

PROPOSAL DEFENSE — PREPARATION PACK

Traffic Rule Awareness & Violation Management System

Samir Baral & Santosh Subedi • BIM 6th Semester

Supervisor: Prithivi Raj Paneru • Aarambha College, Faculty of Management, TU

Defense date: _____ / _____ / 2026 Target length: ~8–10 minutes + Q&A

1. How to run it (at a glance)

Opening: Samir opens (Slide 1) and closes (Slide 11); you alternate slides in between so both members speak roughly equally.

Pace: Speak slowly and look at the panel, not the screen. It is a proposal, so emphasise the plan, feasibility, and usefulness — not a finished product.

If you don't know an answer: Stay calm, say what you do know, and note it as something you will confirm or address during development. Panels value honesty and a good plan.

2. Speaker script (who says what)

Rough talking points per slide — make them your own; don't read word for word.

Slide	Speaker	What to say
1	Samir	Good morning, respected supervisor and panel. We are Samir Baral and Santosh Subedi, BIM sixth semester, Aarambha College. Our proposed project is the Traffic Rule Awareness and Violation Management System — a web platform combining road-safety education with digital violation management. Our supervisor is Prithivi Raj Paneru.
2	Santosh	Road safety depends on people knowing the rules and on violations being recorded properly. Today this information is scattered — rules in booklets, signs elsewhere, records often kept manually. Our system brings rule information, road-sign learning, quizzes, violation reporting, and record management into one web application for citizens, drivers, and traffic authorities.
3	Samir	There are three core problems. First, traffic-rule information is hard for the public to access in a structured way. Second, violation records are handled manually, causing delays, duplication, and weak tracking. Third, no single system spreads awareness and manages violations together. Our project targets exactly this gap.
4	Santosh	Our main objective is to build this web-based system. Specifically: provide rules, signs, penalties and guidelines digitally; let users learn through content and quizzes; allow citizens to report violations; let administrators review and manage those reports; and generate useful reports on violations and awareness activity.
5	Samir	We are following an iterative methodology, building in small phases with supervisor feedback. We begin with requirement analysis, then system and database design — ER diagram, DFD, use-case diagram — then module-wise implementation, and finally testing and documentation.
6	Santosh	On requirements: functional features include registration and login, viewing rules and signs, quizzes, violation reporting and management, and report generation. Non-functional needs are usability, security, speed, and a

Slide	Speaker	What to say
		responsive interface. The project is technically, operationally, and economically feasible — it uses free, common web technologies and no special hardware.
7	Samir	For analysis and design we use use-case diagrams, DFDs, ER diagrams and wireframes. For implementation: React on the front end; Node.js and Express on the back end with JWT authentication; MySQL for the database; Git for version control; and Draw.io for diagrams.
8	Santosh	The expected outcome is a working system where users access rules, learn signs, take quizzes and report violations, and administrators manage everything and generate reports. Alongside it we deliver a complete project report with analysis, design, implementation, and testing.
9	Samir	Our schedule spans about fourteen weeks: one week requirement analysis, two weeks design, three weeks each for backend and frontend, two weeks testing, and three weeks for the report and defense preparation.
10	Santosh	Our references follow APA seventh style and include government road-safety publications, a management information systems textbook, and the official React and Node.js documentation.
11	Samir	That concludes our proposal. Thank you for your time — we are happy to answer any questions.

3. Likely questions & answers

These carry most of the marks. Read them aloud a few times so the answers feel natural.

Q1. Why did you choose this topic?

A: Road safety is a real, everyday problem, and it fits information management well — organizing scattered data, managing records, and generating reports for decision-making. It is socially useful and its scope is right for a sixth-semester project.

Q2. How is your system different from existing traffic systems?

A: Existing systems mostly focus on fine payment, vehicle registration, or licensing. Ours integrates public awareness, road-sign learning, quizzes, citizen violation reporting, and administrative management in a single platform, which most existing systems do not combine.

Q3. What is the scope and what are the limitations?

A: Scope: awareness content, road signs, quizzes, citizen reporting, admin management, and reports. Limitations: it is not a legal enforcement or online-payment system; reported violations are verified manually by officers; and this version has no real-time GPS or vehicle-database integration.

Q4. Who are the users and their roles?

A: Two roles. General users/citizens can browse rules and signs, take quizzes, and report violations. Administrators (traffic officers/staff) manage content, review and update violation status, and view statistics. Authentication separates the two roles.

Q5. Why React, Node.js, and MySQL?

A: They are widely used, free, and well-documented, and we already know them from our coursework. React gives a responsive interface, Node.js with Express provides a simple REST API, and MySQL suits our structured, related data such as users, rules, and violations.

Q6. How will you keep the data secure?

A: Passwords are hashed with bcrypt, protected actions use JWT authentication, admin endpoints check the user role, and inputs are validated before they reach the database.

Q7. What are the main database entities?

A: Users, Traffic Rules, Road Signs, Penalties, Quizzes, and Violation Reports. For example, one user can file many violation reports, and penalties relate to specific rules.

Q8. How will you test the system?

A: We will test each module functionally — authentication, quiz scoring, violation reporting, and admin updates — using sample data, and refine it with supervisor feedback during each iteration.

Q9. Is the timeline realistic for two members?

A: Yes. We divide the work between front end and back end, overlap phases where possible, and we already have a working prototype, so the fourteen-week plan is achievable.

Q10. How does a citizen report a violation, and how is misuse prevented?

A: Only logged-in users can submit a report with the required details. An officer then reviews it and updates its status, so unverified reports do not automatically become official records.

Q11. Which information management concepts does the project apply?

A: Structured data organization, CRUD-based record management, role-based access control, and report generation for decision support — all core management information system concepts.

Q12. What is the future scope?

A: A mobile app, online fine payment, integration with vehicle and license databases, notifications, and location tagging of reported violations.

Q13. How is the work divided between the two of you?

A: Samir focuses on the back end, database, and admin module; Santosh focuses on the front-end pages (rules, signs, quiz, reporting) and documentation. (Adjust this to how you actually split it.)

4. Logistics checklist (do before you leave / on arrival)

- ☐ Laptop fully charged, plus the charger.
- ☐ Backup: proposal.pdf and the slide deck on a USB drive AND emailed to yourselves.
- ☐ Test the projector / HDMI / adapter early and check the screen resolution.
- ☐ Open the slide deck (presentation_proposal.html) and press F for fullscreen — it hides all the toolbars.
- ☐ Carry 3–4 printed copies of the proposal for the panel.
- ☐ Confirm who speaks on which slide (see the script above).
- ☐ If demoing: start the backend and frontend beforehand and keep them running.
- ☐ Confirm the app works offline (in-memory mode) in case there is no internet or database.
- ☐ Pre-open browser tabs: the app home page and the admin login.
- ☐ Phones on silent; arrive at least 15 minutes early.
- ☐ Dress formally; keep water nearby.
- ☐ Do one timed run-through — aim for about 8–10 minutes of speaking.

5. Live demo walkthrough (optional at proposal stage)

A short demo makes a strong impression even at the proposal stage. Keep the servers already running before you begin so there is no waiting.

1. Start the backend: in the backend folder run “node index.js” (port 5000). If MySQL is not set up, it runs in in-memory mode with sample data.
2. Start the frontend: in the frontend folder run “npm run dev” and open <http://localhost:5173>.
3. Home page — briefly show the landing/overview.
4. Rules & Signs — show the searchable rules list and the road-sign cards.
5. Penalties — show the fines list.
6. Quiz — answer one question to show instant scoring.
7. Register / Login — create or log in as a citizen.
8. Report a Violation — submit a sample report.
9. Admin — log in as an officer, open the dashboard, update a report's status, and show the statistics.
10. Close the demo and return to the slides for questions.

Note: Your backend automatically falls back to an in-memory database with sample data if MySQL is not connected — so the demo still works without internet or a database setup.

6. Final reminders

- ☐ Introduce yourselves and the supervisor at the start.
- ☐ Watch your time — don't over-explain any single slide.
- ☐ Thank the panel at the end and invite questions.
- ☐ Agree with reasonable suggestions; note them as improvements you'll make.