IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Fair Test PRO : New Testing Platform Where No Can Cheat

[1]Komal Gandal, [2]Prof. N.K.Patil, [3]Chinmay Inamdar, [4]Abhijeet Phute, [5]Tejal Kamthe
[1]Student, [2]Professor, [3]Student, [4]Student, [5]Student
[1]Sinhgad Institute Of Technology Lonavala,
[2]Sinhgad Institute Of Technology Lonavala,
[3]Sinhgad Institute Of Technology Lonavala,
[4]Sinhgad Institute Of Technology Lonavala,
[5]Sinhgad Institute Of Technology Lonavala

Abstract - Fair Test Pro is an online testing solution that aims to provide secure and cheat-free online tests. It responds to some of the most critical issues in remote testing like impersonation and inappropriate support by leveraging sophisticated machine learning algorithms such as face and object detection, eye-tracking, and monitoring of tab-switching. FairTestPro prioritizes both academic integrity and accessibility by integrating seamless authentication with government ID verification and live photos. Developed on scalable and affordable technologies, Fair Test Pro reduces human involvement with a user-friendly interface for examinees and administrators. Despite issues such as false positives and occasional software glitches, FairTestPro is constantly improving as a secure digital assessment solution for the future of remote education.

keywords - Secure Online Exam AI-based Proctoring Cheating Detection

1.Introduction

In the rapidly changing world of education today, FairTestPro is a revolutionary system that aims to confront the challenge of distant assessments boldly. As virtual learning and online tests gain popularity, institutions are challenged to ensure that tests are fair and credible. FairTestPro is a web-based, revolutionary examination platform established to maintain academic honesty by offering a secure, cheat-proof setup for virtual tests. Through the most recent advances in computer vision and machine learning, FairTestPro observes examinee actions, allowing cheating attempts to be identified and halted in real time. This forward thinking guarantees that students' abilities and knowledge are tested in a just manner, with the actual efforts being exposed instead of the prospect of cutting corners or cheating. An advantage of the platform's fundamental nature is its very natural incorporation of advanced technology to meet its objectives. FairTestPro's algorithms use machine learning to constantly scan data for patterns characteristic of cheating activities, like irregular eye movements, more than one person in the frame, or lengthy disappearances. The computer vision feature of the platform allows it to monitor and scan the testing room, detecting possibly suspicious activity without intruding on the privacy of the examinee. The real-time detection feature is essential in the modern digital era when proctoring the old way is not possible every time. By recognizing abnormal behavior during exams, FairTestPro assists institutions in upholding the integrity of their exams so that results accurately reflect the student's capability. Apart from the technical, FairTestPro also caters to the deeper need within the educational sector: establishing confidence in online learning and testing.

1.1 RESEARCH METHODOLOGY

a) **Identification of the Examinee**

This process verifies that the test taker is the right, registered examinee.

Methods can be:

Face recognition via webcam input

ID identification via image capture or document scan

b) **Detection of Unauthorized**

This process verifies whether some other person (other than the examinee) is in the frame, showing potential cheating or impersonation**.**

Methods can be:

Object detection (e.g., via YOLO or similar models) to detect faces

Alerting when the presence of more than one individual is detected

Background monitoring for any suspicious presence

c) **Monitoring Eye Movements**

To identify whether the examinee is gazing away from the screen repeatedly, indicating cheating.

Eye tracking using webcam and computer vision libraries

Head and gaze direction detection

Flagging suspicious behavior (e.g., glancing off-screen again and again)

d) System Integration and User Interface

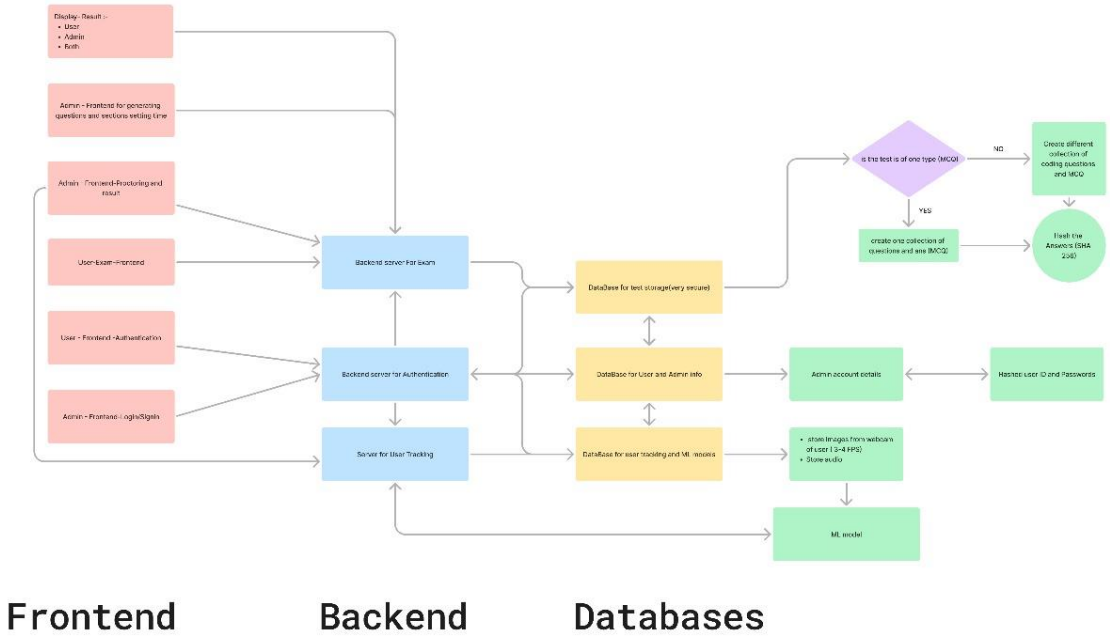
Integrates all detection modules into a working, user-friendly system.

Includes:

Administrator dashboard for reviewing and monitoring data

Alerts or flagging in real-time

MODELING AND ANALYSIS



1. Frontend (User Interfaces)

The left-hand side of the diagram contains interfaces for various users:

Admin Interfaces:

Generate questions and exams

Process and publish results

Manage login and profiles

User Interfaces:

Authentication/login

Exam participation interface

Purpose: To enable users (students and admins) to interact effectively with the system.

2. Backend (Application Logic Layer)

The middle layer processes user inputs and manages system operations:

Exam Backend Server: Handles test delivery, question management, and response submissions.

Authentication Server: Verifies user credentials to ensure only registered examinees gain access.

User Tracking Server: Collaborates with the ML model to monitor user behavior (e.g., face detection, eye tracking).

Purpose: Acts as the core logic that connects frontend actions with the database and ML analysis.

3. Databases

This section stores and maintains essential data:

Temporary Exam Data: Stores question sets and MCQ details during exam setup.

User and Admin Data: Stores personal and login information.

User Tracking Data: Contains logs such as gaze direction, facial detection, and data processed by the

ML Model.

4. Action Flow

The admin creates or selects questions (MCQs) based on the type of exam.

Questions are temporarily stored and linked to the scheduled test.

Users log in (the authentication server verifies credentials).

During the test, the tracking server and ML model monitor the user for:

Facial detection

Eye movement

Presence of unauthorized persons

Results and any flagged behavior are stored and reviewed by admins post-exam.

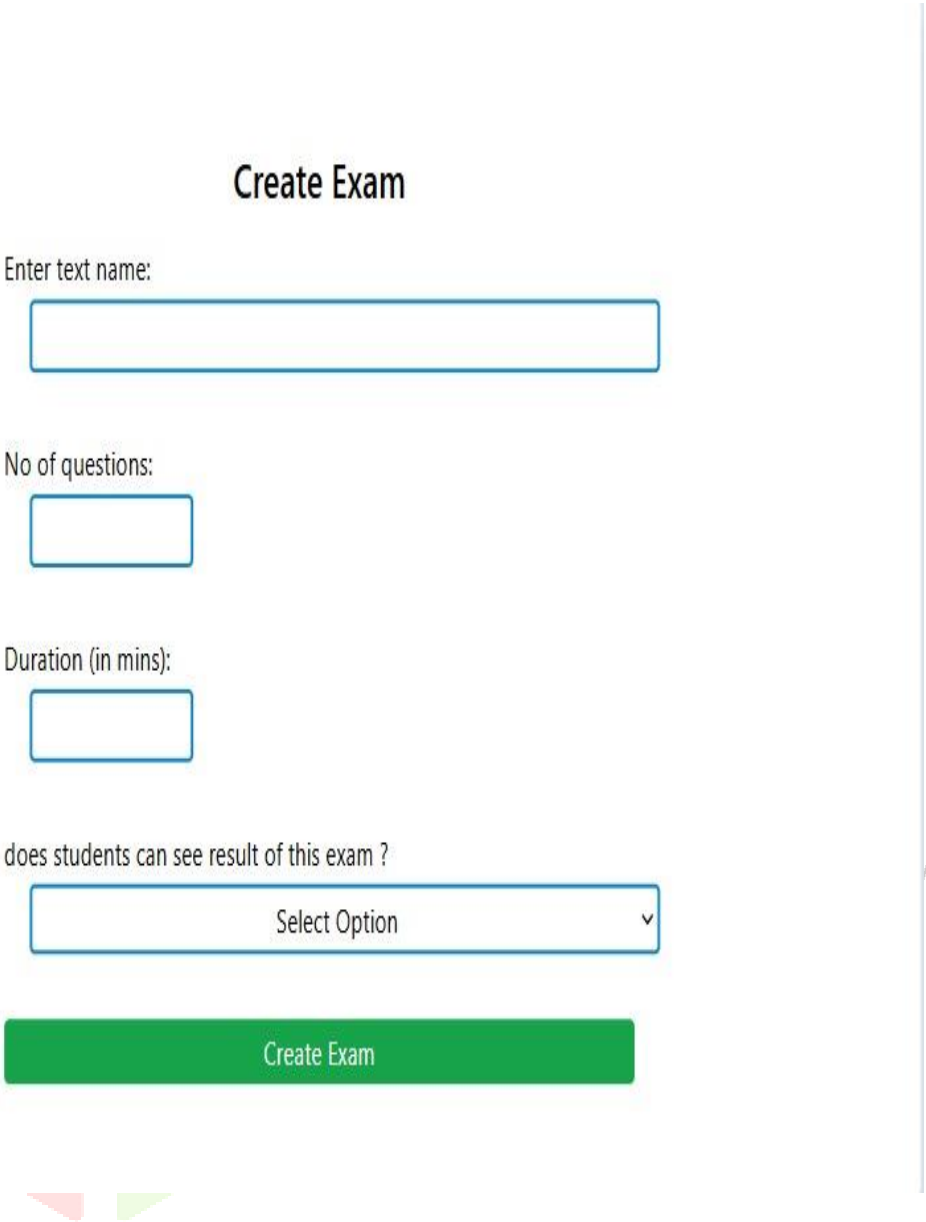
5. Integration with ML Model

The ML model receives video tracking inputs (e.g., face, eyes, surrounding objects).

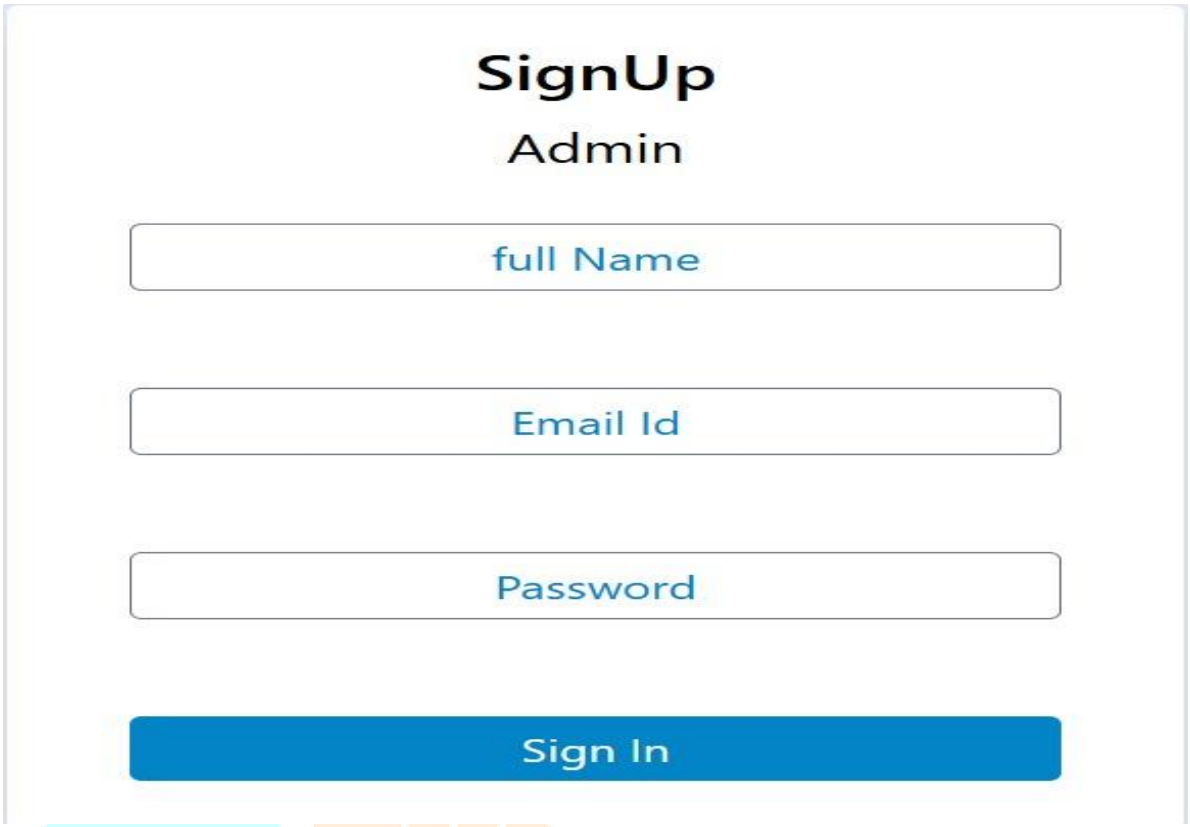
It detects anomalies (e.g., intruder presence, head turned away).

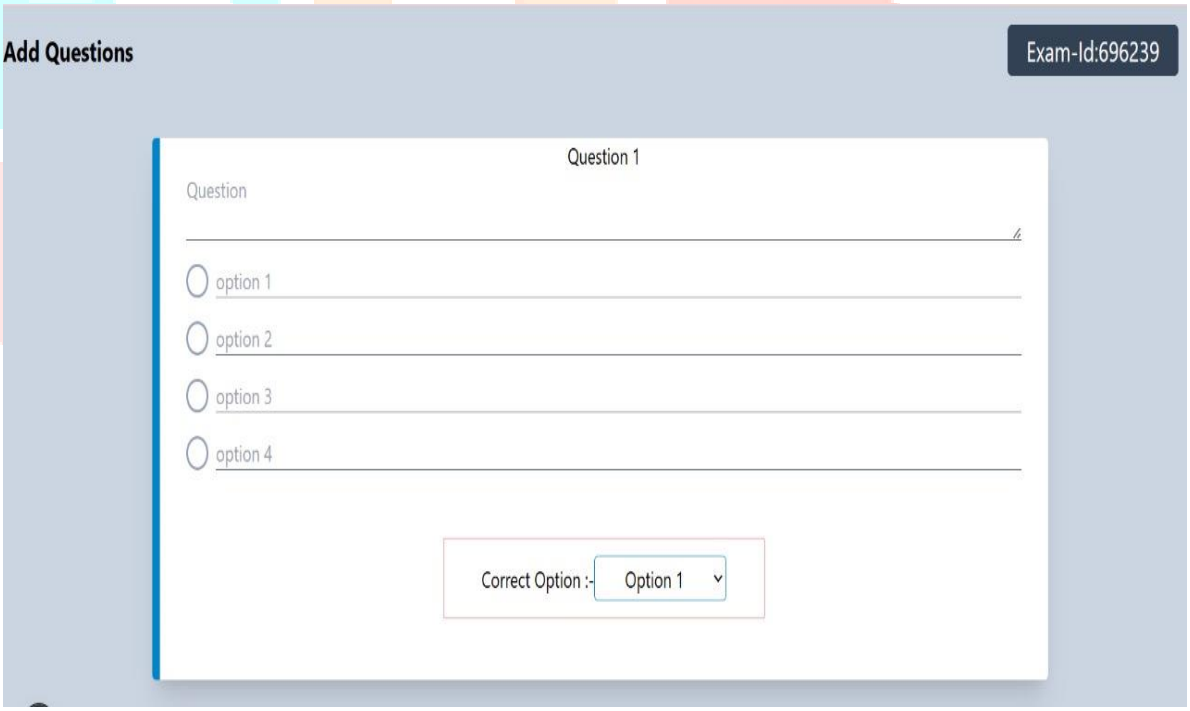
Detection results are sent back to the backend to flag suspicious activity accordingly.

2.RESULTS AND DISCUSSION



EXAM NAME	EXAM ID	NO OF QUESTIONS	DELETE	EDIT
example-test	024480	5	Delete	Edit
Chinmay	781318	10	Delete	Edit
chinmay	623232	10	Delete	Edit


SignUp
Admin
full Name
Email Id
Password
Sign In


Add Questions
Exam-Id:696239
Question 1
Question
option 1
option 2
option 3
option 4
Correct Option :-
Option 1

Fill the information to start the Test

Email ID

Give Camera Access

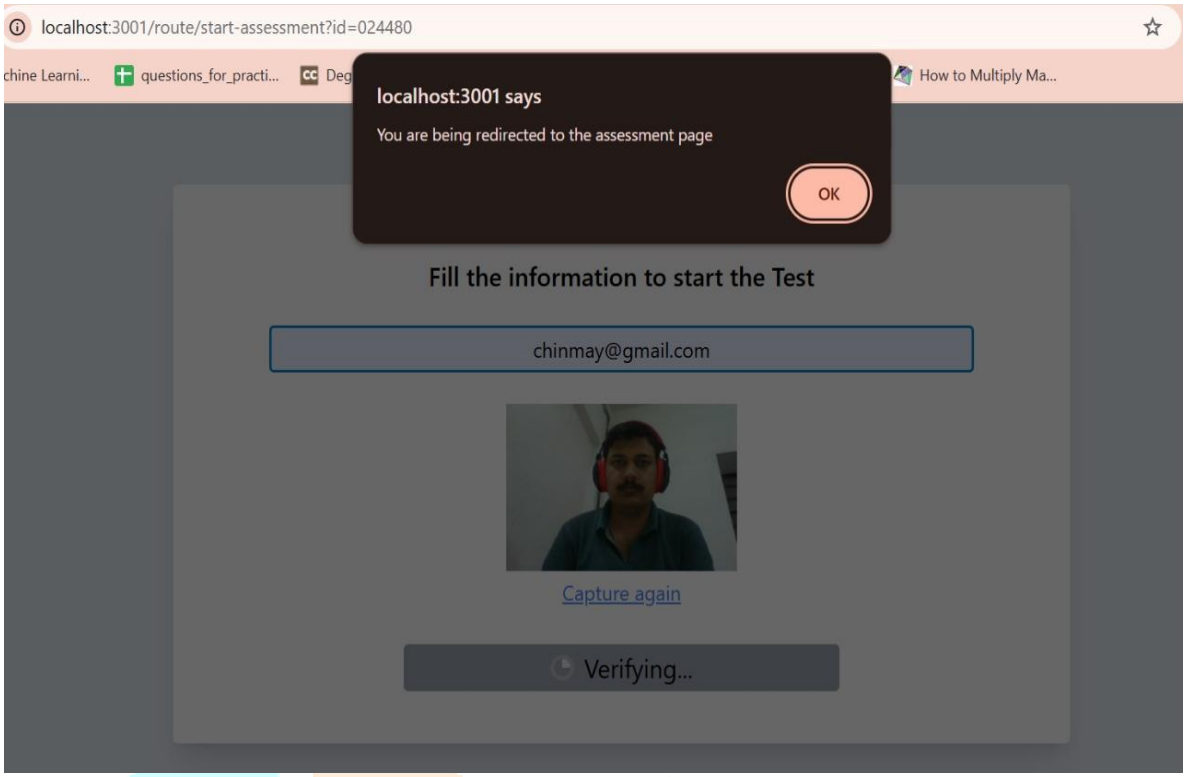
Submit

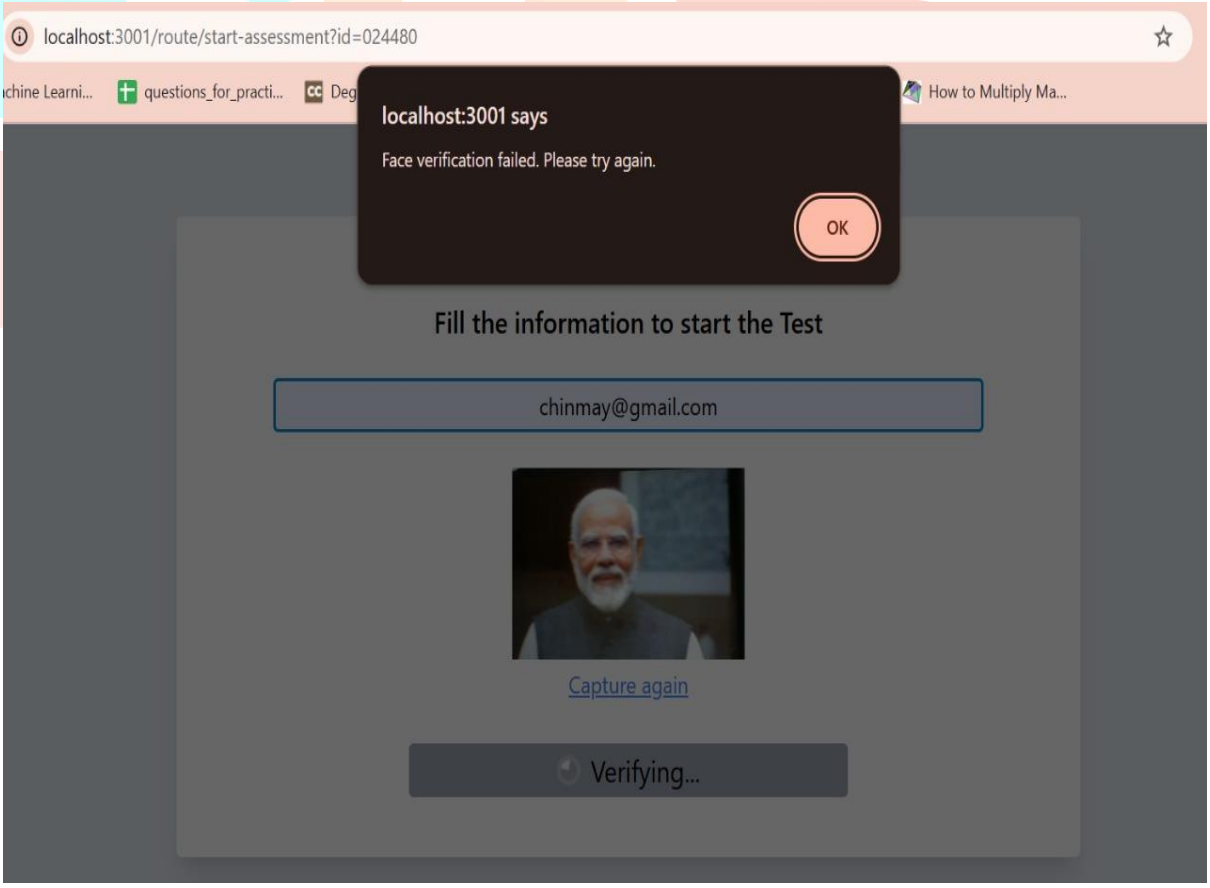
Fill the information to start the Test

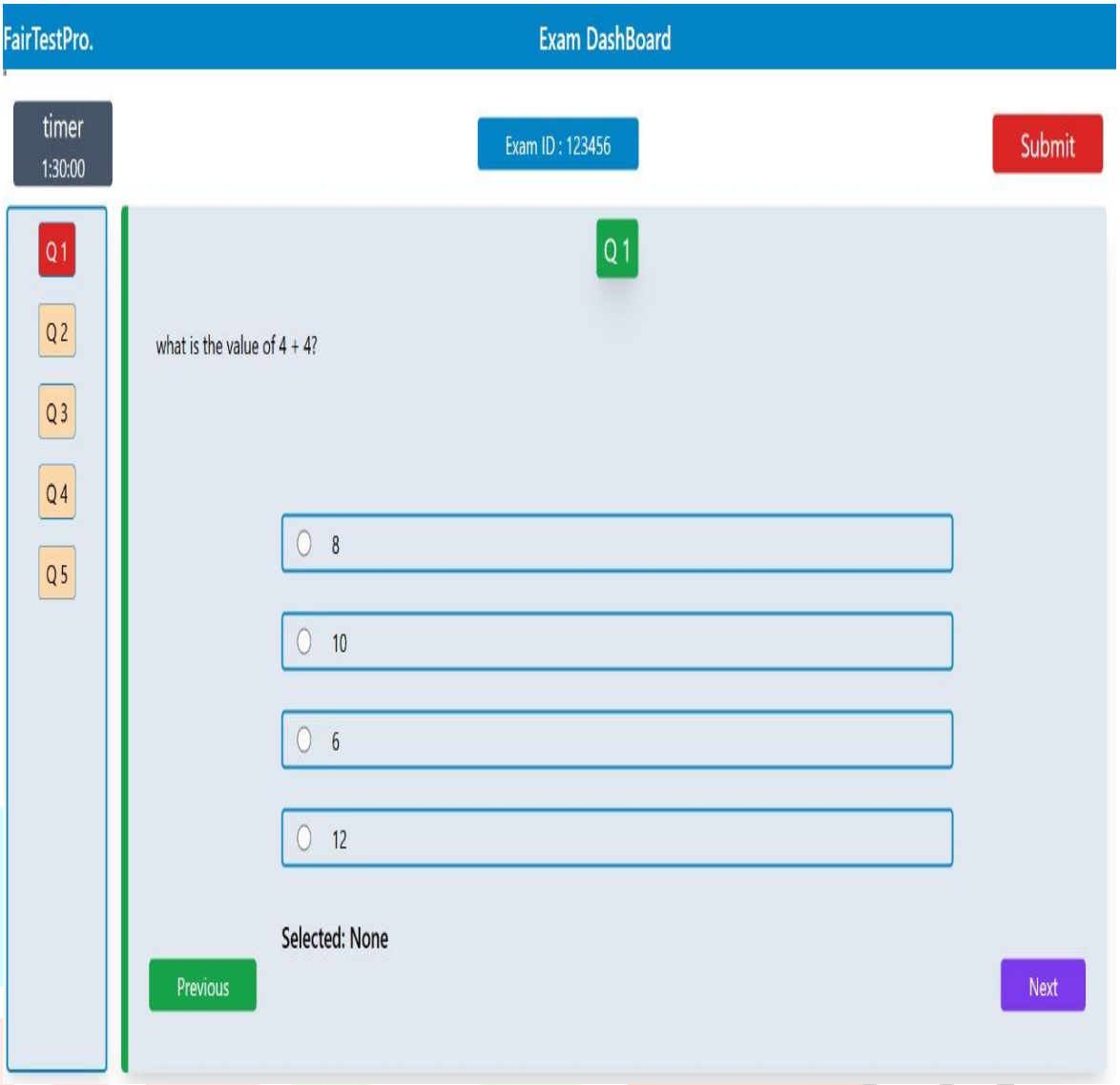
chinmay@gmail.com

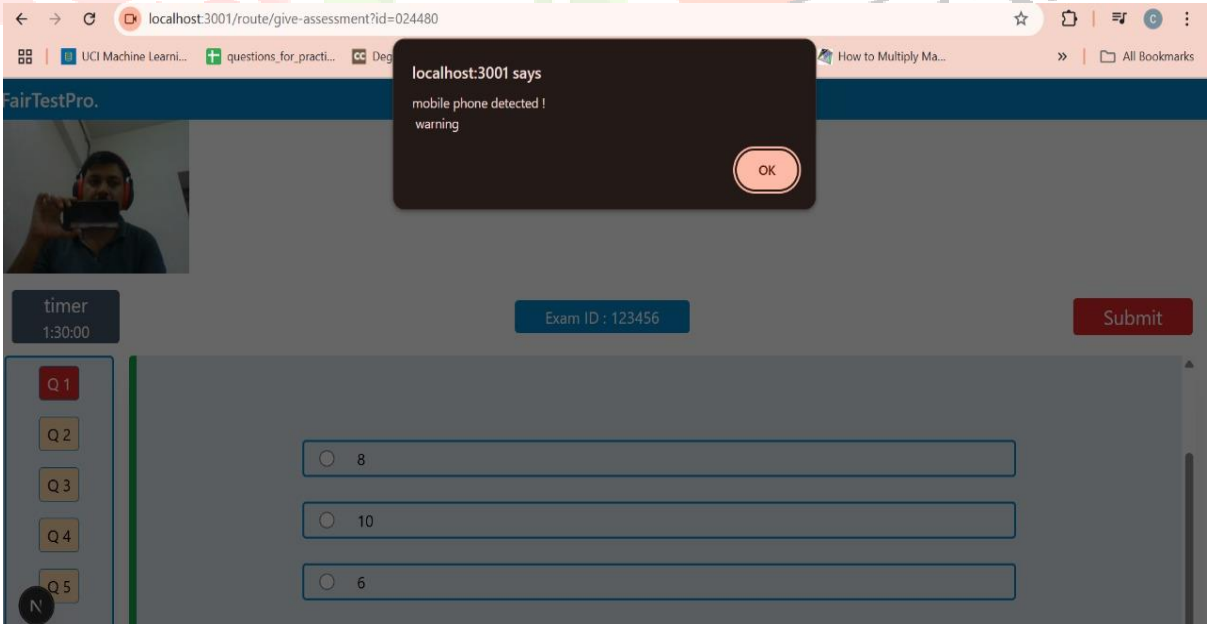
Capture again

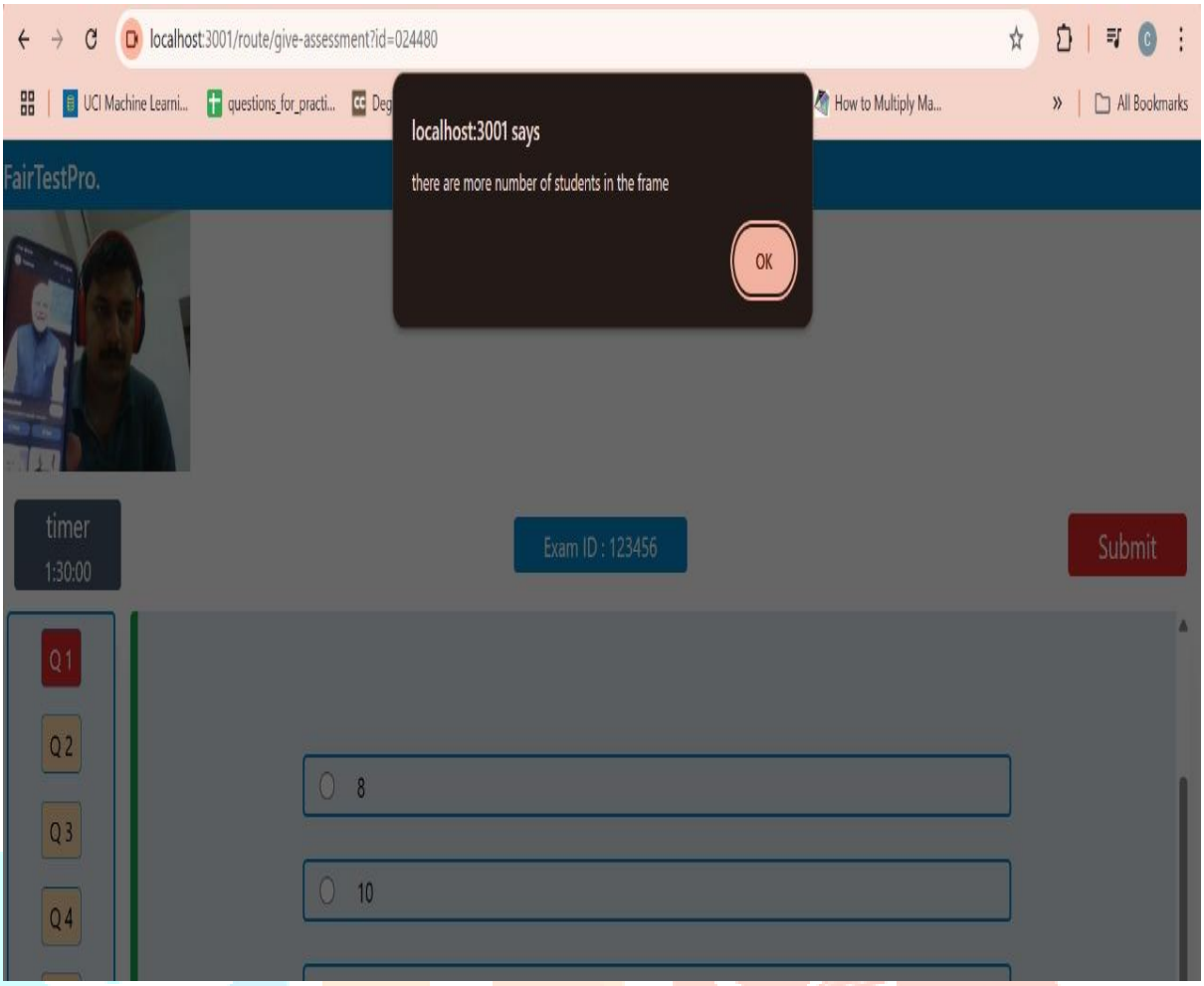
Verifying...


localhost:3001/route/start-assessment?id=024480
questions_for_practi...
How to Multiply Ma...
localhost:3001 says
You are being redirected to the assessment page
OK
Fill the information to start the Test
chinmay@gmail.com
Capture again
Verifying...


localhost:3001/route/start-assessment?id=024480
questions_for_practi...
How to Multiply Ma...
localhost:3001 says
Face verification failed. Please try again.
OK
Fill the information to start the Test
chinmay@gmail.com
Capture again
Verifying...


FairTestPro.
Exam DashBoard
timer
1:30:00
Exam ID : 123456
Submit
Q1
Q2
Q3
Q4
Q5
Q1
what is the value of 4 + 4?
8
10
6
12
Selected: None
Previous
Next


localhost:3001/route/give-assessment?id=024480
localhost:3001 says
mobile phone detected !
warning
OK
FairTestPro.
timer
1:30:00
Exam ID : 123456
Submit
Q1
Q2
Q3
Q4
Q5
8
10
6



3.CONCLUSION

FairTestPro is designed to make online exams secure and cheat-proof. By using advanced technology to verify identities, detect unauthorized people, monitor eye movements, and spot electronic devices, it ensures a fair testing environment.

4.REFERENCES

[1] “An Intelligent System For Online Exam Monitoring” Swathi Prathish, Athi Narayanan S, Kamal Bijlani.

[2] “Detecting cheating in electronic exams using the artificial intelligence approach” Bashar H. Asker Ahmad F. Al-allaf.

[3] “Cheating Detection in Browser-based Online Exams through Eye Gaze Tracking” Nimesha Dilini, Asara Senaratne, Tharindu Yasarathna Nalin Warnajith, Leelanga Seneviratne. [4] “Online Exam Proctoring System using ML” Mrs. Peddaboina Yamuna , Purra Vivek Reddy, Katare Sai Praneeth, Uppunuthula Akhil, Siga Chandu.

[4] “Online Exam Proctoring System using ML” Mrs. Peddaboina Yamuna , Purra Vivek Reddy, Katare Sai Praneeth, Uppunuthula Akhil, Siga Chandu.