

1. Introduction/Overview :

ACADEMIX is an academic management system built for Barisal University. It keeps track of everything departments, courses, batches, teachers, class routines, attendance, assignments, grading, official documents, you name it. All of it sits in one secure, easy to audit place. The whole thing runs on a modern JavaScript stack and follows Agile practices, so it feels smooth and up to date. Whether you're a Super Admin, Department Admin, teacher, or student, you get a single, reliable system where everything just works.

The platform handles all those boring, repetitive jobs like attendance, assignments, and internal assessment submissions so admins don't have to mess around with spreadsheets anymore. It makes things faster when you're generating admit cards or posting results, and it gives the university better oversight with smart analytics, logs, and verification records everyone in the school can trust.

Every official document like admit cards, certificates, whatever gets its own unique ID, an issue date, and even a profile picture. That way, anyone can check and trace them right away if needed. Students can look up all their grades and records anytime, day or night. Teachers get simple tools to grade and plan the lessons, department admins can easily standardize their reports and processes, and super admins still have total control and visibility across the whole institute. We expect this boost data integrity, speed up decision making, tighten the compliance, and, in the end, make happier. The team will build ACADEMIX so, it can grow and adapt, using cloud-native tools and a modular design. That way, it stays easy to maintain and keeps up with whatever the University of Bolton needs next.

2. Problem Statement:

Running home operations feels like juggling a hundred things at once — you've got spreadsheets scattered everywhere, random portals for different tasks, endless email chains, and way too many things you have to double-check by hand. The result? You end up with duplicate files, records that don't match, and no real way to see what's actually happening in each department.

Take exam details, for example. Figuring out if someone is eligible, issuing and re-issuing admit cards, revoking them — it's all manual, and mistakes slip through all the time. Posting grades is a mess too. There's no clean system to automatically update student profiles or notify everyone about new grades, so people are left in the dark. And when it comes to tracking attendance, keeping an eye on teachers, or measuring how each department is doing, the administration just can't get a clear picture. There's no unified data, no easy way to audit, and no solid analytics to help make sense of it all.

Getting results or official documents on time is a headache for students, and honestly, the whole system just feels old system. Teachers spend way too much time on paperwork, and department admins are stuck juggling schedules, updating courses, and dealing with results. Even the people who hold up more authority don't have a clear way to track what's happening across campus. Plus, there is no easy way to prove a document's real if it can't be checked or verified online.

What we really need is one system that handles everything manages academic processes, sets the right permissions, keeps data clean, and spits out official documents that can't be faked. These documents should have metadata that shows if anyone's messed with them. That's the idea behind ACADEMIX. It's here to pull the main operations into one place, link results to student profiles, and give us solid analytics and audit tools. Leaders get the info they need to actually make smart calls.

3. Motivation:

ACADEMIX tackles the old, clunky way University X handles its paperwork and routines, dragging them into the present with a secure, student-focused platform. For years, things like creating routine documents, checking eligibility, issuing papers, and publishing results slowed everyone down. That frustration pushed the team to build a cloud first, modular system that actually smooths out the process and makes everything more transparent for everyone involved.

Students get instant access to learning materials, results, admit cards, and certificates all tagged with authenticity info. Teachers have it easier too. The system handles

attendance, assignments, and evaluations, plus it shows performance data and syllabus progress at a glance. Department admins get streamlined workflows, smarter scheduling, and dashboards for everything that matters. Super admins see the big picture: analytics across the institute, reliable backups, and a solid grip on security, so things keep running smoothly no matter what.

Here's what's new : you get granular role based access control (RBAC), unique IDs for every document, profile snapshots, and event-based updates that auto sync student profiles as soon as results go live. Audit-ready compliance logs are in there too, so tracking and accountability are built right in. The agile delivery approach means you see real value early on, not months down the line, and the team keeps improving things using user feedback and clear KPIs(Key Performance Indicator).