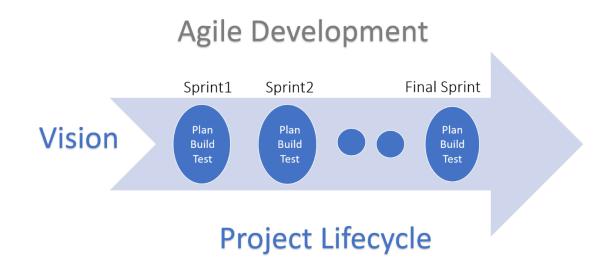
Microsoft Engage 2021 challenge- Build a Microsoft Teams Clone

I have built a video chatting web application- We Talk as my submission for the Engage 2021 challenge.

I have applied the **Agile SCRUM framework** while developing this project. Scrum is an agile development methodology used in the development of Software based on an **iterative and incremental** processes.

I organized my work in 4 sprints, each sprint of around 1 week duration. I further divided each sprint in 3 phases:

- 1. Plan & Design
- 2. Build
- 3. Test & Review



During the **plan and design** phase, I fixed the objectives of the current sprint. I researched about the features that I decided to implement in that sprint. I read articles and tutorials from the internet. I designed the layout of the features, and carefully selected the appropriate icons, images and color scheme.

During the **build** phase, I coded up the new features/ enhancements. I also fixed errors detected during the previous sprint to clear all backlogs. Then, I deployed this working version.

In the **test and review** phase, I tested all the features in my web-app under varying conditions such as:

- User denies the camera/audio permissions.
- The host leaves the meeting first.
- More than 6 people try to join the meeting.
- Tried to create multiple rooms (with different meeting names) at the same time.
- Tried to join the meeting from different browsers, different machines and different networks.
- Two or more participants try to share their screen at the same time.
- User enters a very long message in the chat box

I discussed the progress with my mentor on a regular basis and improved my app based on his inputs and feedback.

Sprint 1:

Planning & Design

- Explored different libraries that enable real time audio-video communication.
- Browsed articles and tutorials on how to call APIs from these libraries.

Build

- Built a basic web app that connects
 users and displays their videos on a screen.
- Made the necessary changes for a group meeting.

Test & Review

 Tested the app using different browsers, different machines and different network connections.

Sprint 2:

Planning & Design

- Designed the look of we-talk.
- Learnt React js with short tutorials.
- Browsed various templates for the home page.

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- Customized the template, created React components for the meeting room screen.
- Linked the home page with the meeting room screen and added buttons to toggle audio-video on/off.

Test & Review

- Fixed the icons which were not getting displayed.
- Put a consistent font on Home page.
- Made the meeting screen responsive.

Sprint 3:

Planning & Design

- Planned the extra features to add.
- Read extensively about the required functions/ api calls.

Build

 Added features of screen sharing, displaying username on video window, displaying the title, current time & member count.

Test & Review

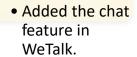
- Made it compulsory for the user to enter both username and title before joining a meet.
- Fixed the bug of username not being displayed in some cases.
- Tested the working of all features.

Sprint 4:

Planning & Design

- Planned the look and position of the chat window.
- Read about the api calls required for chatting.

Build



 Tried to allow users to chat before the meeting starts and after the meeting ends.

Test & Review

- Found a bug where long text messages were not getting wrapped to fit in the chat bubble.
- Added scrolling to the chat window