Kingdom of Saudi Arabia
Ministry of Education
Taibah University
Applied College

Wesal: A Web-Based Platform for Cooperative Training Management

WEB PROJECT
FWD292

Full Stack Web Developer

Supervisor: Arwa Al-Nuzha Al-Zughaibi

Presented by:

Alaa Obaid Alharbi
4624230

Bedoor Ali Al-Balawi
4625026

Maha Ibrahim Al-Alawi
4624214

Lama Abdulaziz Almehmadi
4624922

Atheer abdullah al anazi
4625028

Farida Faleh Al-Anazi
4624095

Hadeel Al-Subhi
4624203

Academic Year 1448 AH

Acknowledgement

Abstract

The abstract should identify clearly and succinctly the purpose of the project, the methods used, the results obtained and the significance of the results or findings. The abstract must not exceed one page. Abstract section gives the readers a brief idea about your project, which present in brief your problem statement and how you can solve it.

Indent accordingly when you start a new paragraph. The abstract section should not exceed a single page.

Keywords: Word1; Word2; Word3; Word4; Word5

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WHO	World Health Organization
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Chapter 1: Introduction

1.1 Introduction

Cooperative training is an important part of the academic journey because it gives students the opportunity to apply what they learn in their courses in a real training environment. The training process usually involves more than one party, including the student, the training organization, and the university supervisor. Each party has different responsibilities, such as providing training opportunities, submitting applications, following the training progress, and reviewing reports and evaluations.

Managing these activities can become difficult when the information and procedures are handled through different methods. Students may need to search for training opportunities, submit their applications, follow their application status, and communicate with the training organization and the university. At the same time, training organizations need a way to publish opportunities, review applications, and evaluate students, while university supervisors need to follow students and their training reports.

To address these needs, we propose **Wesal**, a web-based platform for managing cooperative training in one system. The platform connects students, training organizations, and university supervisors and provides different interfaces and permissions for each user type. Students can create their profiles, upload their resumes, browse training opportunities, apply for them, and follow their application status. Training organizations can publish opportunities, review applications, accept students, and evaluate their performance. University supervisors can monitor students, applications, reports, and evaluations through a dedicated dashboard.

The platform will be developed as a full-stack web application using modern web technologies. It will include a frontend, backend, database, REST APIs, role-based access control, and dashboards. We also plan to include a recommendation feature that can help students find training opportunities that better match their specialization and skills. Through these features, Wesal aims to provide a more organized and easier way to manage cooperative training activities.

1.2 Problem Definition

Cooperative training includes several activities that must be followed by students, training organizations, and university supervisors. These activities include finding suitable training opportunities, submitting applications, reviewing applications, accepting students, following the training progress, submitting reports, and evaluating student performance. When these activities are not managed through one platform, information and communication may become scattered between different methods and users may find it difficult to follow the complete training process.

Students need an easier way to find available training opportunities and manage their applications. Training organizations need a simple way to publish opportunities, receive applications, and evaluate students. University supervisors also need an organized way to follow students and review their training reports and evaluations.

Therefore, the main problem addressed by our project is the lack of a single web-based platform that connects the main parties involved in cooperative training and supports the main training activities in one organized system. Wesal is proposed to reduce this difficulty by providing a unified platform for managing training opportunities, applications, reports, evaluations, and user access.

1.3 Project Objectives

The main objectives of our project are:

- To study the main activities involved in the cooperative training process.
- To identify the needs of students, training organizations, and university supervisors.
- To develop a web-based platform that manages cooperative training activities in one system.
- To allow students to create their profiles, upload their resumes, browse training opportunities, and apply for available opportunities.
- To provide training organizations with tools to publish training opportunities, review applications, accept students, and evaluate their performance.

- To provide university supervisors with a dashboard to follow students, applications, reports, and evaluations.
- To apply role-based access control so that each user can access the functions related to their role.
- To design and develop a database that stores and manages users, training opportunities, applications, reports, and evaluations.
- To develop REST APIs to connect the frontend with the backend and database.
- To provide a recommendation feature that can help match students with suitable training opportunities based on their specialization and skills.
- To test the main system functions and make sure that the platform works correctly.

1.4 Project Scope

The scope of Wesal focuses on developing a web-based platform for managing cooperative training between students, training organizations, and university supervisors.

The project will include the following main functions:

1 Student Side

- Creating an account and logging into the platform.
- Creating and updating a student profile.
- Adding skills and academic information.
- Uploading a resume.
- Viewing and searching for training opportunities.
- Viewing the details and requirements of an opportunity.
- Submitting applications for training opportunities.
- Following the status of submitted applications.
- Viewing training information after acceptance.
- Submitting required training reports.

- Viewing related evaluations and training information.

2 Training Organization Side

- Creating and managing a training organization account.
- Creating and publishing training opportunities.
- Adding the requirements and details of each opportunity.
- Receiving and reviewing student applications.
- Accepting or rejecting applications.
- Following accepted students.
- Evaluating student performance.
- Managing training-related information.

3 University Supervisor Side

- Viewing and following students.
- Monitoring training applications and their statuses.
- Following accepted students and their training progress.
- Reviewing submitted reports.
- Viewing student evaluations.
- Using a dashboard to manage and monitor training activities.

4 Technical Scope

The project will include:

- A responsive web interface for the main user types.
- A backend application to manage system operations.
- A relational database for storing system data.
- REST APIs for communication between the frontend and backend.
- Role-based access control for different users.
- Dashboards for students, training organizations, and university supervisors.

- Testing of the main functions and system workflows.
- A recommendation feature that can be developed to match students with suitable training opportunities based on their skills and specialization.

The current project does not include direct integration with external university systems, online payment services, video conferencing, or other advanced services that are not required for the main cooperative training process. These features can be considered as future improvements if needed.

1.5 Project Timeline

The project will be completed through several main stages. The following timeline is a proposed plan and can be adjusted according to the course schedule and the required submission dates.

Phase	Main Activities	Expected Deliverable
Phase 1: Project Planning	Define the project idea, problem, objectives, and scope	Project proposal
Phase 2: Requirements Analysis	Collect requirements and define functional and non-functional requirements	Requirements and system analysis
Phase 3: System Design	Design the system architecture, database, diagrams, and user interfaces	System design
Phase 4: Development	Develop the frontend, backend, database, APIs, and user dashboards	Working system
Phase 5: Testing	Test the main functions and fix identified problems	Tested system
Phase 6: Documentation	Complete the report and organize project documentation	Final report
Phase 7: Final Preparation	Prepare the presentation and review the complete project	Final presentation and submission

1.6 Document Organization

This project report consists of six main chapters. The chapters are organized to explain the project from the initial problem and objectives to the final implementation and results.

Chapter 1: Introduction presents the project background, defines the main problem, explains the project objectives and scope, presents the project timeline, and describes the organization of the report.

Chapter 2: Literature Review presents the background of cooperative training management and reviews related studies, previous work, and similar systems. It also explains the relationship between existing work and our proposed system.

Chapter 3: Project Requirements and System Analysis explains the data collection techniques, functional and non-functional requirements, system analysis, use case diagram, flow chart, and the development methodology used for the project.

Chapter 4: System Design presents the proposed system architecture, object-oriented design, class diagram, sequence diagram, activity diagram, database design, and user interface design.

Chapter 5: Implementation and Results explains the tools and technologies used to develop the system, presents the implementation of the main features, describes the testing cases, and discusses the obtained results.

Chapter 6: Conclusion and Future Work summarizes the project, discusses its limitations, and presents possible improvements and future work.

References