IDEATION PHASE
PROBLEM STATEMENT

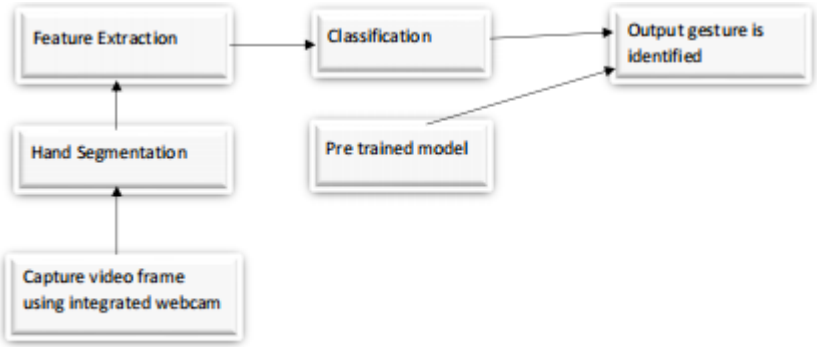
Date	1 October 2022
Team ID	PNT2022TMID31069
Project Name	A Gesture - Based Tool for Sterile Browsing of Radiology Images
Maximum Mark	4 Marks

Problem Statement:

Humans have the ability to recognize body and sign language but computers don't have this ability. Humans can recognize sign language because of the combination of **vision** and **synaptic interactions** with brain. To make computer recognize sign language we need to replicate this skill to computers.

Through **position** and **shape** of the centre of the **palm** and the **fingers** we can obtain certain information. The gesture can be both static and dynamic. *Static hand gestures* are obtained by analysing shape of the hand. *Dynamic hand gestures* are obtained by analysing hand movements. The ability to spontaneously identify gestures without delay in hand motion is the problem. Through real-time hand gesture detection, we overcome these problems. Processing speed, image processing techniques and different recognition algorithms are used in this real-time hand gesture detection.

In this project, the model is first pre-trained on the images of different hand gestures, such as showing numbers with fingers as 1, 2, 3, 4. This model uses the integrated webcam to capture the video frame. The image captures in video frame is compared with the pre trained model and gesture is identified.


Feature Extraction
Classification
Output gesture is identified
Hand Segmentation
Pre trained model
Capture video frame using integrated webcam