Project Report: “Next Horizon”

Date: November 28, 2025 **To:** Project Supervisors **From:** Development Team **Subject:** Technical Proposal, MVP Definition, and Development Roadmap

1. Executive Summary

Next Horizon is a centralized educational platform designed specifically for Computer Science students at the Lebanese University (Faculty of Science). The platform aims to bridge the gap between academic resources and peer-to-peer support. By facilitating material sharing, peer tutoring, and collaborative learning, Next Horizon serves as a digital campus extension where students can find past exams, attend sessions, and assess their skills.

Given the deadline of **December 28** for the primary build and **January 1** for the final product, this report outlines a strategy to prioritize core functionality (MVP) while scheduling complex features for a secondary phase.

2. Technical Architecture

Tech Stack

- **Backend:** Laravel (PHP Framework)
- **Frontend:** HTML, CSS, JavaScript, React.js
- **Database:** SQL (via Laravel Migrations)

Team Structure & Resource Allocation

- **Total Members:** 9
- **Frontend React Team E:** 5 Members
- **Backend php Team A:** 4 Members

3. Feature Breakdown: MVP vs. Phase 2

To ensure we meet the strict **December 28 deadline**, we have categorized features based on complexity and essential value.

Phase 1: The MVP (Deadline: Dec 28)

The MVP focuses on the "Core Loop": User access, Content consumption, and Peer communication.

A. User Management (Auth)

- Student Registration and Login.
- Profile Management (Year, Major, Profile Picture, etc…).

- Role-based access (Student, Admin, Tutor).

B. The Repository (Material Sharing)

- **File Upload/Download:** Admin can upload PDFs and Images.
- **Categorization:** Filter materials by Course, Year, and Type (Summary, Past Exam, Solution).
- *Note: Video recordings will be handled via YouTube/Drive embed links to save server bandwidth and complexity for the MVP.*

C. Community Forum (Q&A)

- Post a question tagged by subject.
- Reply to questions (Threaded view).
- "Mark as Solved" functionality.

D. Free Sessions & Events

- **Event Listing:** Tutors can create a "Card" for a free session containing the topic, time, and a meeting link (Zoom/Teams/Google Meet).
- **RSVP:** Students can click "I will attend" so the tutor sees the headcount.

E. Prep Exams (Basic)

- Tutor creates free prep exam for enrolled students to test their readiness for the test.
- **Reward Logic (Manual):** The system records high scores. Admins manually contact top performers for rewards (compensations) to avoid complex automated coupon logic in the first sprint.

Phase 2: Advanced Features (Post-Jan 1 or Roadmap)

These features require complex logic or third-party integrations (Payment Gateways) that pose a risk to the short deadline.

A. Paid Courses & Monetization

- Integration of payment gateways (e.g., Stripe, PayPal, or local integration).
- Locked content accessibility validation.
- Transaction history and invoicing.

B. Advanced Scheduling System

- Calendar integration for booking specific time slots with tutors.
- Automated email notifications and reminders.

C. Automated Reward System

- Automatic generation of coupons/vouchers when a student scores above a threshold in Prep Exams.

4. Risk Management Strategy

Challenge: Majority of members are new to the technologies. **Mitigation:**

1. **Pair Programming:** A Junior member is always paired with an Experienced member for complex tasks.
2. **Code Reviews:** No code is merged into the `main` branch without review by a Tech Lead.
3. **Simplified Stack:** We will stick to standard REST APIs. We will avoid complex third-party libraries unless absolutely necessary to reduce the learning curve.

5. Conclusion

Next Horizon is a viable and high-impact project for the Faculty of Science. By adhering to the MVP scope defined above, the team is confident in delivering a functional, robust product by December 28, laying the groundwork for a scalable educational platform.