



Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY, THANE
(All Programs Accredited by NBA)

Department of Information Technology



AI based Smart Online Examination Framework

Group No: 24

Swapnil Sapre : 18104027

Kunal Shinde : 18104012

Keval Shetta : 18104013

Guide : Prof Vishal Badgujar

Contents

- Introduction
- Objectives
- Problem Definition
- Technological Stack
- Review Suggestions (Given in Last meeting)
- Proposed System Architecture/Working
- Prototype Design Demonstration
- Implementation Status
- Status of Paper Draft & Targeted Conference

Introduction

- Problems Identified :
 - Inability to conduct in person exams in situations like pandemic.
 - Malpractices done by students by taking advantage of no proctoring methods during exam.
 - Personal monitoring of students required that takes more time and not easily manageable
 - Problem of Impersonation
 - Student management in terms of marks record and question bank management in terms of setting question paper.

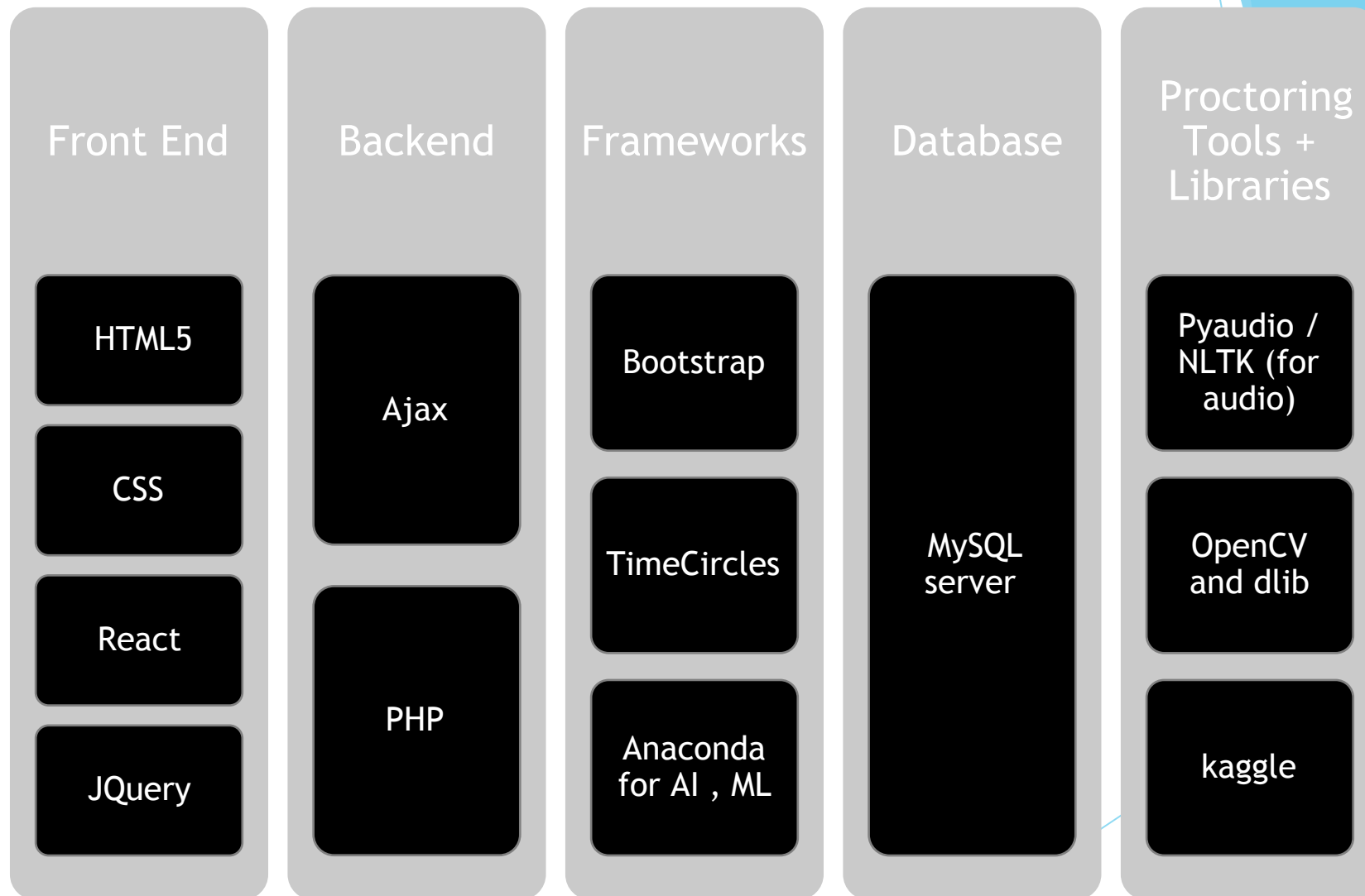
Introduction

- Solution Proposed :
 - With proctoring enabled the chance of students doing malpractices reduces by a huge amount.
 - The AI and ML based proctoring mechanism will auto detect the malpractices. Hence no need to individually monitor students.
 - For impersonations, live facial validation of actual examinee before the exam.
 - Making use of OTP or secret password based authentication mechanism instead of simple username-password.
 - Enabling webcam and microphone for video & audio detection and tab locking to prevent browsing activities.

Objectives

1. To set up proctoring mechanism to stop malpractices in exam. To create a system that validates each user well before the exam using facial recognition and validation.
2. To perform object tracking (person tracking) throughout the exam.
3. To allow the examiner to alert warnings or end the exam if students found performing malpractices.
4. To provide a platform for the teachers to set the questions and get detailed reporting.
5. To provide tab locking features to not allow students to navigate away from exam screen.
6. To send attendance and mis activity report details to teacher's.

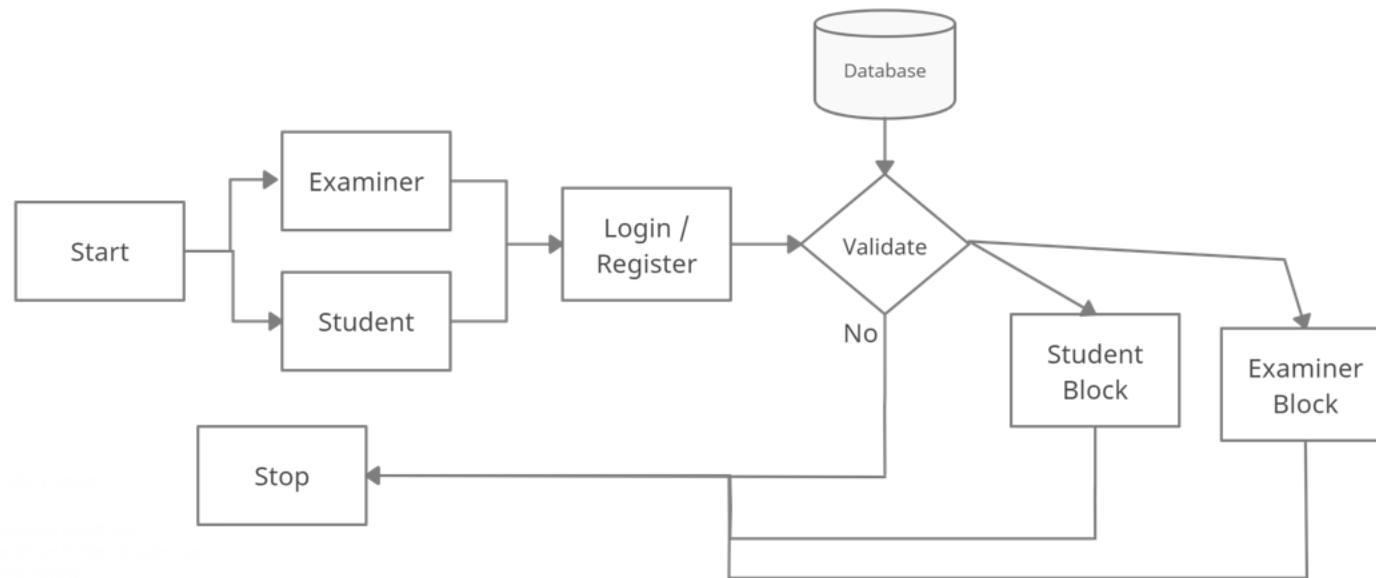
Technology Stack

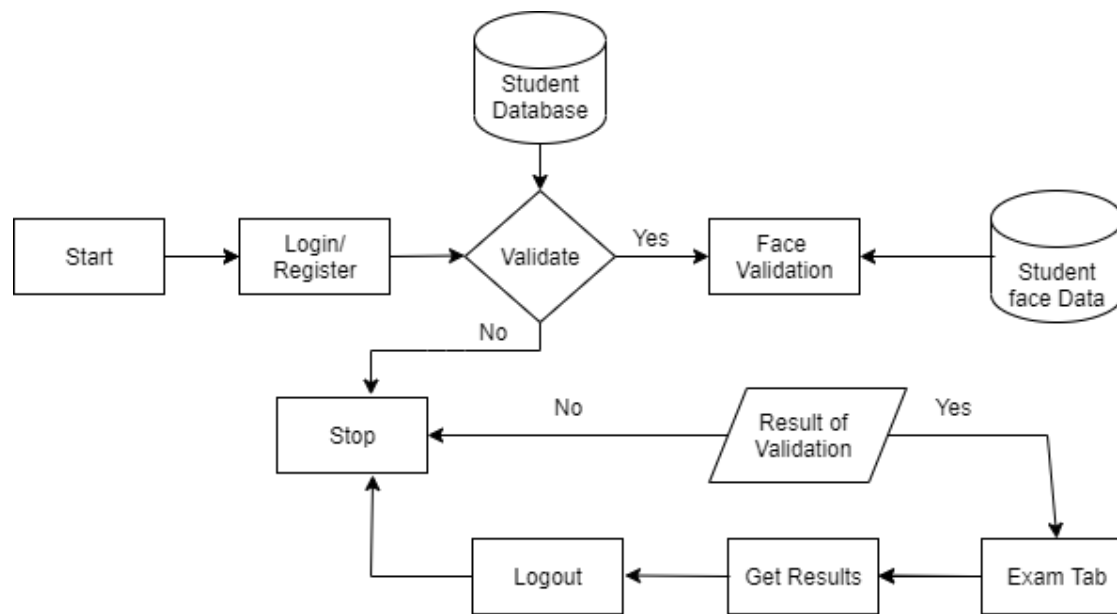


Review Suggestions

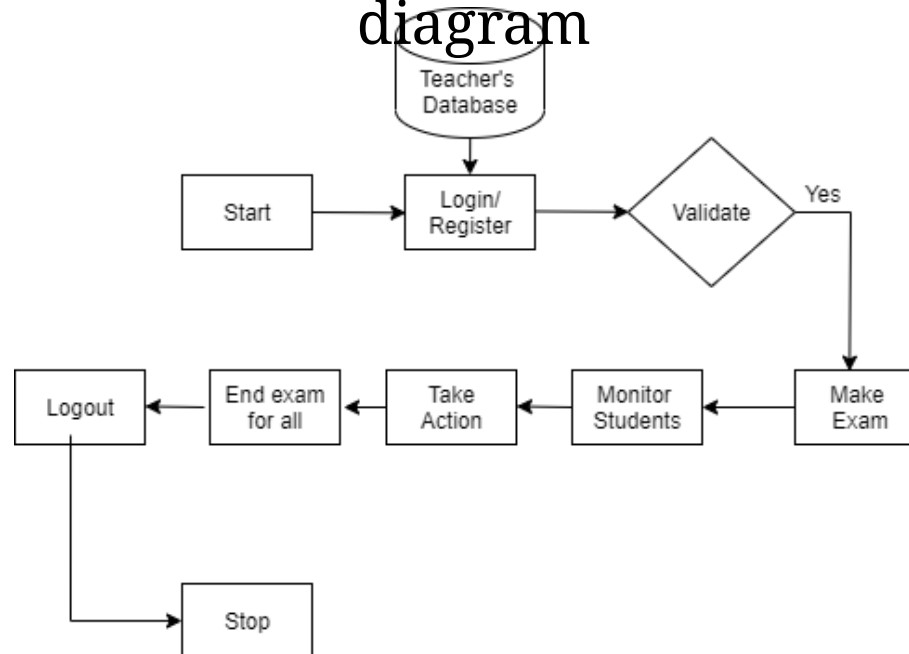
- Ability to save the exam in progress in case of power or internet interruptions.
- Make a downloadable version of application (to be downloaded from website using link)

Proposed System Architecture





Student's End block
diagram



Teacher's End block
diagram

Prototype Design Demonstration

- <https://swapnilsapre.proto.io/editor/index.cfm?id=45612231-f54e-4cb9-af6e-216ff5e0fdd5>

Implementation Status

- Pose setup, face recognition and validation in progress (objective 1)
- Object tracking in progress (objective 2)

Status of Paper Draft & Targeted Conference

- Paper completed , approved by guide and submitted in following conferences

- 3rd International Conference on Advances in Distributed Computing and Machine Learning (ICADCML)-2022

More Details : <https://www.icadcml.in/#proc>

- 3rd International Conference on Deep Learning, Artificial Intelligence and Robotics, (ICDLAIR) 2021

More Details : <https://icdlair2021.iaasse.org/index.html>

- International Conference On Big Data, Machine Learning and Applications

More Details : <http://bigdml.nits.ac.in/>

Thank You...!!