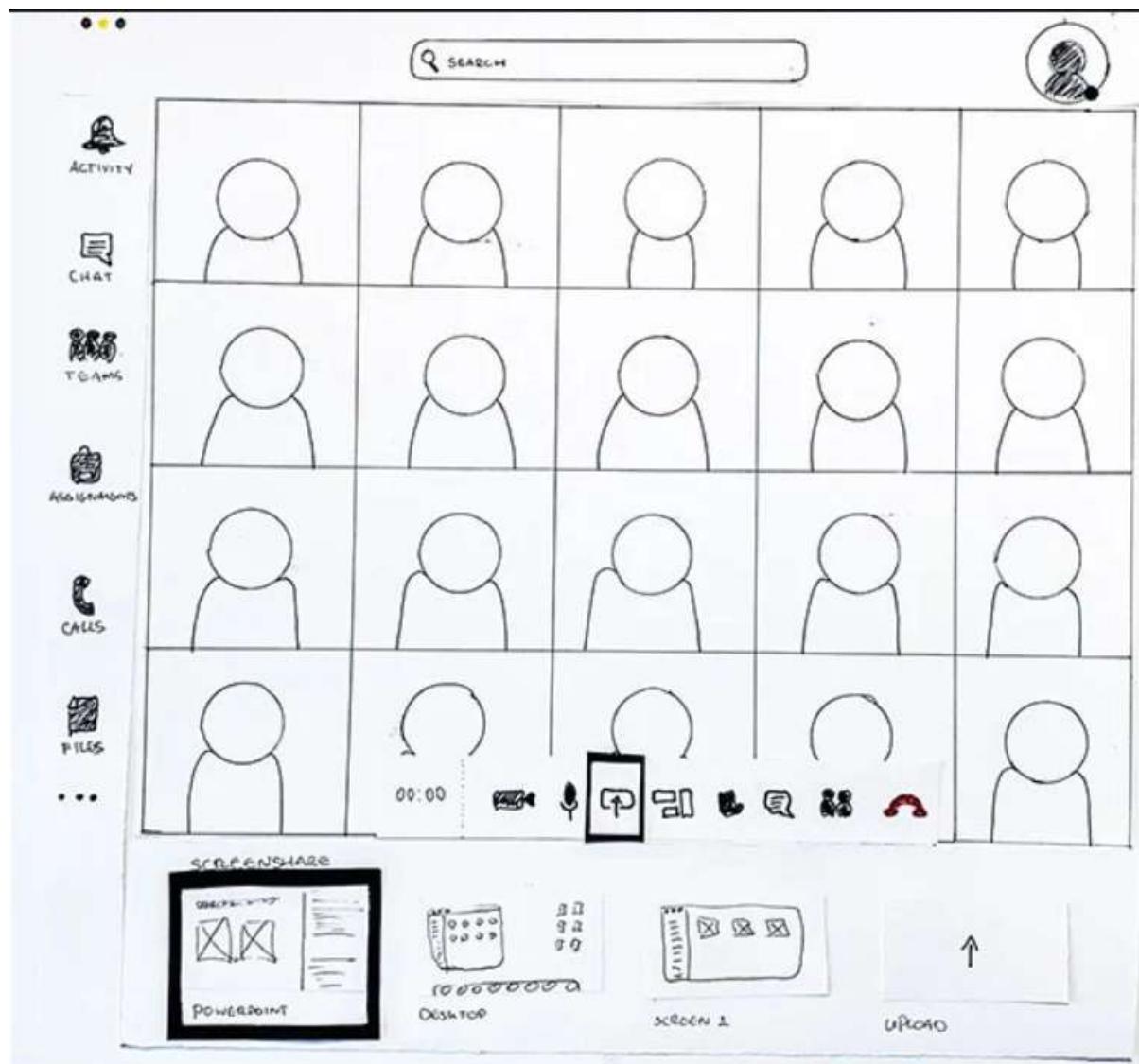
→ Split screen enabled
→ Read Receipts added

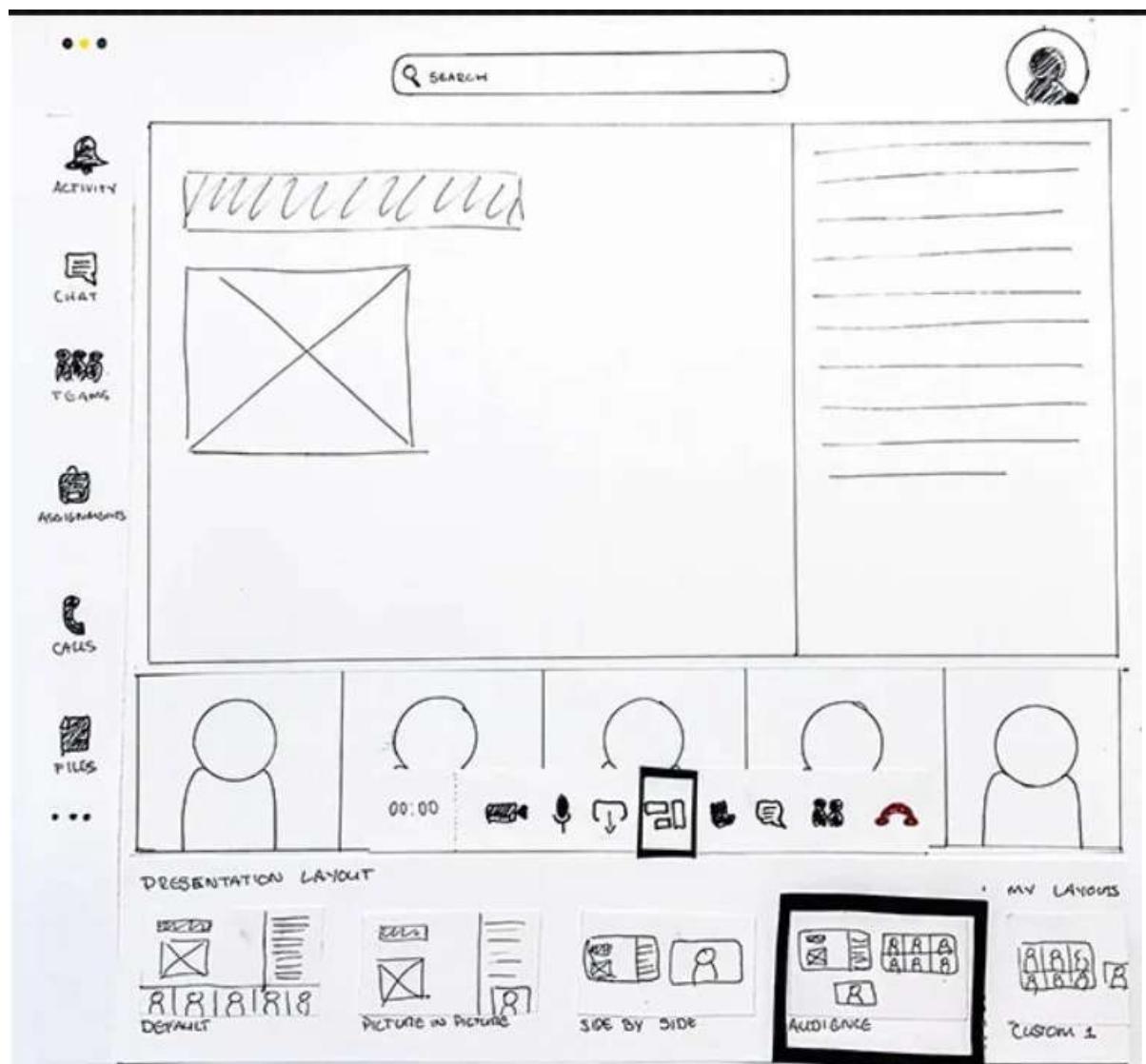
→ Can attend a meeting as well as chat with a person.

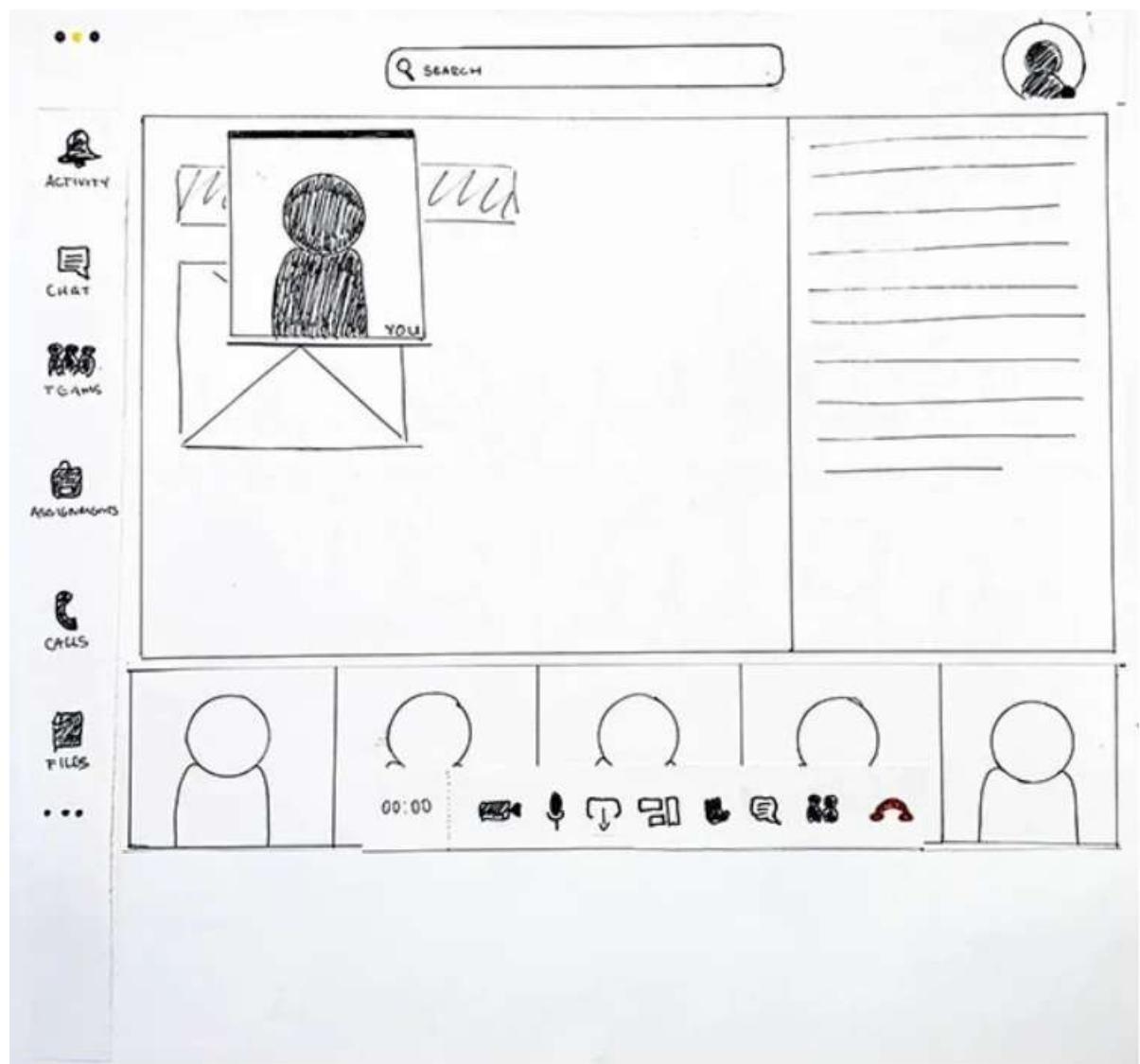


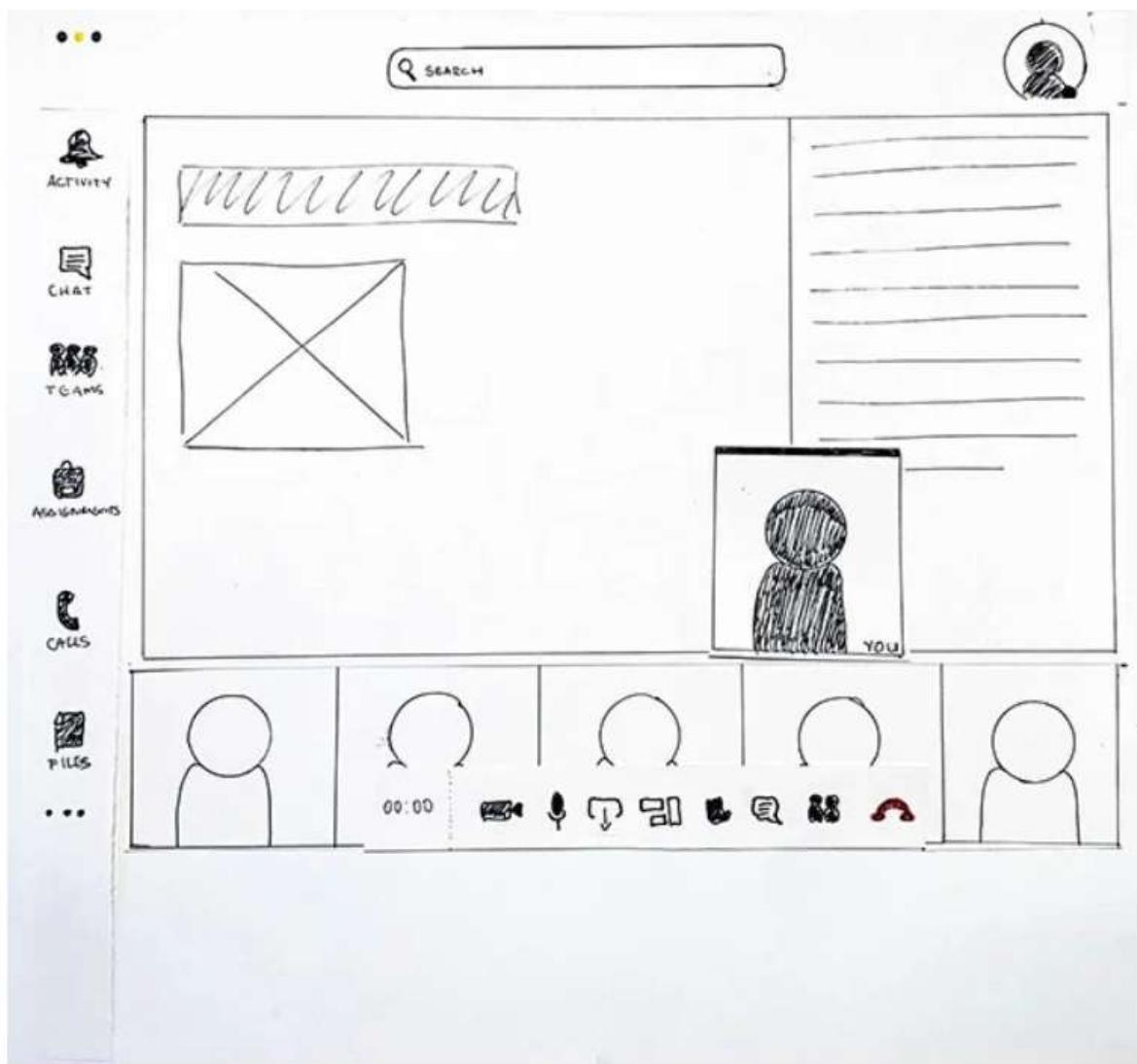


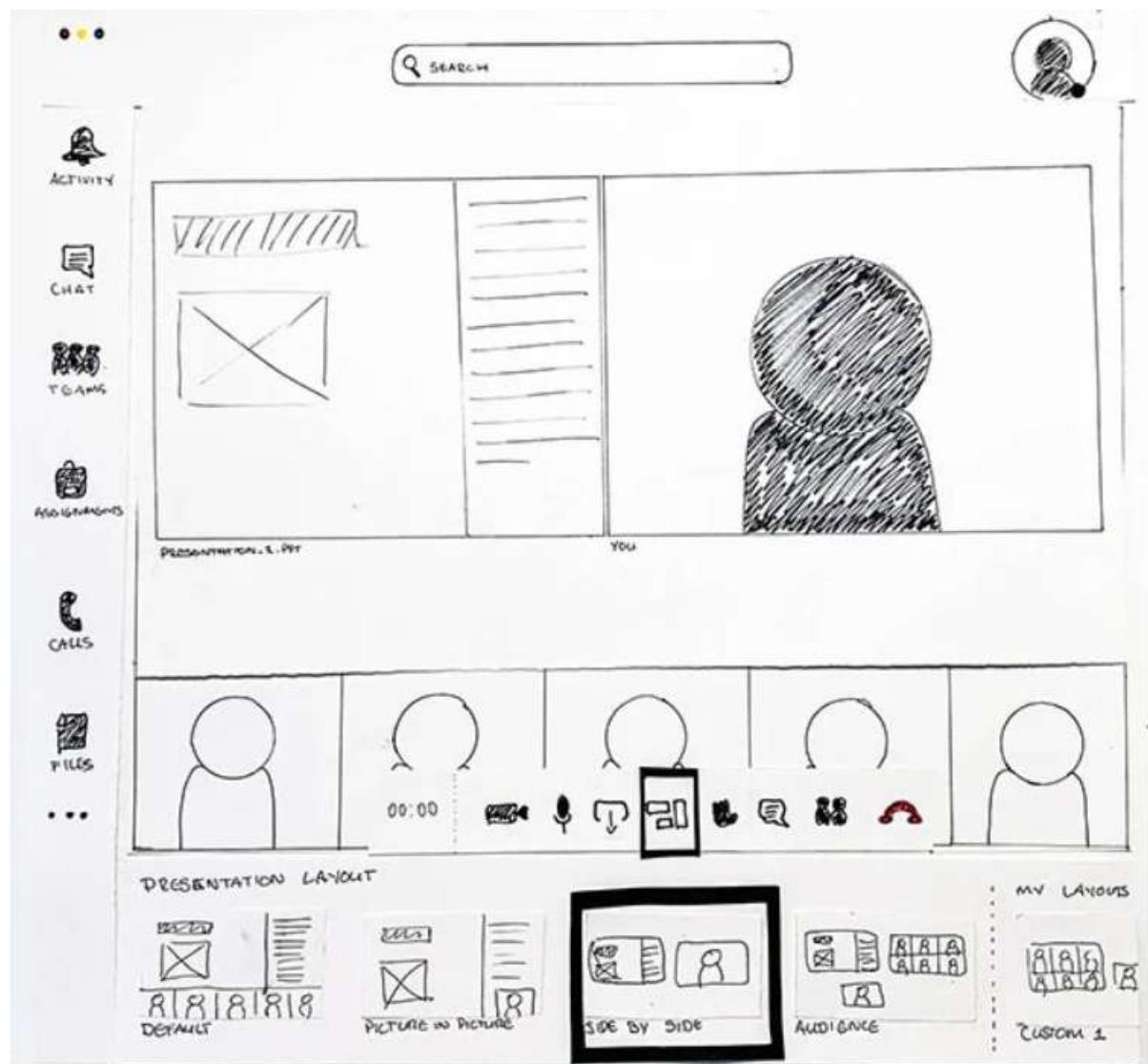


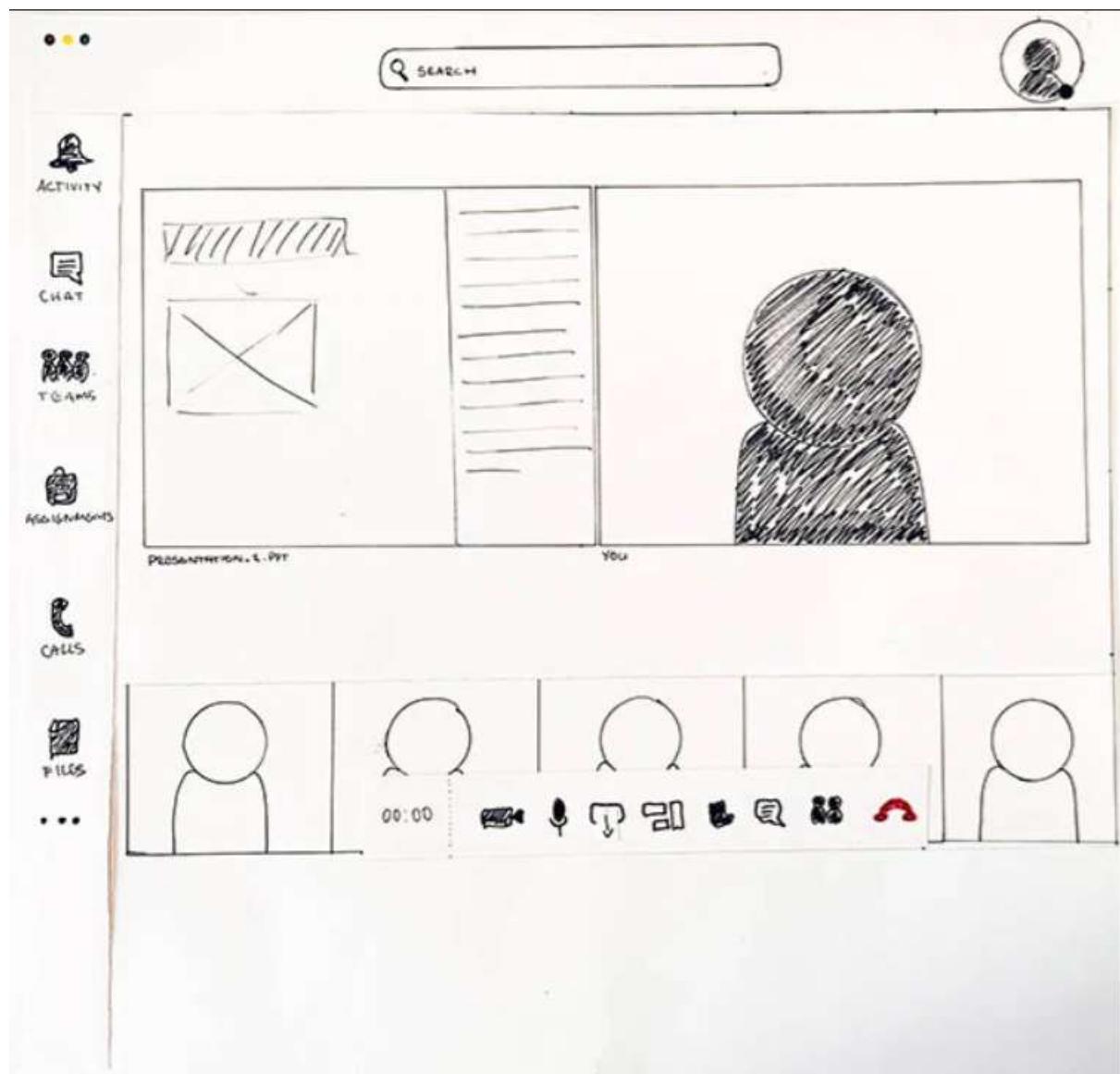


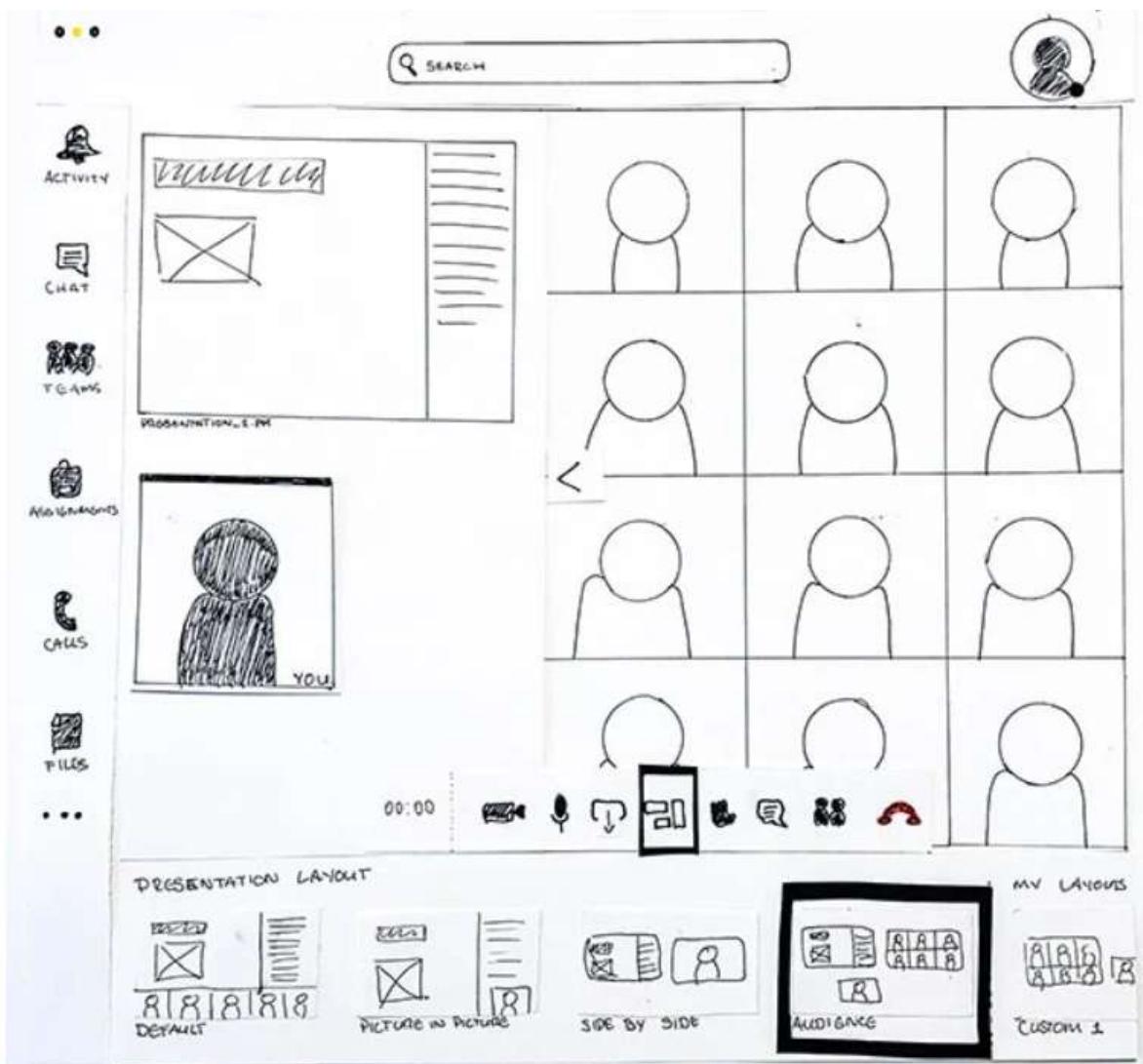


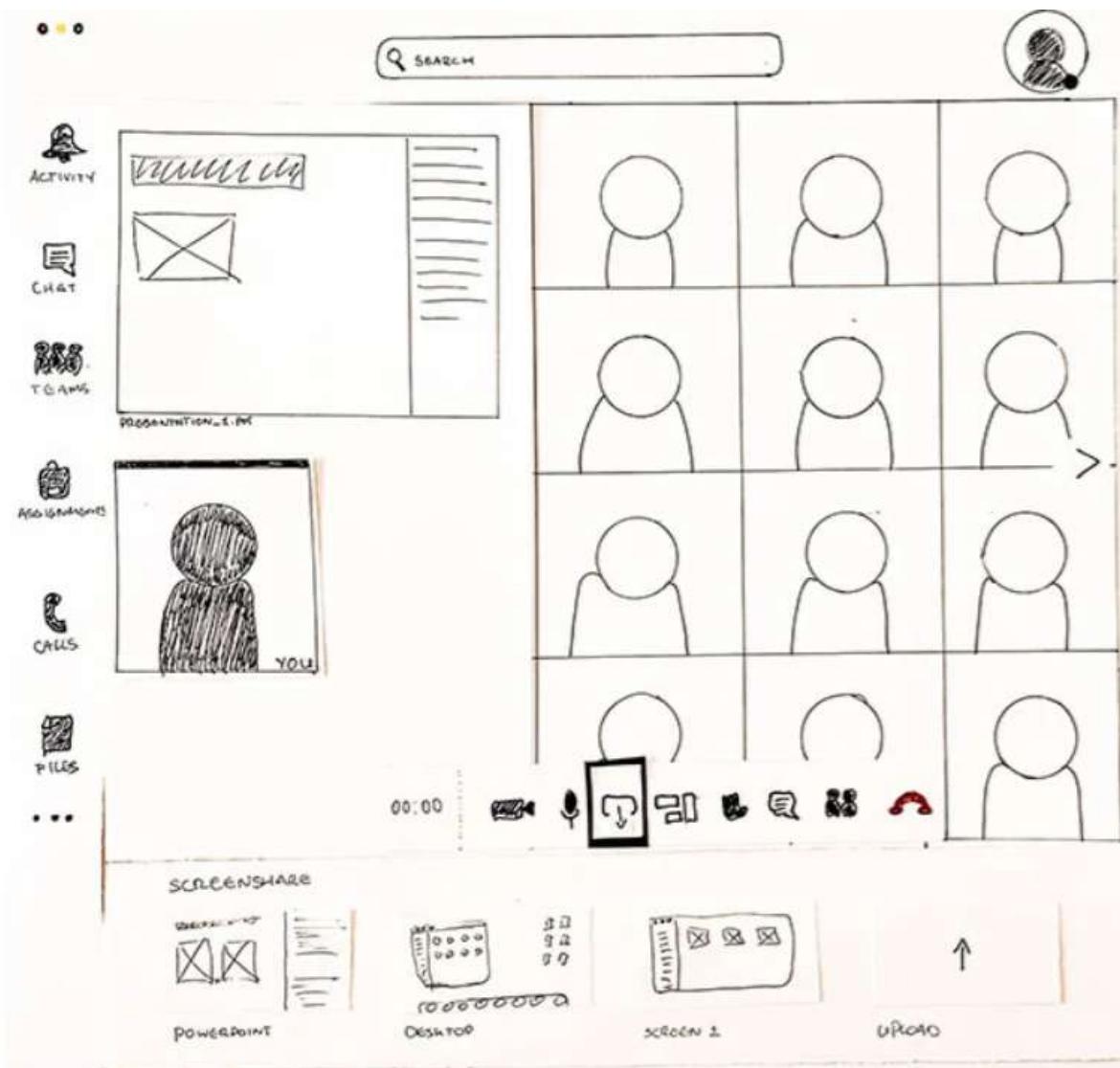


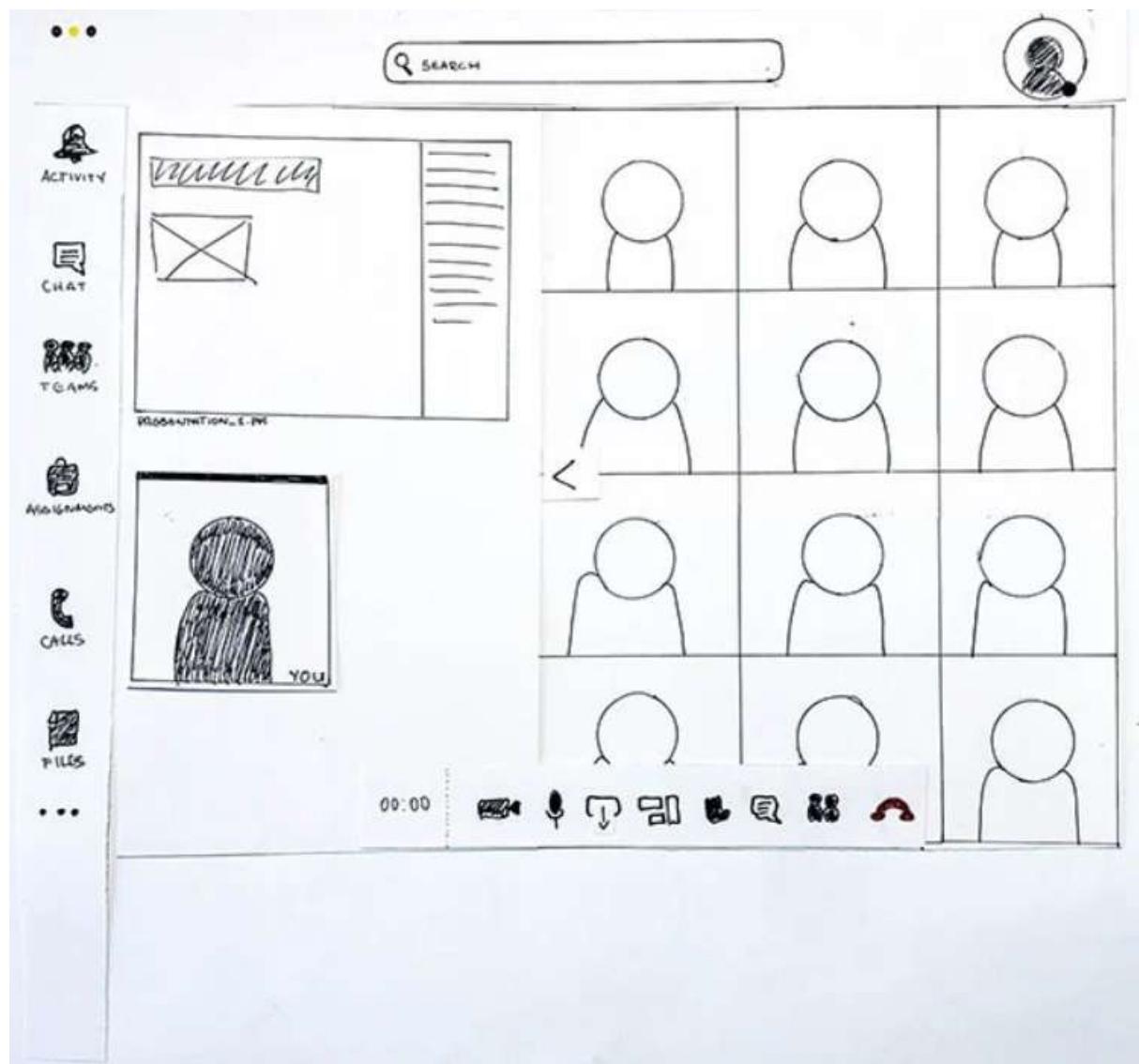












CONCLUSION:

In conclusion, the affinity diagram, concept development, and task flow diagram activities are crucial in the redesigning of MS Teams. The affinity diagram helps to organise user feedback and identify pain points and opportunities for improvement. The concept development stage involves generating ideas and solutions based on the identified pain points and opportunities. The task flow diagram maps out the steps users take to complete tasks in the current system and identifies areas for improvement.

Through these activities, it is possible to gain a better understanding of user needs and preferences, which can inform the redesign process. By addressing pain points and offering new features and customization options, MS Teams can enhance user experience and increase user adoption. Continuously gathering user feedback and evaluating usage metrics can help to identify emerging trends and make necessary adjustments to optimise the design. Overall, these activities are essential to creating a user-centred and effective redesign of MS Teams.