

**SMART INDIA  
HACKATHON  
2022**

# Basic Details of the Team and Problem Statement

**Ministry/Organization Name/Student Innovation:**

Department of School Education & Literacy (DoSEL), Ministry of Education

**PS Code:** RK783

**Problem Statement Title:** Crowd Sourcing model for preparing large question banks.

**Team Name:** Nocturnal Coders

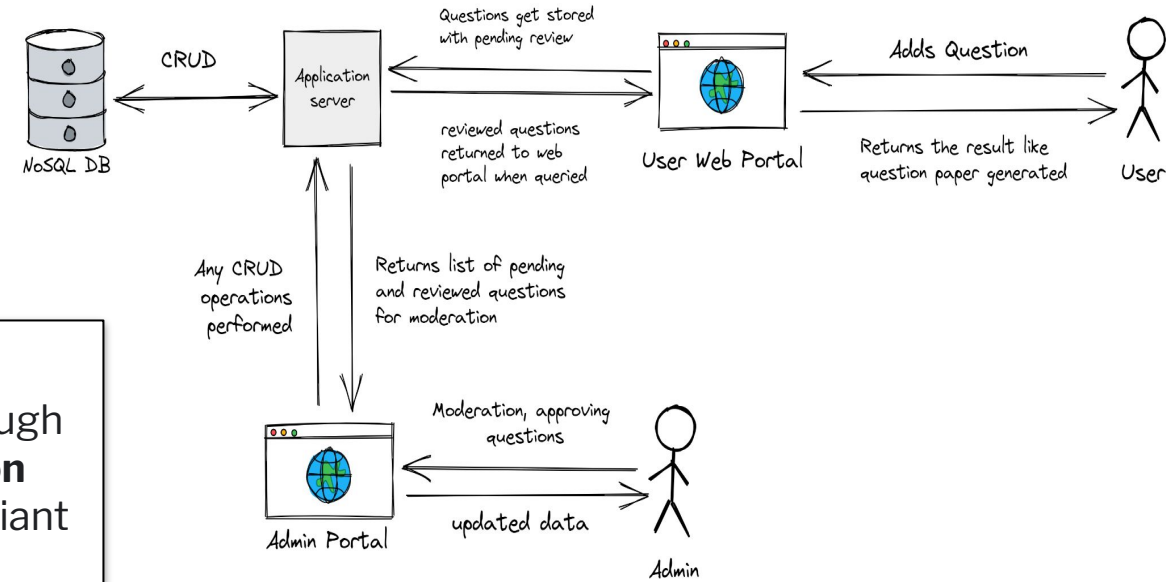
**Team Leader Name:** Apoorv Dwivedi

**Institute Code (AISHE):** C-32870

**Institute Name:** Maharaja Agrasen Institute of Technology

**Theme Name:** Miscellaneous

# Idea/Approach Details



## Idea/Solution:

- Challenge the traditional board paper setting system through '**EnormoQB**', an eco-friendly and **comprehensive question bank, crowdsourced** by the contribution of numerous brilliant minds.
- Contributors can **anonymously** contribute to the question pool while tracking the subjects, classes and topics via a set of filters, along with automated plagiarism checks.
- Questions and their options will be **reviewed** and checked for **duplicity** before addition. The status/feedback for each question will also be provided by **experts**.
- Users can **access** a part of our **question pool** for reference.
- An automated environment to **generate question papers** depending upon user requirements. A question paper with answer key will be returned to the user in PDF format.
- Top Contributors will be notified via **E-mail** about the topics that require more questions. They will also have various **perks** for consistent contributions.

## Technology Stack:

- **Frontend: React.js** is an open-source JavaScript library that is used for building interactive and performant user interfaces.
- **Backend: Express.js** is a Node based web application server framework, specifically designed for building robust APIs for single-page/ multi-page or hybrid web applications.
- **Database: MongoDB** is an open-source NoSQL database management program.
- **Others: Natural Language Processing** will be used for duplicity detection. **Auth0** is a flexible, drop-in solution which will be used to add authentication and authorization services to our application. **Cloud services** will be used for storage/deployment purposes.

# Idea/Approach Details

## Use Cases

- Register new account.
- Manage user roles - contributors/admin.
- Add/Remove/Edit questions according to categories/subcategories.
- Display question pool based on different queries/filters.
- Display question pool real-time stats.
- Manage question status & difficulty by admin.
- Request re-approval of rejected questions according to the feedback given by admin.
- Generate question paper with associated answer key.
- Display previously generated question papers.
- Freeze spam accounts for a duration by admin.
- Perk System for contributors.

## Dependencies / Show stoppers

### **Dependencies:**

- Cloud service uptime
- Manual Intervention for Admin related activities
- Question Bank Contributors (Users)
- API and services

### **Show Stoppers:**

- Using NLP model for data duplication
- Manually adding roles to users such as admin
- Maintaining data security without any data leaks

# Team Member Details

Team Leader Name: **Apoorv Dwivedi**

Branch: Btech      Stream: CSE      Year: III

Team Member 1 Name: **Ankit Goel**

Branch: Btech      Stream: CSE      Year: III

Team Member 2 Name: **Apoorva Singh**

Branch: Btech      Stream: IT      Year: III

Team Member 3 Name: **Disha Bhardwaj**

Branch: Btech      Stream: CSE      Year: III

Team Member 4 Name: **Mahak Raju**

Branch: Btech      Stream: CSE      Year: III

Team Member 5 Name: **Prakhar Sharma**

Branch: Btech      Stream: CSE      Year: III

**Team Mentor 1 Name: Mr. Ashish Sharma**

Category: Academic      Expertise: Computer Networking      Domain Experience (in years) : 17

**Team Mentor 2 Name: Dr. Sandeep Tayal**

Category: Academic      Expertise: AI / ML      Domain Experience (in years) : 12