

notebook MyTUT Events – System Plan Documentation

Date: August 25, 2025

bookmark-tabs 1. System Overview

The MyTUT Events System is a web-based event management platform for Tshwane University of Technology (TUT). It allows event organizers to post, manage, and track events, while students can view, register, and attend events easily. The system ensures fast performance, secure authentication, and seamless communication through email and WhatsApp notifications.

bookmark-tabs 2. User Roles

page-facing-up 2.1 Admin (System Owner)

[sparkle](#) Full access to system.

[sparkle](#) Can manage all users, events, and reports.

page-facing-up 2.2 Event Organizers (Staff at TUT)

[sparkle](#) Sign up with staff ID + credentials.

[sparkle](#) Log in to create/manage events.

[sparkle](#) Track attendance and analytics.

page-facing-up 2.3 Students

[sparkle](#) Access public landing page.

[sparkle](#) View upcoming/current/past events.

[sparkle](#) Register for events after login/signup.

[sparkle](#) Receive QR code (e-ticket) for check-in.

bookmark-tabs 3. Key System Pages & Features

page-facing-up 3.1 Public / Student Side

3.1.1 Landing Page

[sparkle](#) Hero section: Welcome to MyTUT Events.

[sparkle](#) Quick link to “Current Event.”

[sparkle](#) Search bar for events.

[sparkle](#) Highlights: Upcoming Events, Past Events, Organizers at TUT.

[sparkle](#) About Page: What is MyTUT Events?

3.1.2 Student Login & Signup

[sparkle](#) **Signup:** Full name, student ID, email, password.

[sparkle](#) **Login:** Student ID + password.

[sparkle](#) **Security:** Encrypted passwords (bcrypt/argon2), account verification via email.

3.1.3 Event Browsing

[sparkle](#) Upcoming Events (cards with event details).

[sparkle](#) Current Event (highlighted separately).

[sparkle](#) Past Events (archive with photos).

3.1.4 Event Registration

[sparkle](#) Click “Register” → system checks login.

[sparkle](#) After registration: Student receives QR code e-ticket via email + WhatsApp.

3.1.5 Profile Page (Student Dashboard)

[sparkle](#) My Registered Events.

[sparkle](#) Download QR codes again.

[sparkle](#) Update profile & settings.

page-facing-up 3.2 Organizer Side (Staff)

3.2.1 Organizer Signup

[sparkle](#) Staff ID verification (must match TUT database).

[sparkle](#) Profile info: Full name, department, contact.

3.2.2 Organizer Login

[sparkle](#) Staff ID + password.

3.2.3 Organizer Dashboard

sparkle Create New Event:

- Title, Description, Date, Time, Venue.
- Upload Event Banner & Photos.
- Add Category (Sports, Academic, Cultural, etc.).
- Set Max Attendees.
- Enable/disable registration.

sparkle Manage Events:

- Edit, Delete, or Cancel event.

sparkle Attendee Tracking:

- View registered students list.
- Check-in system (scanning QR codes at event).

sparkle Reports:

- Number of attendees, participation rate, analytics.

page-facing-up 3.3 Admin Side

sparkle Manage Organizers (approve/disable accounts).

sparkle Manage Students (block/report abuse).

sparkle Approve/Reject Events before publishing.

sparkle Generate system-wide analytics.

bookmark-tabs 4. Notifications & Communication

page-facing-up 4.1 Email System

sparkle Account verification.

sparkle Event registration confirmation + QR code.

sparkle Event reminders (1 day before event).

page-facing-up 4.2 WhatsApp Notifications (API Integration)

sparkle “You are invited to [Event Name]. Register here [link].”

sparkle Event updates & reminders.

sparkle QR code delivery via WhatsApp as backup.

bookmark-tabs 5. Extra Features

sparkle **Photo Gallery:** Event photos uploaded after events.

sparkle **Feedback System:** Students rate events (1–5 stars + comment).

sparkle **Search & Filters:** Students can filter by date, department, or category.

sparkle **Calendar View:** Month view of all events.

sparkle **Security Features:**

- Role-based access control.
- Encrypted credentials.
- OTP (email/phone) for signup verification.
- ReCAPTCHA to block bots.
- Secure session management (JWT/HTTPS).

bookmark-tabs 6. Tech Stack Recommendation

For speed, security, and beautiful UI:

page-facing-up 6.1 Frontend (Fast UI)

sparkle React (Next.js for server-side rendering → faster load).

sparkle Tailwind CSS (for modern, responsive design).

page-facing-up 6.2 Backend (Secure + Scalable)

sparkle Django (Python) or Node.js (Express).

sparkle Django Rest Framework (for APIs).

page-facing-up 6.3 Database (Reliable & Fast)

sparkle PostgreSQL (good choice, reliable & scalable).

page-facing-up 6.4 Notifications

sparkle Twilio API (WhatsApp + SMS).

sparkle SendGrid / SMTP (emails).

page-facing-up 6.5 Authentication & Security

sparkle JWT or OAuth2.

sparkle bcrypt/argon2 for password hashing.

bookmark-tabs 7. Workflow Summary

sparkle Organizer signs up → logs in → creates event.

sparkle Event auto-saves to DB → Admin approves → Event goes live.

sparkle Students visit landing page → see event → login → register.

sparkle System sends QR code e-ticket via email + WhatsApp.

sparkle On event day → Student presents QR code → Organizer scans for check-in.

sparkle Attendance tracked → Analytics generated.

sparkle Event photos uploaded → moved to “Past Events” page.