COLLEGE CODE: 8203

COLLEGE: AVC COLLEGE OF ENGINEERING

DEPARTMENT: INFORMATION TECHNOLOGY

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DATE:03/10/2025

Completed the project named as Phase IV

TECHNOLOGY PROJECT NAME: Feedback Collection System

SUBMITTED BY,

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ADDITIONAL FEATURES:

SENTIMENT ANALYSIS:

- Automatically analyze user feedback (Positive / Negative).

EMAIL NOTIFICATIONS:

- Send confirmation emails after submission using Nodemailer.

ADMIN DASHBOARD (MOBILE/WEB VIEW):

- Admins can filter feedback by date, rating, or sentiment.

EXPORT FEEDBACK REPORTS:

- Generate CSV / Excel reports for offline analysis.

SEARCH & FILTER OPTIONS:

- Search feedback by keyword, department, or course.

ROLE-BASED ACCESS:

- Secure login for admin, separate access for users.

ANALYTICS & CHARTS:

- Display feedback statistics (Positive vs Negative, rating distribution).

MULTI-LANGUAGE SUPPORT (OPTIONAL):

- Feedback form and dashboard in English, Tamil, Hindi.
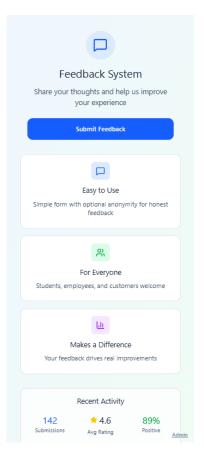
UI/UX IMPROVEMENTS :

UI ENHANCEMENTS:
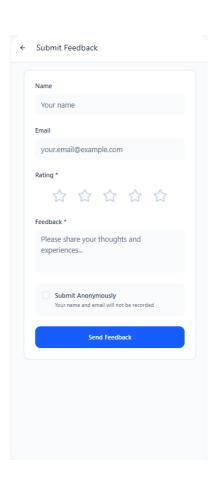
- Modern card-based layout for feedback display.

- Responsive design for both mobile & desktop.

- Clean typography (Roboto/Poppins).

- Error & success states clearly shown (✔ success / ⚠ error).

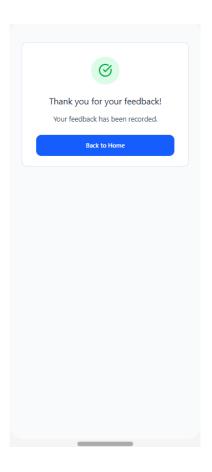- Dark/Light theme toggle for better readability.

UX ENHANCEMENTS:

- Auto-suggestions for email/fields.

- Easy filtering in dashboard (date, rating, sentiment).

- Accessibility support (screen reader & high contrast).

- Smooth animations for form submission and dashboard charts.

- Offline cache (last feedbacks accessible without internet).

UI STRUCTURE:

API ENHANCEMENTS :

PERFORMANCE & OPTIMIZATION:

- Add caching (Redis/MongoDB) for frequent queries.
- Enable pagination & filtering for large datasets.

EXTENDED FEATURES:

- API to export data in CSV/Excel.
- API for feedback statistics (ratings, sentiments).

ERROR HANDLING IMPROVEMENTS:

- Return custom error codes (400 – Invalid Input, 500 – Server Error).
- User-friendly error messages in frontend.

SECURITY ENHANCEMENTS:

- API key & sensitive info stored in .env.
- Use HTTPS for secure communication.
- JWT authentication for admin routes.

PERFORMANCE & SECURITY CHECKS:

- **Functional Testing** → Verify all feedback submissions, filtering, and exports.

- **API Testing** → Validate endpoints /feedback, /feedback/:id, /feedback?rating=5.

- **Performance Testing** → Measure API response under multiple submissions.

- **Database Testing** → Ensure schema validation rejects invalid entries.

- **Security Testing** → Check for SQL/NoSQL injection, API key protection, HTTPS enforcement.

- **User Acceptance Testing (UAT)** → Collect feedback from real users/admins.

DEPLOYMENT PLAN :

FRONTEND DEPLOYMENT (HTML/JS OR REACT):

- **Netlify** → Drag & drop deployment for static frontend.
- **Vercel** → Optimized for React/Next.js projects.

BACKEND DEPLOYMENT (NODE.JS + EXPRESS):

- **Heroku / Render / Railway** → Easy Node.js hosting with auto-scaling.
- **Cloud Platforms (Optional)** → AWS (Elastic Beanstalk), Google Cloud Run, or Azure.

DATABASE DEPLOYMENT:

- **MongoDB Atlas** → Cloud-hosted, secure, and scalable.

CI/CD INTEGRATION:

- GitHub repo connected for auto-deployments.
- Automated testing before deployment.
- Rollback option for failed builds.

FINAL DEPLOYMENT SETUP (RECOMMENDED):

- Frontend → Netlify / Vercel.
- Backend → Render / Railway.
- Database → MongoDB Atlas.
- Custom Domain → With SSL enabled.