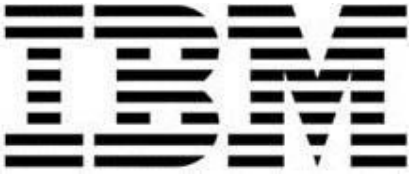

COLLEGE CODE : 9222

COLLEGE NAME : THENI KAMMAVAR SANGAM COLLEGE OF TECHNOLOGY

DEPARTMENT : B.TECH(INFORMATION TECHNOLOGY)

STUDENT NM-ID : A857FF10960EB4C8CDB46821869AA67B

REG NO : 922223205012

DATE : .2025

Completed the project named as Phase_4_ TECHNOLOGY

PROJECT NAME : IBM-NJ- FEEDBACK COLLECTION SYSTEM

SUBMITTED BY,

NAME : GOVINDARAJAN R

MOBILE : 8825464206

ENHANCEMENT & DEPLOYMENT

FEEDBACK COLLECTION SYSTEM

UI/UX Improvements:

- Redesigned user interface for both admin and user dashboards.
- Improved mobile responsiveness and accessibility.
- Streamlined feedback submission flow for enhanced usability.
- Modern design elements (animations, transitions, intuitive layouts).

API Enhancements :

- Optimized existing RESTful APIs for better performance and clarity.
- Added support for filtering, pagination, and sorting of feedback data.
- Role-based access control for API endpoints (admin vs. user).
- API documentation using tools like Swagger or Postman.

Performance & Security Checks :

- Code and database optimization for faster load times.
- Implementation of rate limiting and throttling on API endpoints.
- Input validation and sanitization to prevent SQL Injection and XSS attacks.
- Use of HTTPS, secure headers, and data encryption in transit.

Testing of Enhancements :

- Unit tests for backend logic (e.g., feedback submission, user roles).
- Integration testing for full workflows (e.g., login → submit feedback → view feedback).
- UI/UX testing for responsiveness and design compliance.
- Automated testing tools (Jest, Mocha, Cypress) and manual testing procedures.

Deployment :

- Deployment of frontend and backend to reliable cloud platforms
  - **Frontend:** Netlify or Vercel
  - **Backend/API:** Render, Railway, or any Node-compatible cloud service
  - **Database:** Cloud-based database like MongoDB Atlas or PostgreSQL on Superbase
- CI/CD pipeline setup for smooth future updates.
- Environment variable configuration and deployment security measures.

Technology Stack:

- **Frontend:** React.js / Next.js / Tailwind CSS
- **Backend:** Node.js / Express.js
- **Database:** MongoDB / PostgreSQL
- **API Testing:** Postman / Swagger

Additional Features:

UI/UX Improvements :

Revamped user interface for better usability and responsiveness.
Improved design for both users and administrators.

API Enhancements :

Optimized and extended APIs with better structure, validation, and security.
Added features like filtering, sorting, and role-based access.

Performance & Security Checks :

Enhanced system speed through code and database optimization.
Implemented security measures such as input validation, HTTPS, and data protection.

Testing of Enhancements :

Conducted unit, integration, and UI testing to ensure reliability.
Used tools like Jest, Postman, and Cypress for testing workflows and API endpoints.

Deployment :

Deployed the system on cloud platforms like **Netlify** or **Vercel** (frontend) and **Render/Railway** (backend).
Configured CI/CD pipelines and environment variables for smooth operation.