SMART INDIA HACKATHON 2025

- **Problem Statement ID – SIH25019**
- **Problem Statement Title- Digital Learning Platform for Rural School Students in Nabha**
- **Theme- Smart Education**
- **PS Category- Software**
- **Team ID-**
- **Team Name - Xenovate**

XENOVATE

GYAAN GANGA

SMART INDIA HACKATHON 2025

❖FACING PROBLEMS

- Rural schools in Nabha *lack* reliable internet and updated infrastructure
- Teachers struggle with *outdated systems.*
- Students cannot access modern digital learning.
- Parents have *no digital visibility* into student progress.
- Rural education is facing a *growing digital divide.*

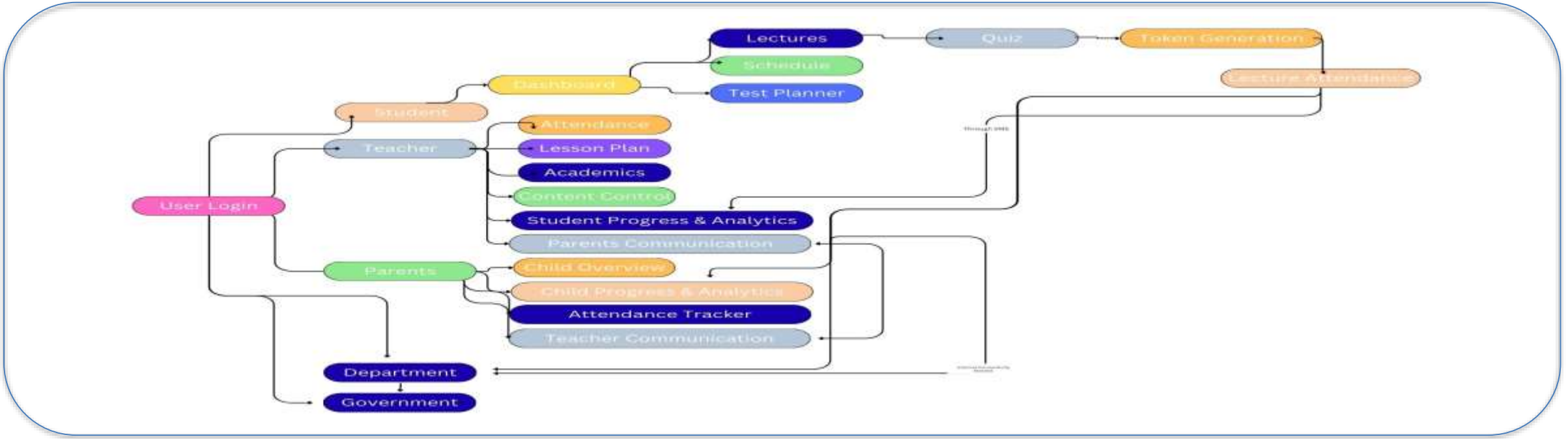
❖SOLUTION

- ✓ Developing a *web-based* application for teachers and students to collaborate *without high-end networking.*
- ✓ Teachers can share lectures, schedules, and planners.
- ✓ Runs on *simple connectivity* for maximum participation.
- ✓ Includes *digital quizzes* and *games* for learning.
- ✓ Provides *administrative control* to school authorities and Punjab government.

XENOVATE

TECHNICAL APPROACH

SMART INDIA HACKATHON 2025



Programming Languages
Python / JavaScript

Database
Supabase / MySQL

Frontend
React.js / Tailwind

Backend
FastAPI

XENOVATE

FEASIBILITY AND VIABILITY

SMART INDIA HACKATHON 2025

❖ ANALYSIS OF FEASIBILITY OF DATA

Technical Feasibility

- The required technologies (react.js , MySQL , FastAPI) are readily available and well documented , making development feasible.
- Cloud platforms ensure scalability and performance.

Market Feasibility

- There is a growing interest in digital learning , especially in rural sectors.
- The solution aligns with the growing trend of digital education and virtual experiences.

❖ CHALLENGES & RISKS

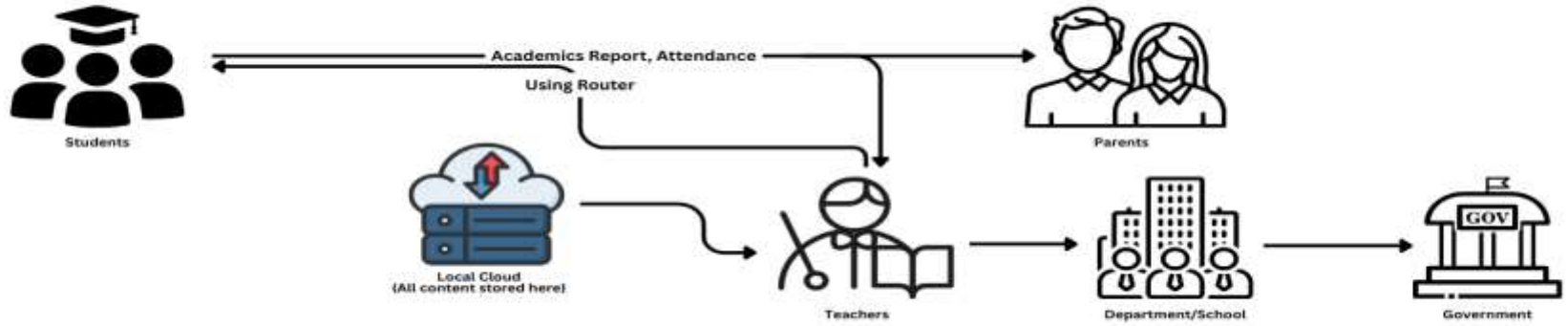
- **Data Handling:** Managing and *storing large lecture* files for daily sharing is a major challenge.
- **Data Accuracy:** Ensuring correct content, reports, and sensitive information reach teachers, parents, and authorities is crucial.
- **User Adoption:** Engaging users on a virtual platform is difficult, especially for *non-technical audiences.*

XENOVATE

IMPACT AND BENEFITS

SMART INDIA HACKATHON 2025

- **Improved Accessibility** – Rural students can access lectures anytime, reducing the digital divide.
- **Enhanced Engagement** – Interactive quizzes and planners make learning enjoyable.
- **Transparency** – Teachers, parents, and authorities receive accurate academic updates.
- **Skill Development** – Students and teachers adapt to digital platforms, building technical confidence.
- **Technical Feasibility** – Use of lightweight frameworks ensures smooth performance on low resources.
- **Data Handling Insights** – Efficient storage strategies help manage large lecture files.
- **Adoption Strategies** – Simple UI/UX encourages non-technical users to participate.
- **Best Practices** – Referenced models from existing e-learning solutions guided design improvements.



XENOVATE

RESEARCH AND REFERENCES

SMART INDIA HACKATHON 2025

- The Nabha Foundation — Education Programs, Nabha (free, equitable, quality education, Navi Disha Schools)
- Annual Status of Education Report 2024 — Punjab Rural Data (enrollment, learning levels, school resources)
- “ASER 2024: In rural Punjab, only 34% class-III kids can read basic text but arithmetic skills improve significantly” — Indian Express article Nabha Power
- CSR: To Promote Inclusive Education, Distribution of School Kits to Rural Students