Department - Information Technology.

Institute - School of Engineering.

University - MIT ADT

**Project Title –** Sanvardhit

**Group no** - 8

**Team Members -**

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**Project Guide –**

Prof. Pallavi Bhujbal

**Problem Statement –**

Immersive And Mixed Reality for social collaboration.

**Brief Project Idea –**

Traditional online collaboration technologies are ineffective in fostering a sense of presence and engagement among remote team members, which is an issue for business. The chance is to enhance online collaboration sessions and give distant teams a more interesting, interactive experience via the use of immersive and mixed reality technologies. This fills a gap in distant team members' lack of efficient communication and collaboration.

Phases –

These are all great steps in developing a mixed reality application.

1. Hand tracking is a crucial aspect of augmented reality, and using a combination of OpenCV, Unity, and Vuforia can provide a strong foundation for implementing hand tracking functionality.
2. Implementing hand tracking to enable users to hold and move augmented objects can add a great deal of interactivity to the application, making it more engaging for users. A whiteboard integration is a good starting point, as it can demonstrate the capabilities of the hand tracking system and provide a practical use case for users.
3. Allowing multiple users to join a session and collaborate with each other is a major step in the development of a mixed reality application. It's important to keep in mind that this will require the implementation of a networking system to allow users to communicate with each other, as well as the creation of user avatars to represent each user in the virtual environment. This can add a level of complexity to the project, but it is a key aspect of developing a collaborative mixed reality experience.

**Novelty in the project –**

Sanvardhit has features like

- Augmented Reality / Mixed Reality

- Avatar based

- Voice / Gesture based

- 2-way communication

- Integration with entities like

* + Desktop Screen sharing, Web Site
  + White Board

Business model - Users will be able to use the product for 40 minutes only until the session expires.

**Technology to be used in the project –**

C#, Unity Engine, Vuforia Engine.

C# - C# will be used to code the objects which will be created and managed in the unity Engine.

Unity Engine – Unity Engine is the platform which will allow us to create objects and add the C# script to the objects.

Vuforia – Vuforia is a software development kit for creating AR application which supports marker less AR.