Slide 1 — Cross Platform

Title: Cross-Platform App
Points:

- Built using **React Native**.
- Single codebase → Android + iOS.
- Faster development & easy maintenance.
- Same UI/UX experience for all users.
- Supports camera, QR scanning & notifications.

Slide 2 — Pending List

Title: Pending List System
Points:

- If HOD is busy, request goes to **Pending List**.
- Ensures no request is missed.
- Student can track status in real time.
- HOD receives request instantly once available.
- Smooth approval workflow.

Slide 3 — Face Recognition

Title: Face Recognition (FaceNet)
Points:

- Uses **FaceNet model (Google, 2015)**.
- Converts faces to **128-D embeddings**.
- Highly accurate and fast recognition.
- Works under different lighting conditions.
- Prevents impersonation and unauthorized entry.

Slide 4 — Duplicate Entries

Title: Duplicate Entry Prevention
Points:

- Checks if user already has an active gatepass.
- Blocks multiple requests at the same time.
- Prevents misuse of the system.
- Face recognition ensures unique identity.

- Maintains clean and trusted records.

Slide 5 — Scalability

Title: Scalable Architecture
Points:

- Firebase paid plan supports large user base.
- Auto-scaling backend → no slowdown.
- Handles thousands of real-time operations.
- Easily expandable when institution grows.
- Long-term stable performance.

Slide 6 — High Availability

Title: High Availability & Emergency Approval
Points:

- HOD receives **pop-up notification** instantly.
- Works even if HOD is in class or meeting.
- One-tap Approve/Reject from mobile.
- In emergencies → Principal or Class Incharge can approve.
- Smart GatePass ensures **zero delay** in critical cases.

Slide 7 — Why IoT?

Title: Why IoT for Smart GatePass?
Points:

- Connects real hardware with backend.
- Automates QR scanning & face verification.
- Enables automatic gate opening.
- Real-time monitoring and logs.
- Reduces human error and increases security.

Slide 8 — ERP Integration

Title: ERP Integration Approach
Points:

- ERP integration possible via secure API.
- IoT needs fast, lightweight backend → Firebase.
- ERP servers are heavy & not for real-time hardware.
- Separate systems = faster + safer.
- Later sync ERP + IoT through controlled APIs.

Slide 9 — Semi-Automate & Blocklist

Title: Semi-Automate Decision
Points:

- Semi-auto causes delays if HOD is in class/meeting.
- In emergencies, manual signatures become impossible.
- **Smart GatePass pop-ups solve this instantly.**
- Fully digital → fastest approval in urgent cases.

Blocklist Policy:

- Max 2 passes per week.
- 1–2 emergency passes allowed.
- Misuse → auto block for review.

Slide 10 — Conclusion

Title: Conclusion
Points:

- Secure, smart, and automated gatepass system.
- IoT + Face Recognition + Real-Time Cloud.
- Faster than manual or semi-automated methods.
- Scalable and future-ready.
- Supports ERP integration in future.