STEVTA Proposal – Core Modules & Features

1. Human Resource (HR) Management Module

- Employee Management:
- • Centralized employee database with profiles and document uploads
- • Role-based access control for employees and managers
- • Department-wise and designation-wise staff listing
- Attendance Management:
- • Biometric, RFID, or manual attendance integration
- • Daily attendance tracking and reports
- • Late arrivals, early departures, and absentee summary
- Leave Management:
- • Employee leave requests with approval workflow
- • Leave balance tracking by type (casual, medical, earned)
- • Real-time leave calendar and reporting
- Payroll Management:
- • Automated salary calculation with attendance and leave data
- • Overtime, bonuses, deductions, and tax configurations
- • Payslip generation and download for employees
- Performance Management:
- • Monthly or quarterly performance reviews
- • KPI-based evaluation system
- • Training recommendations based on performance
- Recruitment & Onboarding:
- • Job posting, applicant tracking, and interview scheduling
- • Digital onboarding forms and document submission
- • Probation period tracking
- Notifications & Reports:
- • Email/SMS notifications for approvals, reminders, and alerts
- • Exportable reports: salary sheets, attendance, leave, etc.

2. Campus Management Module

- Institute Structure:
- • Multi-campus and department-wise management
- • Roles for admin, HODs, faculty, and students
- • Academic session, semester, and batch configurations
- Course & Subject Management:
- • Curriculum and syllabus uploading per course/semester
- • Subject-wise assignment and materials management

- • Link faculty to specific subjects and courses
- Assignment & Notes:
- • Faculty can upload assignments with deadlines
- • Students can submit assignments online
- • Notes, lecture slides, and reading materials upload/download
- Class Scheduling & Timetable:
- • Faculty-wise and room-wise timetable creation
- • Clash detection and notifications
- • Student and teacher view modes
- Student Information System (SIS):
- • Digital student profiles with academic and personal data
- • Admission records, enrollment tracking, and ID card generation
- • Parent/guardian information with contact tracking
- Event & Notice Board:
- • Event calendar with campus activities and holidays
- • Notices and circulars visible to specific roles
- Reporting & Analytics:
- • Student progress reports, attendance reports, course completion tracking
- • Exportable PDF and Excel reports for management

3. Online Test System (MCQs + Theory Based)

- Exam Creation:
- • Create exams with MCQs, short questions, and long theory-based answers
- • Define marks, timing, and passing criteria per section
- • Randomized question banks to avoid cheating
- Question Bank:
- • MCQs with multiple correct answers support
- • Add explanation or references for each question
- • Tag-based categorization (by subject, topic, difficulty)
- Test Attempt Interface:
- • User-friendly, mobile-responsive design
- • Timer-based exams with auto-submit on timeout
- • One-question-at-a-time navigation with flagging for review
- Evaluation & Result:
- • Auto-evaluation for MCQs with instant result
- • Manual marking system for theory questions
- • Detailed result with question-wise performance
- Security Features:
- • Browser locking and full-screen enforcement (for cheating prevention)
- • IP and device tracking

- • Random question orders and test shuffling
- Report Generation:
- • Result export with grade, rank, and statistics
- • Admin dashboard to view test stats per student, class, and subject
- • Answer-wise analytics (which questions were hard, easy, skipped)

Technologies Used

Frontend Technologies

- • HTML5 – Structure and semantic markup
- • CSS3 – Styling with animations and transitions
- • JavaScript – Core scripting and interactivity
- • Bootstrap – Responsive design framework
- • SASS – CSS preprocessor for scalable and maintainable styles
- • LESS – CSS preprocessor (optional alternative to SASS)

Backend Technologies

- • Laravel – PHP framework for web applications and API development
- • RESTful API – For communication between frontend and backend
- • MySQL – Relational database for structured data storage

Server Specifications (Recommended)

- • Operating System: Ubuntu 20.04 LTS (or CentOS 8)
- • Web Server: Apache 2.4 or Nginx
- • PHP: Version 8.1 or higher with required Laravel extensions
- • Database: MySQL 8.0 or MariaDB 10.5
- • RAM: Minimum 4 GB (8 GB recommended for production)
- • Processor: Minimum 2-core CPU (4-core recommended)
- • Disk: SSD with at least 40 GB free space
- • SSL Certificate for secure HTTPS connections
- • Daily Backups and Monitoring Tools (e.g., UptimeRobot, Netdata)