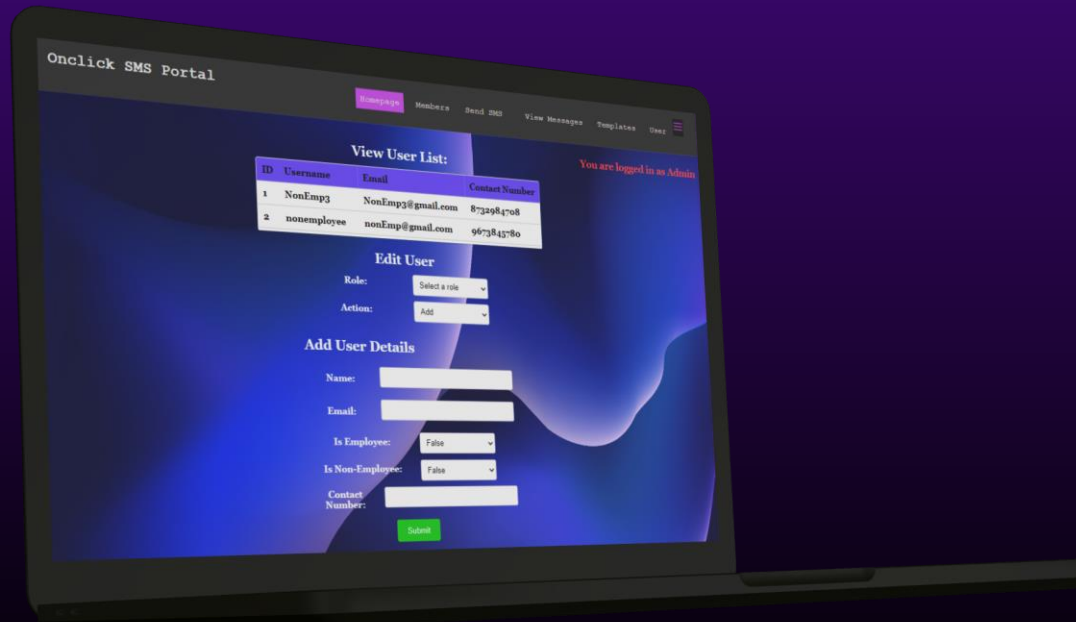


# ONCLICK SMS PORTAL



Team

Agrima Kumar - Project Trainee

Timeline

May - July 2023

# MOTIVATION

BARC has integrated center for managing crisis such as biological, chemical, radiological, fire, security etc. In an event of any such incident all the agencies involved need to alerted.

An SMS portal is operational to send alerts to all the registered mobile numbers. This portal needs to be enhanced for the additional requirements from BARC Security and restructured in alignment with the new policy by the SMS service providers.

The work involves, design of database, development of REST APIs to communicate with the database, use of the SMS Gateway for messaging and design & develop a web application interface.

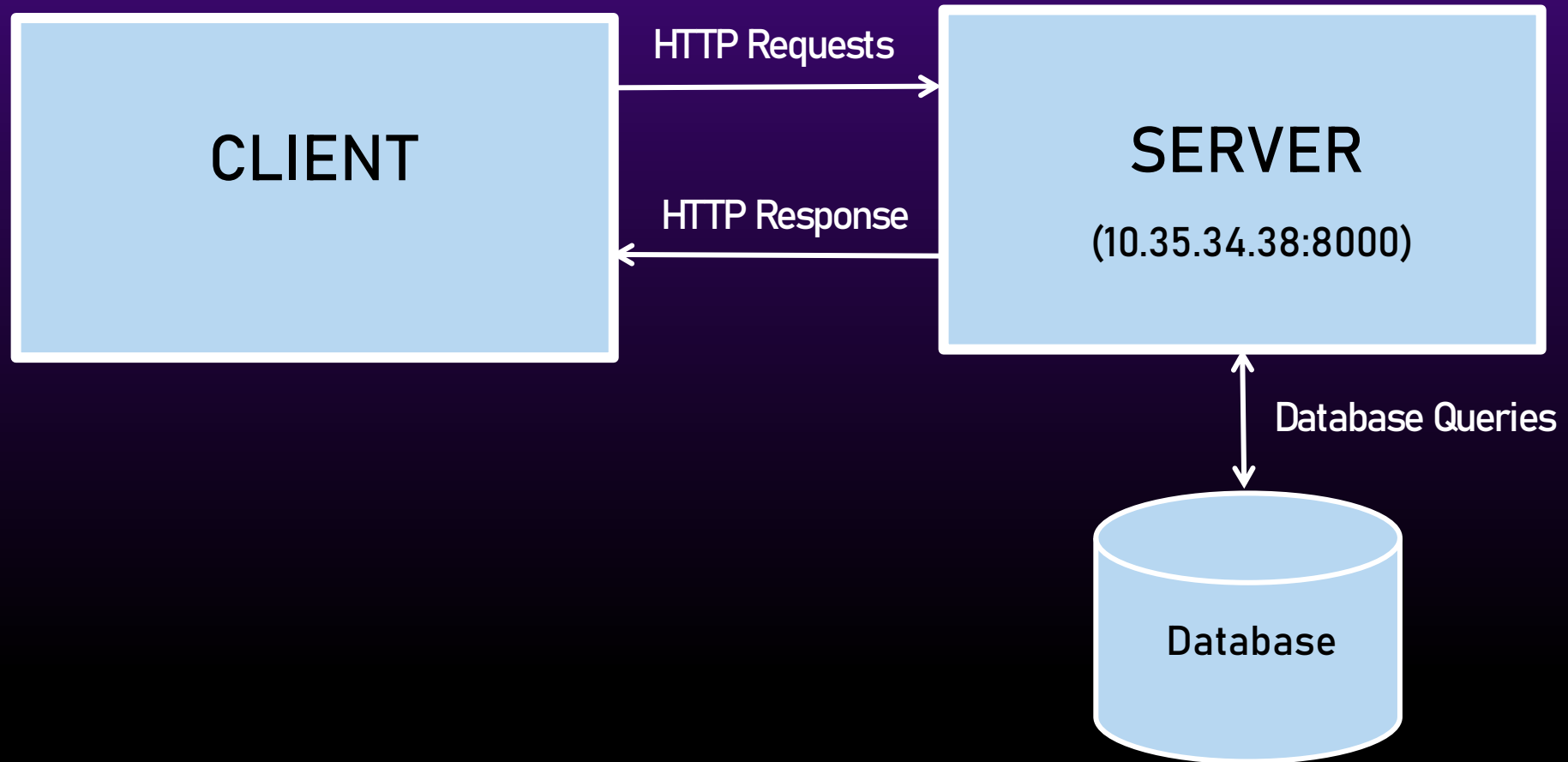
# LITERATURE SURVEY

- MVC (MODEL-VIEW-CONTROLLER) ARCHITECTURE
- MVT (MODEL-VIEW-TEMPLATE) ARCHITECTURE
- REST FRAMEWORK
- DJANGO WEB FRAMEWORK
- HTTP REQUEST LIBRARIES - AXIOS
- ADVANCED REST CLIENT

# LANGUAGE AND FRAMEWORKS USED:

- FRONTEND:
  - PROGRAMMING LANGUAGE: JAVASCRIPT
  - FRAMEWORK: **REACT**
- BACKEND:
  - PROGRAMMING LANGUAGE: PYTHON
  - FRAMEWORK: **DJANGO**
  - ADDITIONAL LIBRARIES/TOOLS: DJANGO REST FRAMEWORK FOR BUILDING RESTFUL APIS
- DATABASE:
  - DATABASE MANAGEMENT SYSTEM: **MYSQL**
- API TESTING:
  - **ADVANCED REST CLIENT (ARC)**: EXPLAIN THAT ARC WAS USED AS A TOOL FOR TESTING AND INTERACTING WITH API ENDPOINTS DURING THE DEVELOPMENT AND DEBUGGING PROCESS.
- INTEGRATION:
  - REACT FRONTEND COMPONENTS WERE CONNECTED TO DJANGO'S RESTFUL APIS USING **AXIOS** TO ENABLE DATA EXCHANGE BETWEEN THE FRONTEND AND BACKEND

# ARCHITECTURE

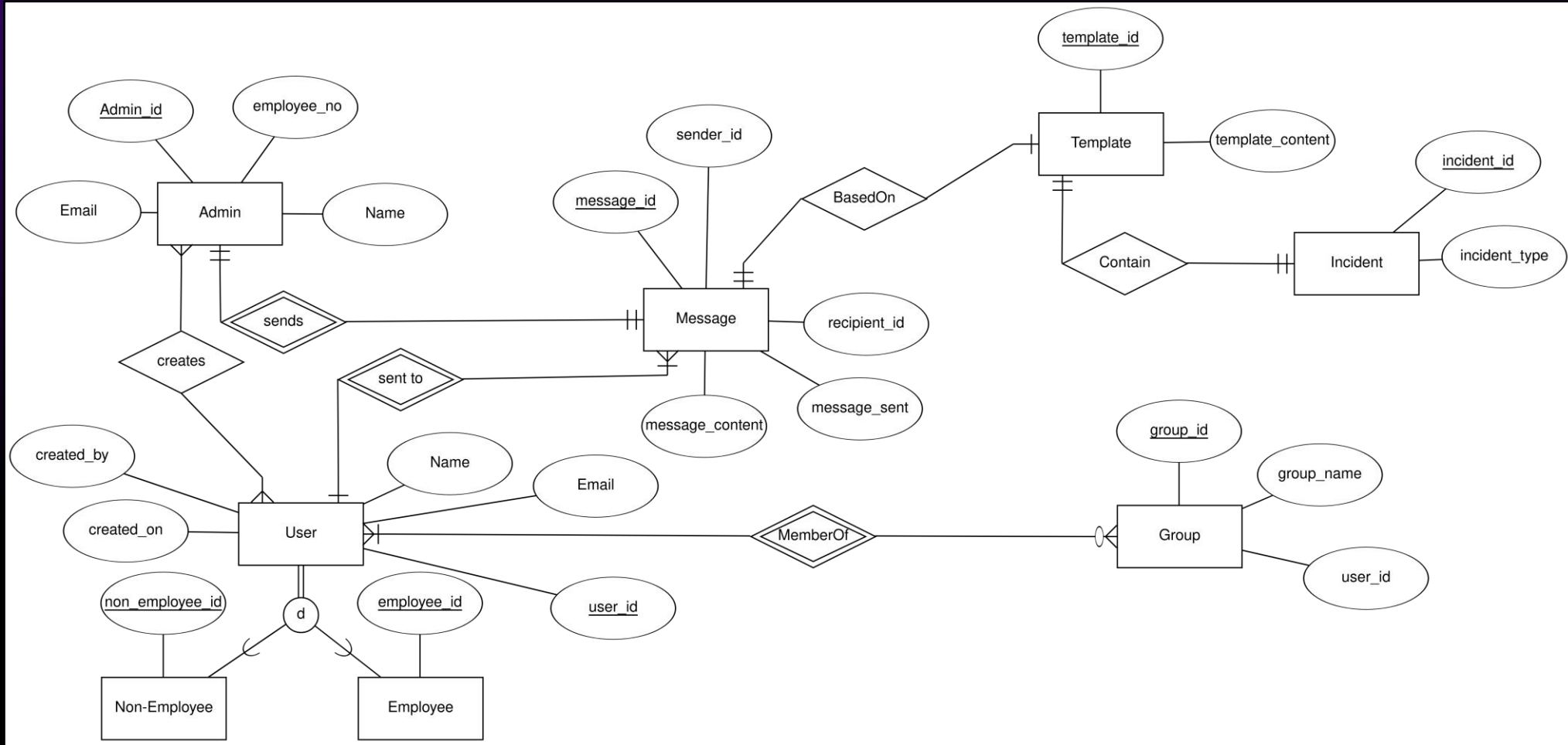


# SMS PORTAL FEATURES

- Feature to add and use templates for messages – so that complete message fits into 160 characters.
- Provision to create new templates.
- Creation of groups on basis of different criteria
- Group messaging made possible.
- Statistics about message success and failures.
- History of all the messages sent.

# DESIGN AND DEVELOPMENT

- Database Schema:



# DESIGN AND DEVELOPMENT

## Advantages of using REACT:

### Virtual DOM:

React uses a virtual DOM, which results in efficient updates and faster rendering of UI components.

- **Component-Based Architecture:**

React follows a component-based approach, making it easier to reuse and maintain code.

- **Declarative Syntax:**

React uses a declarative syntax called JSX, which allows developers to describe how the UI should look, making the code more readable and intuitive.

- **Performance Optimization:**

React's efficient rendering and update processes, along with its virtual DOM, contribute to improved performance and better user experiences.



# SNAPSHOTS

Onclick SMS Portal

Homepage Members Send SMS View Messages Templates User

You are logged in as Admin

### View User List:

ID	Username	Email	Contact Number
1	NonEmp3	NonEmp3@gmail.com	8732984708
2	nonemployee	nonEmp@gmail.com	9673845780

### Edit User

Role:

Action:

Onclick SMS Portal

Homepage Members Send SMS View Messages Templates User

### Contact List

Search Criteria:

Enter Employee Name:

ID	Name	Contact Number	Select Individual
1	NonEmp3	8732984708	<input type="checkbox"/>
2	nonemployee	9673845780	<input type="checkbox"/>
3	Emp2	9876543210	<input type="checkbox"/>
4	Emp5	9619348539	<input type="checkbox"/>

3	Emp2	Emp2@gmail.com	9876543210
4	Emp5	Emp5@gmail.com	9619348539

### Edit User

Role:

Action:

### Add User Details

Name:

Email:

Is Employee:

Is Non-Employee:

Contact Number:

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Onclick SMS Portal

Homepage Members Send SMS View Messages Templates User

### Send Message Now

Select Entity:

Enter Mobile Number:

Your Message:

Select Template:

# SNAPSHOTS

**Onclick SMS Portal**

Homepage Members Send SMS **View Messages** Templates User

### Message List

ID	Subject	Body	Created At	Sent At	Message Group	Template
1	MESSAGE1	This is body	2023-07-01T20:51:10.007880Z	2023-07-01T20:50:03Z	1	Template1
2	MESSAGE2	Sample body	2023-07-02T22:17:41.688277Z	2023-07-01T03:48:03Z	2	Template1

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### Templates

Name	Incident	Content
Template1 (Click on Template to Select)	Incident1	Template has incidents too
Template2 (Click on Template to Select)	Incident1	Template 2 content
Template3 (Click on Template to Select)	Incident2	Temp 3 Content

#### Add new template

Name:

Incident:

Content:

Select Incident

- Select Incident
- Incident1
- Incident2**
- Incident3

Add Template

New Password

Confirm Password

Save Changes

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Windows Taskbar: Search, Taskbar icons, System tray (ENG IN, 04:57, 03-07-2023)

# SCOPE

- **COMMUNICATION EFFICIENCY:**  
allows for efficient and quick communication with a large number of recipients, enables businesses, organizations, or individuals to send important information notifications, updates, or messages to a large target audience simultaneously.
- **TARGETED MESSAGING:**  
the portal allows for targeted messaging, where specific groups or segments of recipients can be selected based on various criteria.
- **COST-EFFECTIVE SOLUTION:**  
bulk SMS services are generally more cost-effective compared to other traditional communication methods.

## FUTURE SCOPE

- **SCHEDULING:**  
SMS portals can offer scheduling features, allowing admins to plan and automate message sending at specific times and dates.
- **REPORTING:**  
Basic reporting capabilities may be available to track the delivery status of messages and assess the success of SMS campaigns.