

UWC PostGrad Portal

Firebase Migration Changelog

University of the Western Cape

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Project: Postgraduate Request Portal

Methodology: Design Science Research (DSRM)

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PostGrad Portal - Firebase Migration Changelog

Project: Postgraduate Request Portal

Context: Academic Research Project (Design Science Research Methodology)

Date: June 2025

Scope: Migration from in-memory mock data layer to Firebase (Authentication + Cloud Firestore)

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1. Overview

The PostGrad Portal is a React-based university postgraduate administration system supporting four user roles: Student, Supervisor, Coordinator, and Admin. Prior to this migration, the application relied entirely on an in-memory mock data layer (`mockData.js`, ~627 lines) that simulated CRUD operations with JavaScript arrays and objects. Data was volatile -- lost on every page refresh.

This changelog documents the complete migration from mock data to Firebase, introducing:

- * Firebase Authentication (email/password) replacing simulated login
- * Cloud Firestore replacing the in-memory data store with persistent, real-time data
- * Real-time subscriptions (`onSnapshot`) so all connected clients receive live updates
- * Automation scripts for repeatable provisioning and seeding

This migration constitutes a core design science artefact iteration -- transforming a functional prototype into a production-capable system while preserving all existing UI behaviour.