Software Requirement Specification (SRS)

Department Budget Management & Expense Analytics System

1. Project Title

Smart Department Budget Management & Expense Analytics System

2. Duration

45 Days (Internship Project)

3. Problem Context

Academic departments in engineering colleges face difficulty in managing and tracking annual budgets across multiple activities such as infrastructure upgrades, hardware/ software purchases, technical events, workshops, FDPs, expert sessions, and student activities.
Traditional spreadsheets and manual record-keeping lead to:
- Lack of transparency and delayed approval cycles
- Missed tracking of activity-wise expenditure
- Difficulty in validating expenses and receipts
- No real-time visibility of remaining funds
- Challenges during audits, accreditation (NBA/NAAC), and departmental finance reviews

There is a need for a centralized digital tool that simplifies budget planning, real-time expense tracking, receipt verification, and data-driven decision-making.

4. Problem Statement

Design and develop a web-based Department Budget Management Tool that enables departments to define annual/semester-wise budget requirements, compare them with actual budget allotments, record expenses category-wise, and upload receipts for verification.
The system must provide visual dashboards to track monthly, yearly, and activity-wise expenditure, and display the remaining funds at any point.

5. Key Features / Requirements

A. Budget Planning & Allotment
- Input the department's initial budget proposal for the academic year.
- Enter the actual budget allotted by the institute/governing body.
- Auto-calculate variance (shortfall/excess).

B. Expense Categories to Manage

System must support expenses for:
- Infrastructure (lab setup, repairs, furniture)
- Hardware purchases
- Software purchases/licenses/subscriptions

- Workshops, FDPs, seminars
- Expert talks / industry sessions honorarium
- Sponsorships & expenses for technical fests / departmental events
- Stationary, printing, miscellaneous academic needs
- Student activities and competition support

C. Expense Entry & Verification
- Add expense details:
- Category, amount, date, description
- Vendor details
- Activity/event/asset associated
- Upload receipts/bills in PDF/JPEG/PNG format
- Approver/Verifier workflow (optional):
- Department coordinator → HOD

D. Real-Time Budget Tracking
- Display remaining balance category-wise and overall
- Compare planned vs actual vs spent
- Alerts for overspending or nearing budget limits

E. Dashboard & Analytics

Interactive dashboard showing:
- Monthly expenses trend (bar/line chart)
- Yearly budget utilization progress (progress bars / donut charts)
- Category-wise breakdown (pie chart)
- Event/activity-wise spend analysis
- Downloadable reports (PDF/Excel)

F. Additional Functionalities
- Role-based access (Admin / HOD / Staff)
- Export summary for NBA/NAAC documentation
- Maintain log history for audits
- Cloud storage for receipts
- Filters by date, category, event, vendor

6. Expected Outcomes

By the end of 45 days, the intern should deliver:
1. Fully functional web application
2. Database schema for budget, expenses, and receipts
3. Dashboard with charts & analytics
4. Receipt upload module
5. Budget variance reporting
6. Documentation:
- SRS
- Architecture document
- UI mockups
- User manual
- API documentation (if applicable)

7. Stakeholders
- Head of Department
- Department Budget Coordinator

- ACBS Coordinator

8. Impact

The system will:
- Reduce manual workload by 50–70%
- Improve transparency and accuracy in budgeting
- Provide audit-ready records
- Help departments make informed spending decisions
- Support accreditation and compliance reporting

9. Deliverables Format for Internship Report