Al-Aqsa University-Gaza Faculty of Computers And IT Dep. Applied Information Technology



جامعة الأقصى غزة كلية الحاسبات وتكنولوجيا المعلومات قسم تكنولوجيا معلومات تطبيقية

"GradTrack: A Smart Web Platform for Efficient Graduation Project Management"

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This project was submitted for a Bachelor's degree in: Applied Information Technology.

Al-Aqsa University 2024-2025

Abstract:

GradTrack is a web-based platform designed to enhance the management of graduation projects by addressing key issues like inefficient communication and poor timeline management. It aims to improve collaboration between students and supervisors, streamline project tracking, and facilitate structured feedback. The platform enables students to track project stages, submit documents, and communicate seamlessly, fostering organization and transparency. Expected outcomes include increased efficiency through reduced errors, timely updates for necessary adjustments, and a smoother graduation process that supports academic achievement. GradTrack ultimately fosters a collaborative environment conducive to academic excellence. While initially designed for Al-Aqsa University, GradTrack has the potential to be adopted by other academic institutions seeking an efficient and structured approach to graduation project management.

Introduction:

Background and Context

Graduation projects are a critical component of academic programs, shaping students' professional and research skills. However, managing these projects poses significant challenges for both students and supervisors. Traditional project management methods often lead to communication breakdowns, inefficient tracking of progress, and delays in receiving structured feedback. The lack of a centralized system results in scattered communications, missed deadlines, and difficulty in monitoring project stages.

To overcome these challenges, GradTrack introduces a smart web-based solution designed to optimize project workflows, enhance collaboration, and ensure seamless supervision throughout the project lifecycle. The platform integrates real-time tracking, document sharing, automated reminders, and scheduling meetings to enhance efficiency and transparency throughout the project lifecycle.

Problem Statement

Many academic institutions struggle with managing graduation projects due to several key issues:

- Ineffective tracking of project stages and deadlines.
- Lack of a centralized system for document storage and collaboration.

- Poor communication between students and supervisors.
- Limited visibility into project progress and feedback.
- Supervisors often struggle with managing multiple projects simultaneously due to the lack of a centralized tracking system.

These challenges often lead to frustration, delays and suboptimal academic performance. GradTrack aims to solve these issues by introducing a smart, web-based solution that enhances accessibility, organization, and accountability.

Objectives

General Objective

To optimize the graduation project management process by improving communication, project tracking, and structured feedback mechanisms.

Specific Objectives

- Enhance Collaboration: Facilitating structured and direct communication between students and supervisors through seamless comments and replies and efficient feedback exchange.
- Improve Project Tracking: Enable students to monitor stages, see scheduled meetings, and submit deliverables on time.
- Centralized Documentation: Offer a secure, web-based repository for storing and sharing project files.
- Structured Feedback Mechanism: Ensure supervisors can provide timely and organized feedback for continuous improvement.

Significance of the Project

GradTrack is designed to revolutionize the graduation project experience by ensuring seamless collaboration, real-time tracking, and structured supervision. By replacing outdated manual processes with a smart, digital solution, GradTrack empowers both students and supervisors, ensuring that projects meet high academic standards while reducing administrative workload.

Scope and Limitations

The platform offers a comprehensive set of tools for tracking project progress, managing deadlines, submitting required documents, and facilitating communication. However, its effectiveness is contingent on several factors, including internet availability and user adaptation to the platform's features, which may necessitate an initial learning phase.

Expected Impact and Results

GradTrack is expected to achieve the following impacts:

- Increased Efficiency: The platform will streamline workflows by automating routine tasks such as document submissions and feedback processes, thereby minimizing errors and saving time for both students and supervisors.
- Timely Adjustments: With real-time progress updates, the platform will enable quick adjustments, thus ensuring that projects remain on track and meet deadlines.
- Enhanced Academic Outcomes: Improved project organization and student performance are anticipated as a result of these efficiencies.

The platform aims to deliver specific results, including:

- A fully operational web platform with an intuitive user experience.
- Deadline reminders and stages tracking to enhance accountability.
- Secure and centralized document storage for streamlined access to project files.
- Enhanced communication tools, such as comments and replies and notification systems, to improve collaboration.
- Comprehensive analytics for project performance assessment.

In conclusion, GradTrack is more than just a project management tool; it is a transformational solution that optimizes the graduation process, fosters collaboration, and supports students in achieving academic excellence.

Application Tools:

- Frontend Development: HTML, CSS, JavaScript
- UI/UX Design

- Backend Development: Laravel
- Database: MySQL DB
- Authentication: Laravel Authentication (Session-Based Authentication)
- Hosting & Deployment: Netlify (Frontend).
- Collaboration Tools: GitHub

Project Group Members:

- Saja AbuShoaib Frontend Developer
- Nada Shaheen Backend Developer & Database Administrator & UI/UX Design & Security Specialist

Shared Tasks:

- Planning & Documentation
- Meetings & Coordination
- Testing & Debugging
- Deployment & Maintenance