

### Objective:

Development of a exam proctor application using mern stack which can able to add course and conduct exam and perform monitoring over them.

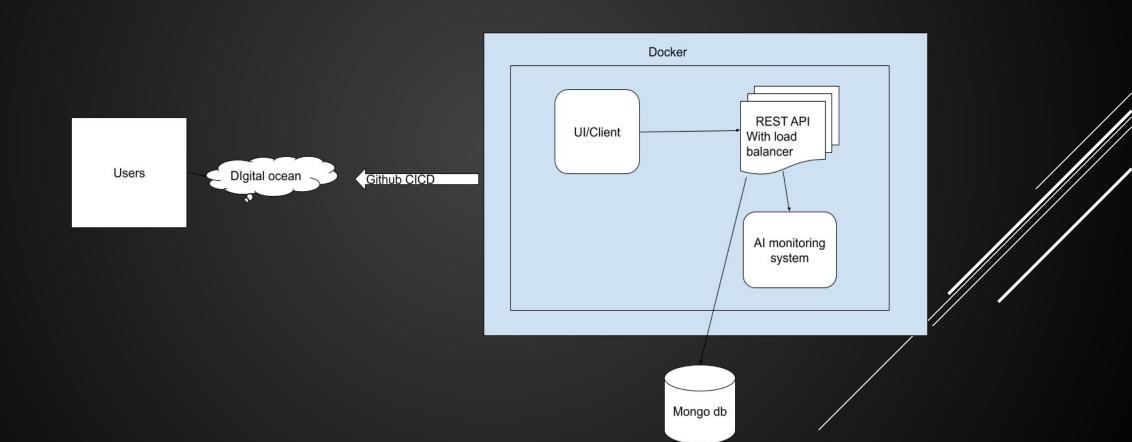
### Benefits:

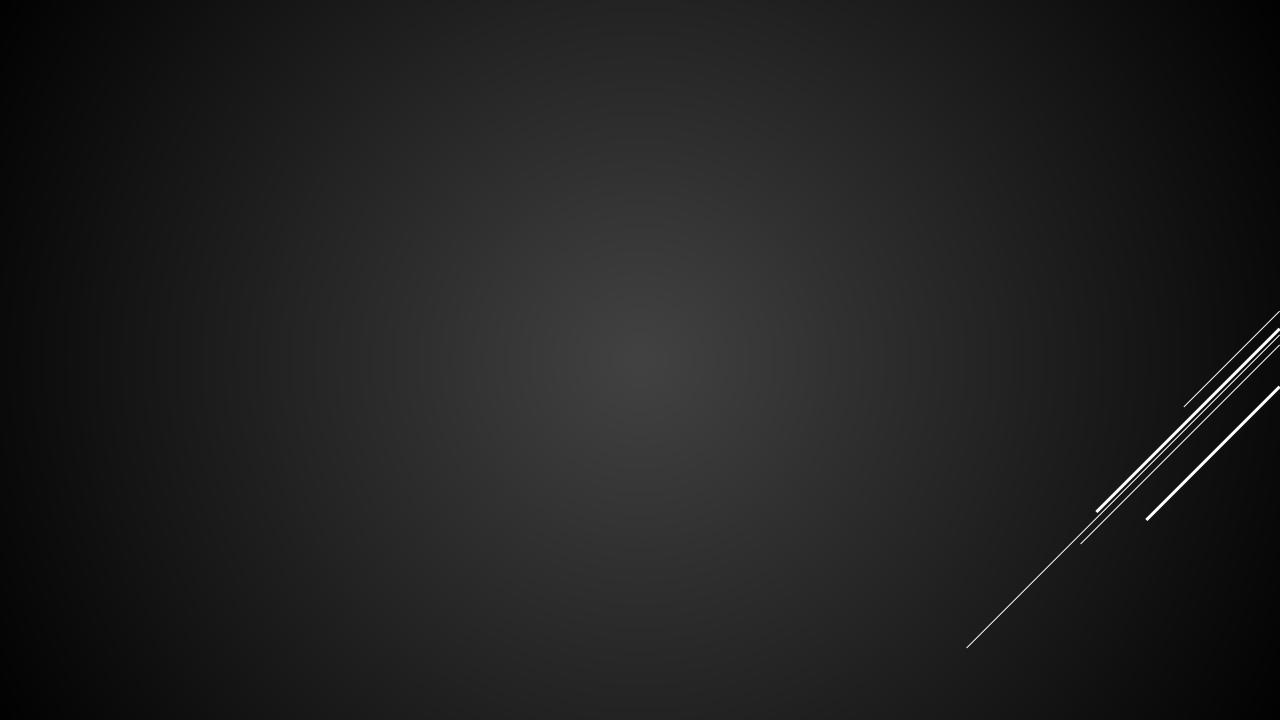
- ☐ Comfort to learning from anywhere.
- Only exams can be monitored in a better way.
- Getting verified with certificate which can be showcased.

# Data Sharing Agreement:

☐ The photo which are used for monitoring exam will not be shared or stored in any form

## Architecture





### Types of uses:

- Creator person who can create and conduct exams
- Learner Person who can view the content learn and take exams which are monitores

### Front End and Back End

- React and bootstrap is used front end development
- Express and node is used for the back end development
- Interaction between these two are happening through REST API's
- JWT based Authentication is being implemented

### Database:

- Atlas a cloud based managed database is being used to store data.
- Mongoose is used to interact between node and mongo.
- For storing files which are >16mb mongo grib is being used.
- IP filtering is being applied.

#### Monitoring system

• Python, Flask, mediapipe and deepface is being used to created real time monitoring system which will analyse your examination.

#### Containerization

Docker and docker compose is used to containerize front end and back end

#### GIT and CI/CID

• Github is used for code maintenance and github action is used to CI CD pipeline

## Deployment:

- Digital ocean is being used as a cloud service to deploy our docker containers in its droplets
- Caddy is used for reverse proxy and load balancer for our node application
- Godaddy is used for purchasing domain and DNS management