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MAKERERE UNIVERSITY

MAKERERE UNIVERSITY BUSINESS SCHOOL

DESIGNING A DIGITAL JOB PORTAL TO CONNECT YOUTH WITH EMPLOYMENT
OPPORTUNITIES IN MBALE DISTRICT

BY

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A project proposal submitted to the faculty of Computing & Informatics of Makerere University
Business School in partial fulfillment of the Award of the degree of Bachelor of Business
Computing of Makerere University

October, 2025

PRELIMINARY PAGES

DECLARATION

We, the undersigned, declare that to the best of our knowledge, this proposal is our original piece of work, and has never been published and /or submitted for any award in any other University or Higher Institution of learning.

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Date: October 25, 2025

APPROVAL

This project proposal has been submitted with my approval as supervisor and my Signature is here appended:

Signed.......... Date.....

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Table of Contents

DECLARATION.....	ii
APPROVAL.....	iii
SECTION ONE.....	iii
1. INTRODUCTION.....	iii
1.1 Project Background	iii
1.2 Statement of the Problem	iv
1.3 Project Goal and Objectives	iv
1.3.1 Project Goal.....	iv
1.3.2 Project Objectives	iv
1.3.3 Project Scope	v
1.4 Significance of the Project.....	v
1.5 Project Assumptions	v
SECTION TWO.....	vi
REVIEW OF LITERATURE	vi
2.0 INTRODUCTION.....	vi
2.1 Youth Unemployment in Mbale District	vi
2.2 Digital Job Portals / E-Recruitment Platforms	vi
2.3 Government and Local Initiatives	vi
2.4 Design Principles of Digital Employment Platforms	vii
2.5 Implementation of Web-Based Job Portals	vii
2.6 Importance of Digital Job Portals for Youth	vii
2.7 Challenges in Designing & Implementing Job Portals	vii
2.8 Overcoming the Challenges	vii
2.9 Conclusion	vii
SECTION THREE.....	viii
RESEARCH METHODOLOGY	viii
3.0 Introduction.....	viii
3.1 Research Design	viii
Figure 3.1: Design Science Research Process for the Mbale Digital Job Portal	ix
3.2 Project Organization (Client)	x
3.2.1 Sampling Design.....	x
3.3 Sources of Project Data	x
3.3.1 Requirement Elicitation / Data Collection Techniques.....	x
3.4 System Analysis and Design Approaches	xi
3.4.2 Design Techniques.....	xi

Figure 3.4.2.1: Use Case Diagram	xi
Figure3.4.2: Entity Relationship Diagram.....	xiii
3.5 Anticipated Project Constraints	xiii
3.6 Project Development Process	xiv
3.7 Ethical Considerations	xiv
References	xv
APPENDICES	xvi

SECTION ONE

1. INTRODUCTION

1.1 Project Background

Youth unemployment is a significant socio-economic challenge affecting millions of young people globally. According to the International Labor Organization (International Labour Organization (ILO), 2022), approximately 73 million young people worldwide are unemployed, representing an unemployment rate of 14% among youth. Digital solutions, including online job portals and e-recruitment platforms, have emerged as effective mechanisms for connecting job seekers with employers, enhancing access to information, and streamlining recruitment processes (Smith, 2019). In Uganda, youth unemployment remains high at 13.2% nationally, with rural districts such as Mbale recording even higher underemployment levels among youth aged 18–35 (Uganda Bureau of Statistics (UBOS), 2022b).

In Mbale District, youth face barriers such as limited access to information about employment opportunities, inadequate digital skills, and reliance on informal job networks. Local labor markets are underdeveloped, and many young people engage in low-income or unstable work, with nearly 42% of youth employed in informal sectors (Okumu, 2021). These challenges reduce youth participation in productive economic activities and limit the district's overall development potential.

Employers and organizations in Mbale District also face challenges in reaching and engaging youth with available vacancies. Currently, there is no centralized platform to manage and disseminate employment opportunities effectively. Existing government and NGO initiatives, while helpful, do not fully address the gaps in timely communication, skills alignment, and accessibility (Ministry of Gender, 2023).

This study proposes the design of a digital job portal tailored to the needs of youth and employers in Mbale District. The platform will provide a user-friendly interface for youth to access job

listings, submit applications, and access resources for skill development, while enabling employers to efficiently post and manage job vacancies. Such a system has the potential to reduce youth unemployment, enhance employability, and promote economic development within the district.

1.2 Statement of the Problem

Studies reveal that many young people in Mbale District still rely on formal networks and lack timely labor market information, indicating a clear problem of youth unemployment and limited access to job information (Uganda Bureau of Statistics (UBOS), 2022b; United Nations Development Programme (UNDP), 2021). ICT-enabled job search platforms are only accessible to 28% of young people in Mbale, which results in underutilization of opportunities. Youth experience high rates of unemployment, underemployment, and socioeconomic vulnerability as a result of this circumstance. Local leaders, organizations, and youth groups frequently lament the lack of access to validated job postings, inadequate career counseling, and low employer engagement. Despite the introduction of various initiatives, such as national job portals and NGO-led employment programs, the majority are dispersed and outdated, lack the localized opportunities and interactive features that rural youth require (Ndawula & Kigozi, 2019). Because of accessibility issues, a lack of support for digital literacy, and a lack of employer involvement, current platforms do not adequately address the needs of Mbale youth. In order to improve access to opportunities and boost youth employability, the suggested solution is to create a centralized digital job portal that is especially designed for Mbale District. This portal would incorporate updated job listings, employer-youth interactions, and career development resources.

1.3 Project Goal and Objectives

1.3.1 Project Goal

The main goal of this project is to design a digital job portal that connects youth in Mbale District with employment opportunities, enhancing access to the labor market and improving employability.

1.3.2 Project Objectives

1. To design and develop a web-based platform enabling youth to search and apply for job opportunities in Mbale District.
2. To provide employers with a system to post vacancies and manage applications efficiently.

3. To integrate tools and resources for youth skill development and career guidance.
4. To test the system with a sample of youth and employers to ensure usability and effectiveness.

1.3.3 Project Scope

The project scope will cover development of a web-based platform for youth registration, job search and application, employer dashboard for posting and managing vacancies, notifications, and access to career resources. Non-functional aspects will include system security, reliability, mobile compatibility, and scalability, optimized for low-bandwidth environments in Mbale District.

1.4 Significance of the Project

The project will reduce youth unemployment by improving access to job opportunities through designing a digital job portal, enhance employer recruitment efficiency, and support policymakers with data to inform youth employment programs. Additionally, the development process provides practical learning and technical skills for students involved in the project.

1.5 Project Assumptions

- Youth in Mbale District will have access to basic digital devices and internet connectivity.
- Employers and organizations will cooperate by posting vacancies and using the portal.
- Required tools, software, and technologies will be accessible and functional throughout the project.
- The project scope and objectives will remain stable, with minimal changes after initial approval.
- The chosen technology stack will function as expected and be compatible with project objectives.

SECTION TWO

REVIEW OF LITERATURE

2.0 INTRODUCTION

This section will examine studies, articles, and reports relevant to designing a digital job portal for youth in Mbale District. The review focuses on youth unemployment, digital job portals, government initiatives, platform design principles, implementation strategies, and challenges in digital employment solutions. Literature from 2021–2025 has been considered to ensure currency and relevance.

2.1 Youth Unemployment in Mbale District

Youth unemployment remains a critical concern in Mbale District. Limited access to employment information, insufficient digital literacy, and reliance on informal networks restrict youth participation in the labor market (Uganda Bureau of Statistics (UBOS), 2022b), (Okumu, 2021). According to (Uganda Bureau of Statistics (UBOS), 2022a), over 45% of youth in Mbale District are either unemployed or underemployed, indicating a severe labor market gap. High unemployment rates contribute to economic instability and social challenges, emphasizing the need for innovative digital solutions.

2.2 Digital Job Portals / E-Recruitment Platforms

Digital job portals have become essential tools for connecting job seekers with employers efficiently (Smith, 2019). Localized platforms targeting district-level opportunities provide timely, relevant job information and facilitate the application process (Adeyemi & Oladipo, 2021). Research shows that districts with dedicated youth employment portals experience 15–20% higher youth employment registration and application rates.

2.3 Government and Local Initiatives

The Ministry of Gender, Labor, and Social Development (MGLSD) and local authorities in Mbale District have initiated programs to enhance youth employability, including vocational training, entrepreneurship support, and ICT-based employment solutions (Ministry of Gender, 2023). Despite these interventions, gaps remain in directly connecting youth with available job opportunities.

2.4 Design Principles of Digital Employment Platforms

Effective digital employment platforms will prioritize user-centered design, mobile accessibility, offline usability, and robust data security. Features like job search filters, employer dashboards, application tracking, and notifications enhance usability and engagement (Kizza & Nansubuga, 2020; Kumar & Sharma, 2022).

2.5 Implementation of Web-Based Job Portals

Implementing a digital job portal will involve requirement analysis, system design, development, testing, deployment, and maintenance. Engagement with stakeholders, understanding local labor market needs, and providing user training are critical for successful adoption (Mugisha, 2022).

2.6 Importance of Digital Job Portals for Youth

Digital job portals will help to reduce the time spent searching for employment, improve access to opportunities, and provide resources for skill enhancement. They will facilitate youth engagement with employers and allow policymakers to design evidence-based interventions (Okello & Kaggwa, 2020).

2.7 Challenges in Designing & Implementing Job Portals

Challenges will include limited internet access, low digital literacy, inadequate infrastructure, and security concerns. Maintaining accurate and up-to-date job listings requires collaboration with employers and government bodies (United Nations Development Programme (UNDP), 2021).

2.8 Overcoming the Challenges

Strategies to overcome challenges will include providing mobile-friendly applications, digital literacy training, stakeholder engagement, and integration with existing government initiatives. These approaches enhance user adoption and platform sustainability (Adeyemi & Oladipo, 2021).

2.9 Conclusion

The literature will highlight the urgent need for a youth-focused digital job portal in Mbale District. Effective design, alignment with local labor market needs, and stakeholder engagement are crucial to developing a platform that enhances youth employment opportunities and promotes economic growth.

SECTION THREE

RESEARCH METHODOLOGY

3.0 Introduction

This section will highlight the research methodology that will guide the development of a digital job portal aimed at connecting youth with employment opportunities in Mbale District. The chapter will present the research design, target population, sampling technique, data collection methods, system design approaches, anticipated project constraints, and ethical considerations. Additionally, the section will describe the use of the Design Science Research (DSR) methodology to ensure the artifact (the job portal) is designed, developed, and tested to meet the defined objectives.

3.1 Research Design

The project team will undertake the Design Science Research (DSR) approach. DSR is a methodology that focuses on creating and evaluating IT artifacts to solve identified organizational problems (Hevner et al., 2004), (Peppers et al., 2007). The approach will allow the team to identify the challenges that youth face in accessing employment opportunities in Mbale District and design a digital solution tailored to their needs.

The steps involved in the DSR approach will include:

1. **Problem Identification:** The researchers will identify gaps in youth employment in Mbale District by reviewing government reports, unemployment statistics, and conducting interviews with youth, employers, and local government officials.
2. **Objective Definition:** The team will clearly define the objectives of the project, which will include analyzing existing employment systems, eliciting user requirements, designing and developing the digital job portal, and testing its usability.
3. **Design & Development:** Logical models, user interface designs, and database structures will be created to support the portal's functionality. A working prototype of the portal will be developed using appropriate technologies.

4. **Demonstration:** The prototype will be demonstrated to selected users and stakeholders for feedback.
5. **Evaluation:** User feedback and system testing results will be analyzed to refine the portal and ensure it meets functional and non-functional requirements.
6. **Communication:** The project findings, prototype, and implementation plan will be presented to supervisors and other stakeholders.

Figure 3.1: Design Science Research Process for the Mbale Digital Job Portal

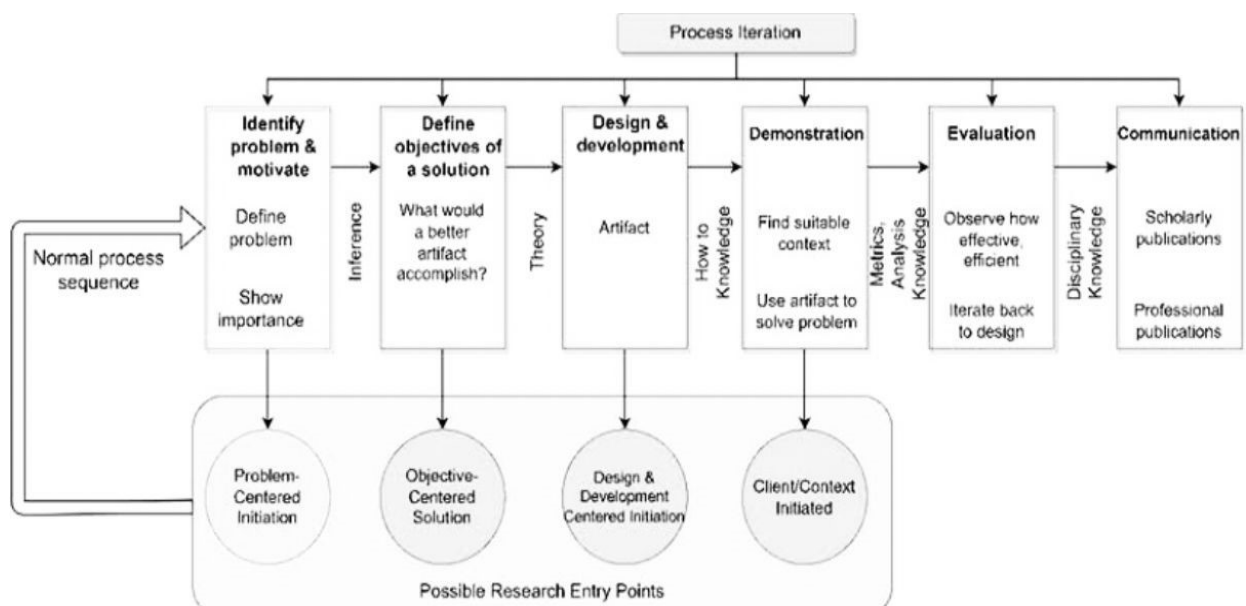


Table: DSR Stage, Research Objective, Proposed Methods, Expected Results

DSR stage	Research Objective	Proposed Methods	Expected Results
Objective Definition	Identify challenges youth face in accessing employment	Interviews, FGDs, observations, secondary data	List of critical challenges and gaps in existing employment systems
Objective Definition	Define project objectives	Workshops, group discussions, document review	Clear, measurement, achievable objectives for the project
Design Development and	Design and develop the portal	UML diagrams, wireframes, prototyping tools, coding	Prototype digital job portal, systems models, sample code

Demonstration	Test the portal with users	User testing, surveys, FGDs	Feedback on usability, functionality, and design
Evaluation	Evaluation portal effectiveness	Analysis of testing results, user feedback	Refined and validated digital job portal
Communication	Present findings and project deliverables	Reports, presentations, demonstrations	Approved final report and portal ready for deployment

3.2 Project Organization (Client)

The digital job portal will be developed for youth in Mbale District, in collaboration with local government authorities, employers, and youth organizations. The target population will include young job seekers aged 18–35, local businesses, and district employment offices. According to (Uganda Bureau of Statistics (UBOS), 2022), Mbale District will have approximately 45,000 youths in the working-age population, which represents the potential user base for the portal.

3.2.1 Sampling Design

A sample of 100 youths will be randomly selected to participate in requirements elicitation and system testing. The sample size will be determined based on (Krejcie & Morgan, 1970) table for sample size determination. The project team will use purposive sampling for local employers and district officials, ensuring that only stakeholders relevant to the project will participate in discussions and testing. This method will help reduce data collection costs while ensuring high-quality insights.

3.3 Sources of Project Data

The project team will collect both primary and secondary data:

1. Primary Data: Interviews with youth, employers, and district officials; observations of employment processes; and focus group discussions (FGDs).
2. Secondary Data: Government reports, academic literature, online articles, and other publications on youth employment and digital platforms.

3.3.1 Requirement Elicitation / Data Collection Techniques

The team will study existing systems in Mbale District to identify gaps and needs. The data collection techniques will include:

- Observation of employment service centers
- Interviews with youth, employers, and government officials
- Focus group discussions to gather diverse perspectives

- Participatory techniques such as mind mapping and affinity diagrams to organize requirements

These methods will ensure that all critical functional and non-functional requirements are captured.

3.4 System Analysis and Design Approaches

The team will adopt an Object-Oriented Design (OOD) approach, as it allows modular and scalable system development. OOD will facilitate effective management of complex data structures such as user profiles, job listings, and application records.

3.4.1 System Design Approach

The portal will be developed using the Prototyping Method, which will allow iterative feedback from users before the final system is deployed. Tools such as UML diagrams, wireframes, and database schemas will be used to ensure a robust design. The SDLC methodology will guide the overall development, ensuring that all project objectives will be met.

3.4.2 Design Techniques

The team will use the following techniques:

- Use Case Diagrams – to visualize interactions between users and the portal
- Entity-Relationship Diagrams (ERDs) – to model the database structure
- Wireframes and Prototypes – to design the portal interface
- System Architecture Diagrams – to show the overall technical infrastructure

Figure 3.4.2.1: Use Case Diagram

(Visual Paradigm Online, 2024)

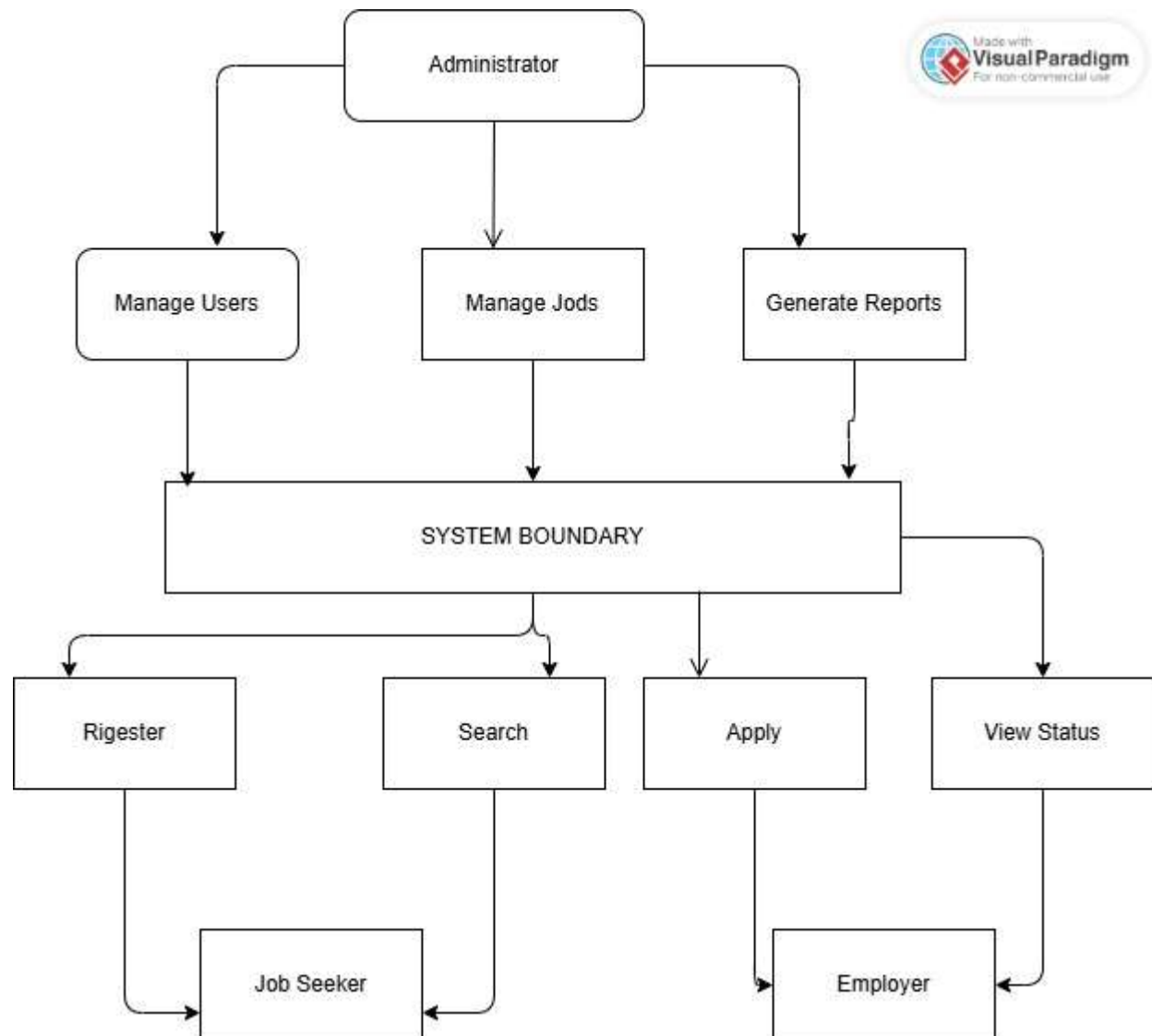
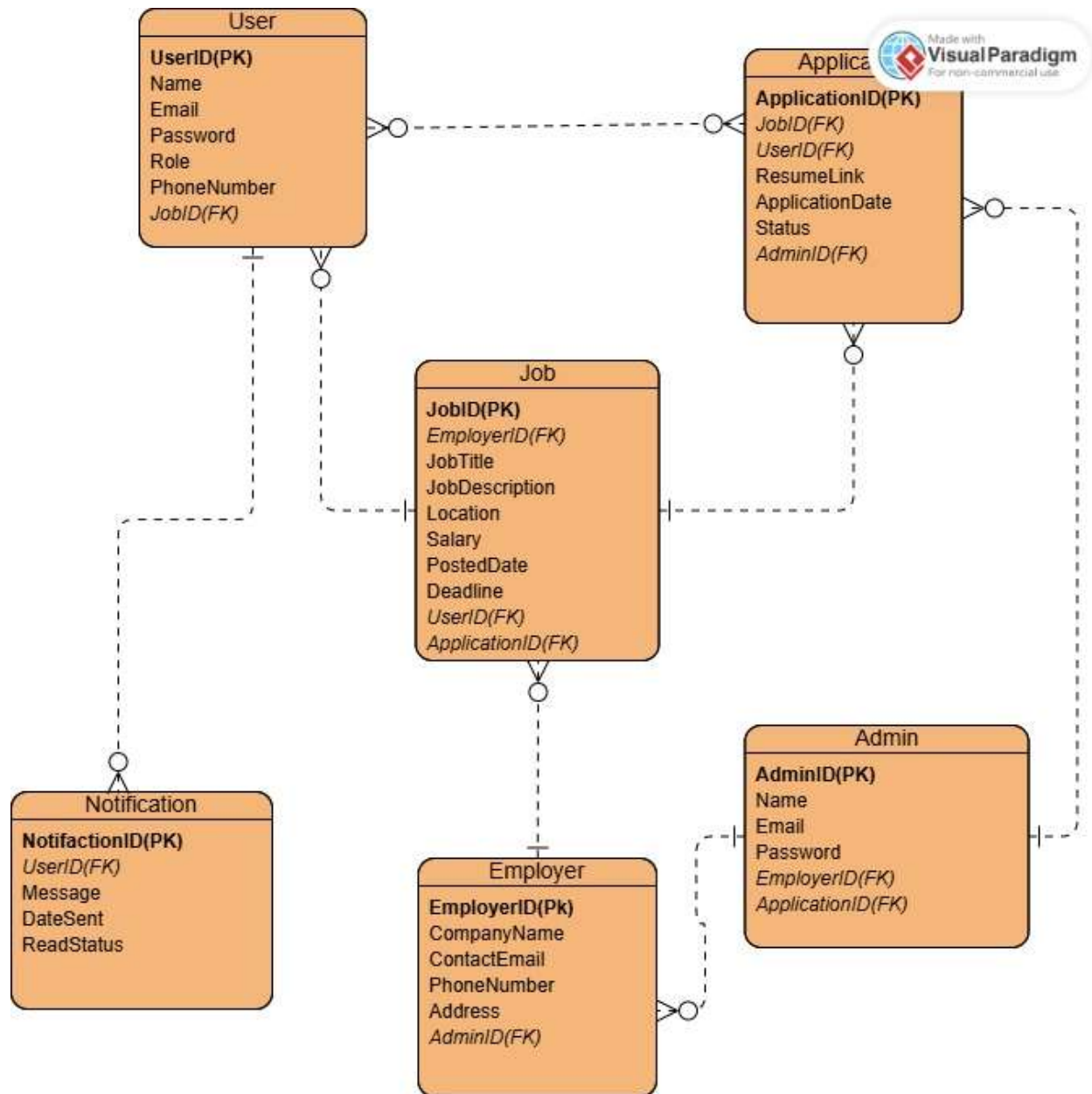


Figure3.4.2: Entity Relationship Diagram(Visual Paradigm Online, 2024)



3.5 Anticipated Project Constraints

The project may encounter the following challenges:

- Limited access to updated employment statistics in Mbale District. The team will mitigate this by using multiple secondary sources.
- Lack of high-end software for development. The team will use open-source development tools.

iii. Limited programming skills among team members. The team will take online courses and seek supervisor guidance.

iv. Potential resistance from users during system adoption. The team will conduct training and demonstrations to encourage acceptance.

3.6 Project Development Process

The project will follow the DSR cycle, consisting of problem identification, objective definition, design and development, demonstration, evaluation, and communication. Insert Project Life Cycle Diagram here in italics.

3.7 Ethical Considerations

The research will ensure that participant data is handled confidentially and ethically. Consent will be obtained before interviews and FGDs. The system will comply with data protection standards to protect users' personal information.

3.8 Timeline & Milestones

The team will prepare a Gantt chart highlighting key deliverables, testing periods, and deadlines. Milestones will include system prototype completion, user testing, and final deployment.

References

- Adeyemi, T., & Oladipo, S. (2021). Digital employment platforms in Africa: Challenges and opportunities. *African Journal of Information Systems*, 13(2), 45–61.
- Hevner, A. R., March, S. T., Park, J., & Ram, S. (2004). Design Science in Information Systems Research1. *MIS Quarterly*, 28(1), 75–106. <https://doi.org/10.2307/25148625>
- Kizza, J., & Nansubuga, E. (2020). Digital literacy and adoption of online employment services in Uganda. *Journal of African Technology Studies*, 7(1), 22–36.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607–610. <https://doi.org/10.1177/001316447003000308>
- Kumar, R., & Sharma, A. (2022). Design principles for effective web-based employment platforms. *International Journal of Human Resource Management*, 33(6), 1123–1138.
- Ministry of Gender, L. and S. D. (MGLSD). (2023). *Annual Report on Youth Employment Programs*.
- Mugisha, D. (2022). Bridging the employment gap: Digital solutions for youth in Uganda. . *Uganda Journal of Development Studies*, 8(1), 55–68.
- Okumu, D. (2021). Youth unemployment and informal employment in Mbale District. *Uganda Journal of Development Studies*, 9(2), 55–70.
- Peffer, K., Tuunanen, T., Rothenberger, M. A., & Chatterjee, S. (2007). A Design Science Research Methodology for Information Systems Research. *Journal of Management Information Systems*, 24(3), 45–77. <https://doi.org/10.2753/MIS0742-1222240302>
- Smith, A. (2019). Online job platforms: Enhancing employment opportunities in the digital age. . *Journal of Employment Studies*, 16(4), 77–88.
- Uganda Bureau of Statistics (UBOS). (2022a). *National Labour Force Survey 2021: Main Report*. <https://www.undp.org/uganda/publications/undp-initiatives-youth-uganda>
- Uganda Bureau of Statistics (UBOS). (2022b). *Statistical Abstract 2022*. https://www.ubos.org/wp-content/uploads/publications/05_20232022_Statistical_Abstract.pdf?
- United Nations Development Programme (UNDP). (2021). *UNDP initiatives for youth in Uganda*. <https://www.undp.org/uganda/publications/undp-initiatives-youth-uganda>

APPENDICES

Appendix A: Research Budget

Item	Description	Estimated Cost (UGX)
Internet and data bundles	For virtual meetings, online research, and testing the job portal prototype	70,000
Printing and photocopying	Printing draft reports and project documentation	40,000
System development tools	Use of Visual Paradigm, WAMP server, and testing tools	50,000
Communication	Phone calls and online coordination among team members	30,000
Miscellaneous	Unforeseen expenses (e.g., flash disks, document scanning, Transport)	30,000
Total Estimated Cost		220,000 UGX

Appendix B: Interview Guide

Purpose:

To collect information from youth and employers through virtual consultations and online interviews about challenges in accessing employment and how a digital job portal can provide solutions.

Sample Interview Questions:

1. What are the common challenges youth face in searching for jobs?
2. How do employers currently share job opportunities online?

3. Would an online job portal make it easier for youth to access available jobs?
4. What key features do you expect from a job portal?
5. How can a digital job portal ensure credibility and trust between employers and applicants?

Appendix C: Relevant Document

1. Screenshots of the developed job portal prototype (Homepage, Login Page, and Application Page).
2. System design diagrams created using Visual Paradigm (ERD and Use Case Diagram).