# Hand Gesture Recognition

For

**Image Processing Machine Vision Case Study**
**TE/D14A/SEM-V/EXTC/2021-22**
**Bachelors in Engineering**

By

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## Aim:
To detect and identify hand gestures using MATLAB
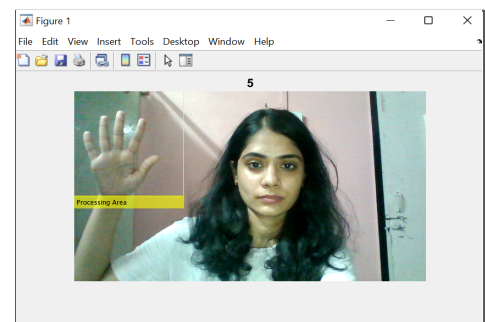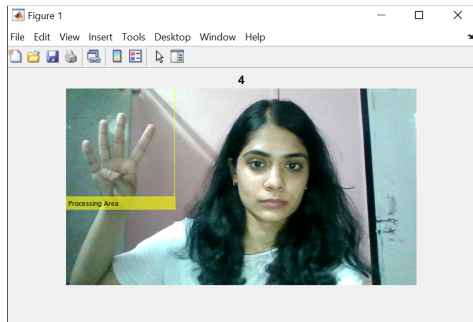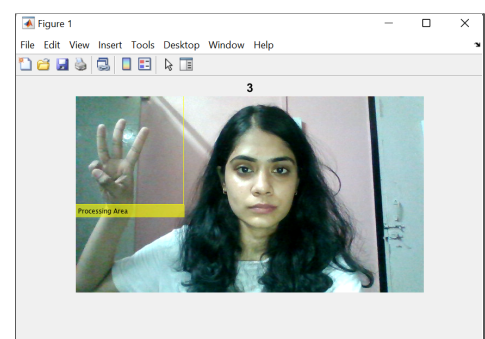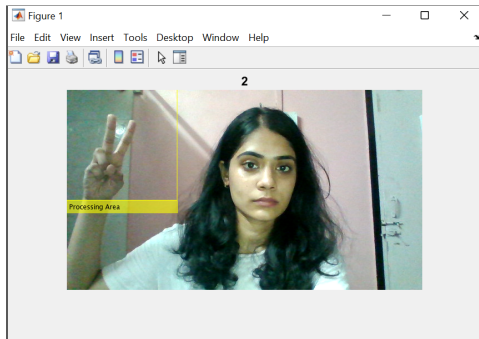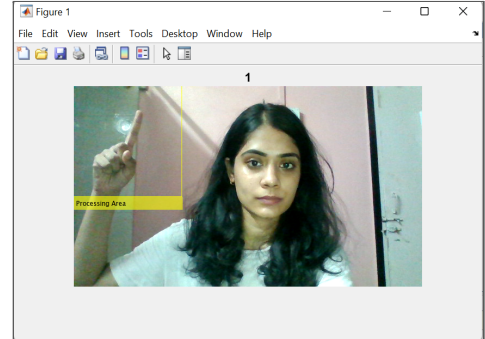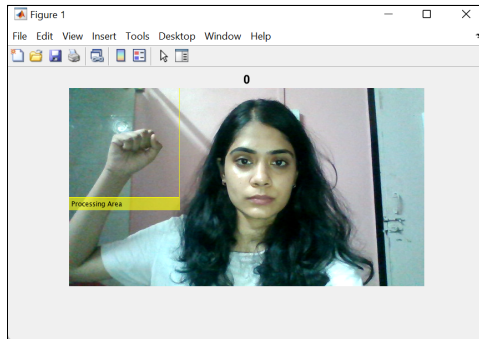

## Software:
MATLAB Simulink R2022a 9.12.0


## Introduction:
Gesture recognition system has been adjusted for different research applications from facial motions to finish substantial human activity. Different applications have developed and made a more grounded requirement for this kind of Gesture recognition system. Presently these kinds of hand gesture systems are used in smart mobiles. In any case, the client needs to utilize a glove-based interface to extricate the advances of the hand motions which constrains their ease of use in certifiable applications, as the client needs to utilize extraordinary gloves so as to communicate with the framework.


## Working:
The project is developed based on the static hand gestures recognition system. The static hand gesture system basically follows the four steps .They are preprocessing and segmentation, feature extractions ,classification and bit generation and Hand gestures interpretation. For our project we have prepared a set of input images for each sign which may have slide differences with each other but prepared for the same sign. When the camera scans the image of the sign as input to the system then the application starts the comparisons with a stirred data set. In this technique, the hand gestures are captured using a camera and saved. After that these images are sent to image processing techniques to provide the output for the given gesture.

# Results:

## Conclusion:

The proposed work will help to eliminate the tradition completely. It only requires a web-camera to capture an I/P image. This would lead to a new generation of human computer interaction in which no physical contact with devices is needed. Anyone can use the system to operate the computer easily, by using gesture command.Almost deaf and discourse disabled people utilize this gesture based communication to impart.This system more helpful to the persons who are old aged deaf and dumb persons to communicate easily with society. However, the gesture recognition system needs more research and defines easy ways to communicate with physically defected people.

## References:

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2. Rekha, J. Bhattacharya and S. Majumder, Shape, Texture and Local Movement Hand Gesture Features for Indian Sign Language Recognition , IEEE 2011

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