P.S.N.A. COLLEGE OF ENGINEERING & TECHNOLOGY, DINDIGUL

Department of Computer Science and Engineering

Project First Review

Project Title	: Online Secure Payment System using Face Recognition
Section	: CSE-D
Domain	: Machine Learning
Batch No	: 5
Team Members	: S.Santhosh (921317104187) S.Santhosh (921317104186) Santosh Luitel (921317104191) S.Sarath Kumar (921317104192)
Internal Guide Name	: Dr. R. Karthikeyan

MERITS OF THE PROBLEM:

- The purpose of our project is to develop a web-based application which is used for online payment in a more secure way.
- To make transaction more secure we use face recognition instead of OTP or MPIN.
- With face recognition, there are no passwords that hackers could compromise. Even if hackers stole your photo database, it would be of little use, as "liveness detection," prevent using them for impersonation purposes.

LITERATURE SURVEY:

REFERENCE LINK	TITLE	YEAR	AUTHORS	PURPOSE
https://ieeexplore.ieee.org/document/7298682	FaceNet (2015 IEEE): A Unified Embedding for Face Recognition and Clustering	2015 IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	Florian Schroff Dmitry Kalenichenko James Philbin	In this paper is presented a system, called FaceNet [1]. FaceNet learns how to directly map face images to a compact Euclidean space.
https://ieeexplore.ieee.org/document/7393056	An efficient scheme for face detection based on contours and feature skin recognition	2015 Tenth International Conference on Computer Engineering and Systems (ICCES)	Mohamed Heshmat Moheb Girgis Seham Elaw Walaa M. Abd-Elhafiez	This work [6] is based on feature extraction to provide an efficient and simple way to detect human faces in images. The features under consideration are mouth, eyes, and nose. The results are with good accuracy, great speed and simple computations.

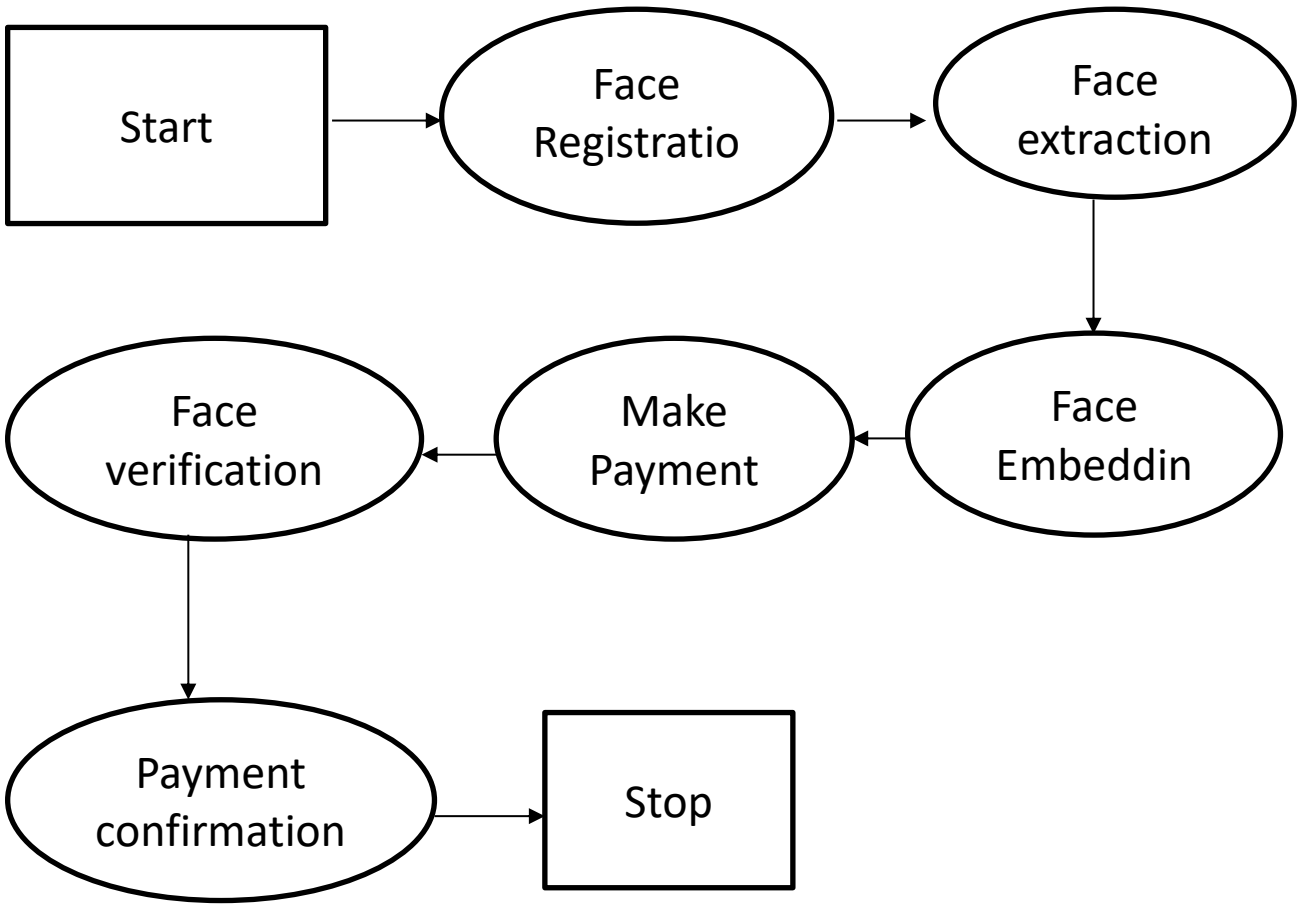
HARDWARE REQUIREMENTS:

- Any Operating System
- System with in-built/external web camera

SOFTWARE REQUIREMENTS:

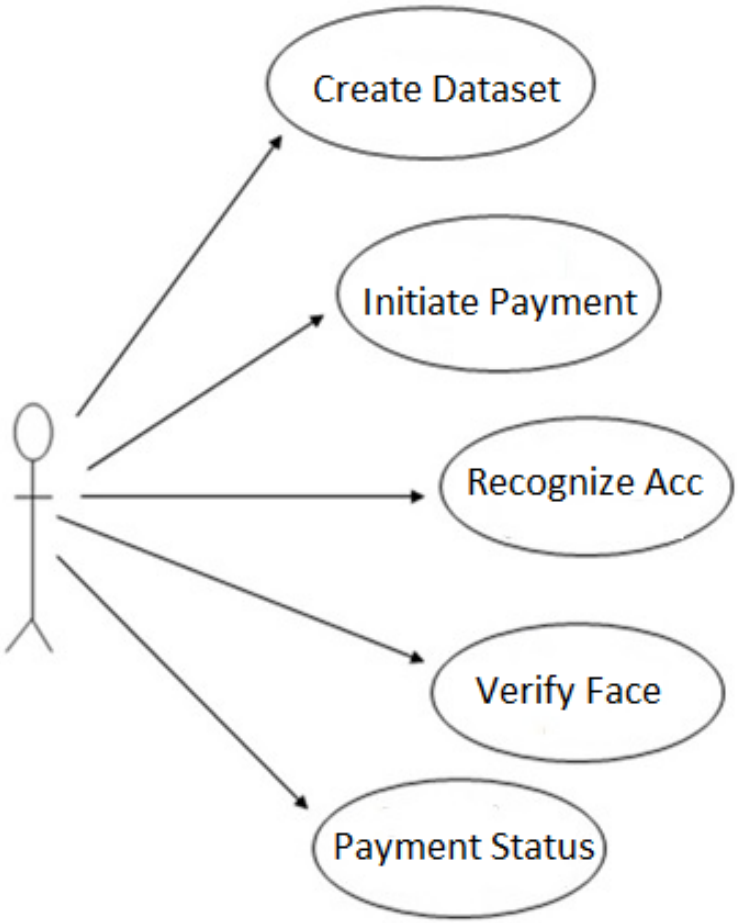
- Python
- Django

HIGH LEVEL DESIGN

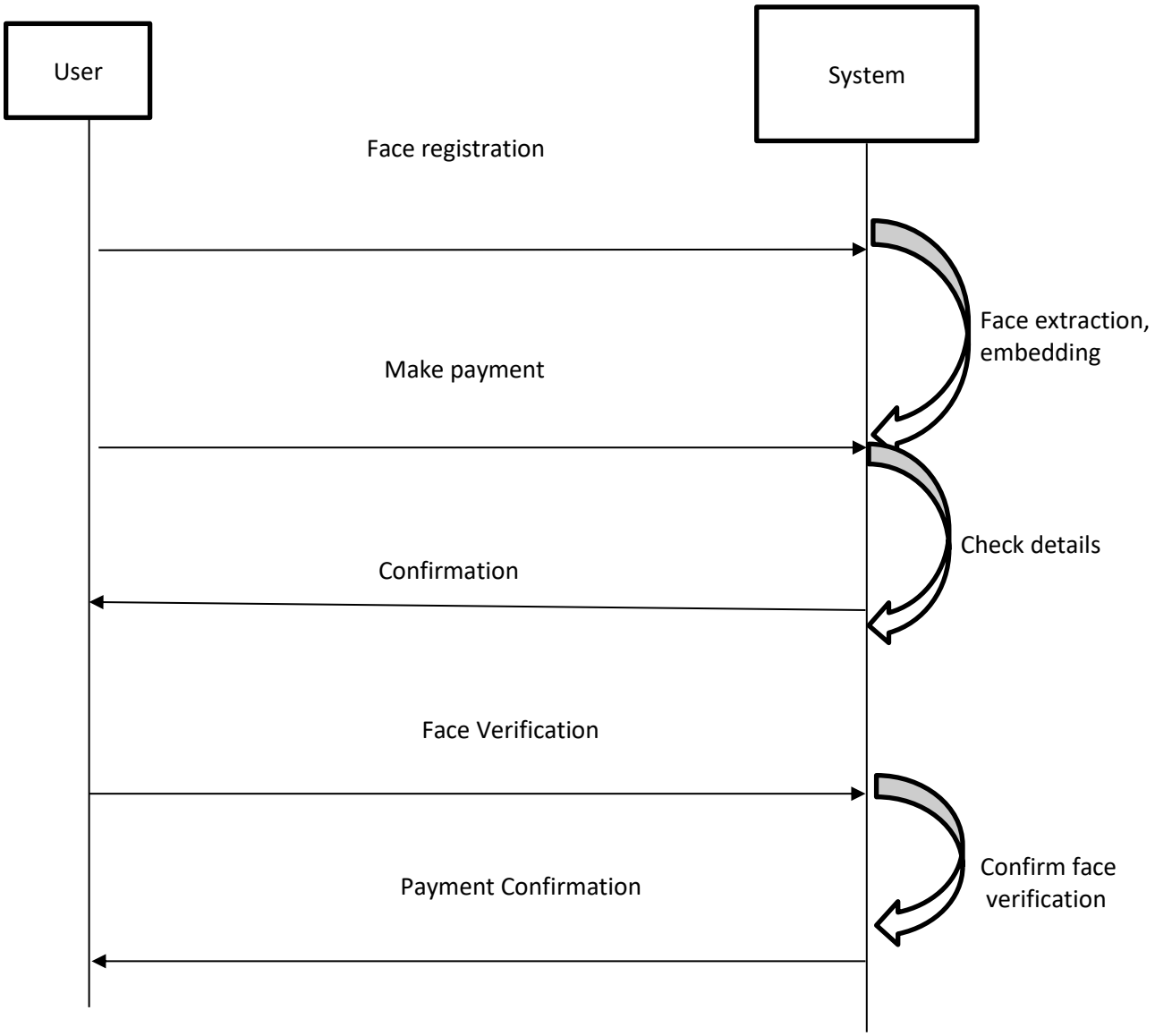


LOW LEVEL DESIGN

1) USE CASE DIAGRAM:



2)SEQUENCE DIAGRAM:



MODULES:

The modules for the system are:

- Face Enrollment
- Payment

DOCUMENTARY REFERENCE:

- Florian Schroff, Dmitry Kalenichenko,and James Philbin, “FaceNet: A Unified Embedding for Face Recognition and Clustering”, IEEE, 2015.
- Muzammil Abdulrahman, Alaa Eleyan, “Facial expression recognition using Support Vector Machines”, 23nd Signal Processing and Communications Applications Conference (SIU), IEEE, 2015.

Supervisor Project Coordinator HOD-CSE