**Slide 6: Proposed System**

The proposed system is a unified education platform designed to meet the specific needs of rural schools. It brings together students, school administrators, volunteers, and NGOs within a single ecosystem.

School administrators can enroll and manage students, post infrastructure or academic requests, and assign digital content. Every student has a personalized dashboard where they can access recorded lessons, attend live virtual classes, and take quizzes based on their grade and subject.

Volunteers and NGOs can view open requests, apply to support specific schools, and contribute by conducting virtual classes or uploading learning materials. All contributions go through a structured approval process, ensuring accountability.

Importantly, the platform includes a full performance analytics module. This helps track student engagement, quiz scores, and class attendance — enabling schools to make informed academic interventions.

Built using the MERN stack, the system supports mobile access, offline caching, and low-bandwidth optimization — making it highly suitable for remote areas.

**Slide 7: Architecture / System Design**

Our platform follows a modular microservices-based architecture to ensure scalability, maintainability, and performance. Each core function is handled by a separate service or module.

The system begins with a secure **Authentication Service**, offering role-based access for students, school admins, volunteers, and NGOs.

Students interact through a **Student Module**, which provides access to class schedules, recorded lessons, quizzes, and progress tracking.

School administrators use an **Admin Dashboard** to manage student enrollment, monitor performance, and post or track infrastructure and teaching-related requests.

Volunteers use a dedicated **Volunteer Panel** to browse open school requests, apply to help, schedule virtual classes, and upload educational materials.

All requests flow through a **Request Management System**, which supports approval workflows and fulfillment status tracking

The **Virtual Classroom Engine** integrates APIs like Jitsi or Zoom to support both live interaction and recorded playback.

We also have a **Content Management Service** for uploading PDFs, videos, and assessments, and an **Analytics Engine** that provides reports on student engagement and learning outcomes.

All data is securely stored in a **MongoDB-powered backend**, optimized for flexible and scalable data modeling.

This architecture ensures modular growth, easy updates, and smooth handling of multiple user roles across regions.

**Slide 8: Conclusion**

In conclusion, our platform provides a structured and scalable solution to the complex challenges faced by rural schools in India.

By integrating direct student engagement, live and recorded classroom experiences, content management, and infrastructure support into a unified system, it transforms how rural education can be delivered and tracked.

The platform not only supports continuity in learning but also builds a sustainable framework for community-driven educational development.

**Slide 9: References**

This project is grounded in a range of credible references that have influenced its design and vision.

These include government-led platforms like **Vidyanjali**, **DIKSHA**, **SWAYAM**, and **eVidyaShala**, all of which focus on different aspects of educational outreach.

We’ve also followed the principles of the **National Education Policy 2020**, which emphasizes digital learning and community participation.

Technically, our system is supported by well-documented APIs like **Jitsi Meet** and **Zoom**, both of which offer strong support for virtual classrooms in distributed settings.