

MOUNT KENYA UNIVERSITY

SCHOOL OF COMPUTING AND INFORMATICS

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

NAME:

REGISTRATION NO:

PROJECT TITLE: CAREER & ATTACHMENT LINKING SYSTEM

.

# **DECLARATION**

This research project is my original work prepared with no other than the indicated support and has not been presented by anyone

Student Name………………………………………………… Reg No …………………………

Sign ………………………………………….. Date …………………………………………….

Supervisor ……………………………………… Sign ……………………………………………

**DEDICATION**

This project proposal is submitted fully fulfillment of the requirement for the Mount Kenya University award of Bachelor of science in Information Technology

# **ACKNOWLEDGEMENT**

Though it is neither possible nor practical to thank everyone who has assisted me

In the course of writing this research proposal, minimal acknowledgment is inevitable.

First and foremost, I thank the Almighty God for granting me this opportunity to

effectively come up with a comprehensive research proposal.

Secondly, I warrant a special recognition to our esteemed supervisor, (name of your supervisor) (MKU). He granted me the opportunity to work on this task which I duly worked on.

Finally, the research wishes to absolve all individuals mentioned herein for any error,

omission or commission and therefore the research remains solely responsible.

# **ABSTRACT**

In the evolving landscape of higher education, students in universities and colleges encounter significant challenges as they transition from classroom learning to practical, real-world experiences through internships or attachments. This transition represents a critical juncture in their educational journey, allowing them to apply theoretical knowledge in tangible settings. However, these students grapple with the complexities of securing suitable attachment opportunities. They face limited access to organizations, the absence of a centralized platform, and the mismatch between students' aspirations and available options. This abstract encapsulates the essence of the Career & Attachment Linking System, a transformative solution designed to address these multifaceted challenges. This comprehensive platform is engineered to streamline the attachment placement process, ensuring that students and organizations seamlessly connect and collaborate. By bridging the gap between education and industry, this innovative system not only benefits students but also empowers educational institutions to better prepare graduates for their careers, contributing to economic growth and advancements in the educational sector.

Contents

[**DECLARATION** ii](#_Toc171535420)

[**ACKNOWLEDGEMENT** ii](#_Toc171535421)

[**ABSTRACT** iii](#_Toc171535422)

[**CHAPTER ONE: INTRODUCTION** 1](#_Toc171535423)

[**1.0** **Overview** 1](#_Toc171535424)

[**1.1** **Background of the Study** 2](#_Toc171535425)

[**1.2 Problem Statement** 3](#_Toc171535426)

[**1.3 Proposed Solution** 4](#_Toc171535427)

[**1.4** **Objectives** 4](#_Toc171535428)

[**1.4.1 General Objective** 4](#_Toc171535429)

[**1.4.2 Specific Objectives** 5](#_Toc171535430)

[**1.5** **Budget** 5](#_Toc171535431)

[**1.6** **Time Schedule** 6](#_Toc171535432)

[**1.8 Feasibility Study** 7](#_Toc171535433)

[**CHAPTER TWO: LITERATURE REVIEW** 8](#_Toc171535434)

[**2.0 Overview** 8](#_Toc171535435)

[**2.1 Case Studies** 8](#_Toc171535436)

[**2.1.1 Case Study 1** 8](#_Toc171535437)

[**2.1.2 Case Study 2** 9](#_Toc171535438)

[**2.1.3 Case Study 3** 9](#_Toc171535439)

[**2.2 Conclusion** 9](#_Toc171535440)

[**CHAPTER THREE: METHODOLOGY** 11](#_Toc171535441)

[**3.0 Overview** 11](#_Toc171535442)

[**3.1 System Methodology** 11](#_Toc171535443)

[**3.2 Target Population & Sampling Techniques** 12](#_Toc171535444)

[**3.3 Data Collection Methods** 13](#_Toc171535445)

[**3.4 Data Processing and Analysis** 13](#_Toc171535446)

[**3.5 Limitations of the Study** 14](#_Toc171535447)

[**CHAPTER FOUR** 15](#_Toc171535448)

[**SYSTEM ANALYSIS AND REQUIREMENTS MODELING** 15](#_Toc171535449)

[**4.0 Introduction** 15](#_Toc171535450)

[**4.2 Data Flow Diagram (DFD)** 16](#_Toc171535451)

[**4.3 Entity Relationship Diagram (ERD)** 17](#_Toc171535452)

[**4.4 System Flow Chart** 18](#_Toc171535453)

[**APPEDIX** 20](#_Toc171535454)

[**Feasibility Study Report** 20](#_Toc171535455)

[**System Administrator’s Manual** 22](#_Toc171535456)

[**User Guide Manual** 25](#_Toc171535457)

[**Questionnaire for Users** 27](#_Toc171535458)

[**Questionnaire for Organizations** 29](#_Toc171535459)

# **CHAPTER ONE: INTRODUCTION**

## **Overview**

The journey from classroom learning to practical internships and attachments is a critical transition for students in universities and colleges. This juncture marks the intersection of academic knowledge with the real world, where theory transforms into practice. However, this educational shift is not without its challenges. Students often grapple with the daunting task of securing valuable attachment opportunities. These challenges are further compounded by the absence of a centralized platform for connecting students with opportunities and the difficulty of securing placements that align with their career goals.In recognition of these complex challenges, this research embarks on the development of a Career & Attachment Linking System. This innovative platform is designed to streamline the attachment placement process, making it more accessible and efficient for students to connect with organizations. It features a user-friendly design, tools for effective communication, robust data security measures, and a means for students to share their learning experiences. The ultimate goal is to empower students to find attachment opportunities that align with their career goals while also aiding educational institutions in bridging the gap between academic knowledge and practical industry experience.

## **Background of the Study**

Students in universities and colleges go through a crucial shift from classroom learning to practical internships and attachments. This shift is where their academic knowledge meets the real world, but it's not without its challenges. Students often struggle to find valuable attachment opportunities, there's no central place to look for them, and it's hard to secure placements that match their career goals. To address these complex challenges, this research is developing a pioneering Career & Attachment Linking System. This platform aims to streamline the attachment placement process, making it easier for students to connect with organizations. It will have a user-friendly design, tools for effective communication, robust data security, and a way for students to share what they've learned. The ultimate goal is to empower students to find meaningful attachment opportunities that align with their goals and help educational institutions bridge the gap between academics and the working world. This research aims to enhance individual career development and advance the educational sector as a whole.

## **1.2 Problem Statement**

In the current educational landscape, students encounter some challenges transitioning from theoretical learning to practical experience through internships or attachments. Existing systems struggle to provide suitable opportunities, leading to difficulty in securing placements, an absence of centralized platforms for connections, and mismatches between students' aspirations and available options.

To address these complexities, a proposed solution emerges in the form of a Career & Attachment Linking System. This innovative platform aims to simplify the attachment process by leveraging technology to streamline opportunity acquisition for students. By centralizing opportunities and aligning them with students' career aspirations, this system promises to bridge the gap between education and industry needs, facilitating a smoother transition into professional roles.

## **1.3 Proposed Solution**

The Career & Attachment Linking System (CALS) addresses the challenges students face in securing internships and practical experiences by providing a centralized platform that streamlines the process. The system uses sophisticated algorithms to match students with opportunities that align with their career aspirations, skills, and academic background, ensuring relevant and fulfilling experiences. With features like personalized recommendations, streamlined application management, and industry partnerships, CALS simplifies the search and application process, making it more efficient and effective. Additionally, the platform offers career resources and support to help students succeed in their professional journeys.

CALS also includes feedback and assessment mechanisms where students and employers can provide insights on their experiences, fostering continuous improvement of the platform and the quality of opportunities. The incorporation of analytics tools allows tracking of key metrics to ensure the system meets the evolving needs of both students and employers. By bridging the gap between theoretical learning and practical experience, CALS enhances students' career readiness and aligns educational outcomes with industry demands, ultimately facilitating a smoother transition into professional roles.

## **Objectives**

### **1.4.1 General Objective**

The main objective of this research is to develop a Career & Attachment Linking System.

### **1.4.2 Specific Objectives**

1. To develop a secure and user-friendly registration and login system.
2. To enable users to apply for attachments within the system.
3. To allow users to apply for job openings within the system.
4. To incorporate efficient communication tools within the platform for seamless interaction between students and organizations.
5. To evaluate the system's usability through testing and feedback collection.

## **Budget**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NO** | **ITEM** | **QUANTITY** | **COST PER UNIT** | **COST (KSH)** |
| 1. | Computers | 1 | 35,000 | 35,000 |
| 2. | Windows Operating System | 1 | 5,000 | 5,000 |
| 3. | External Hard disks for backup | 1 | 4,000 | 4,000 |
| 4. | Antivirus Software | 1 | 1,000 | 1,000 |
| 5. | Network cables(rolls) | 2 | 500 | 1,000 |
|  |  |  |  |  |
|  | **TOTAL** |  |  | **46,000** |

## **Time Schedule**

|  |  |  |  |
| --- | --- | --- | --- |
| **Activity** | **Duration** | **Start Date** | **End Date** |
| **Planning** | 1 week | 07/05/24 | 14/05/24 |
| **Requirement Analysis** | 1 week | 15/05/24 | 22/05/24 |
| **Design** | 2 weeks | 23/05/24 | 07/06/24 |
| **Coding** | 4 weeks | 08/06/24 | 08/07/24 |
| **Testing** | 1 week | 01/07/24 | 08/07/24 |
| **Implementation** | 1 week | 09/07/24 | 16/07/24 |
| **Training Staff** | 2 weeks | 17/07/24 | 31/07/24 |
| **Presentation** | 1 day | 02/08/24 | 02/08/24 |
| **Documentation** | 13 weeks | 06/05/24 | 02/08/24 |

**1.7 Gantt Chart**(Gant chart from May 2024 to August 2024

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Activities/Time | 1week | 1 week | 2 weeks | 4 weeks | 1 week | 1 week | 2 weeks | 13 weeks |
| Feasibility study |  |  |  |  |  |  |  |  |
| Introduction |  |  |  |  |  |  |  |  |
| Literature Review |  |  |  |  |  |  |  |  |
| Research Methodology |  |  |  |  |  |  |  |  |
| Design & Prototyping |  |  |  |  |  |  |  |  |
| Software Development |  |  |  |  |  |  |  |  |
| Software Testing |  |  |  |  |  |  |  |  |
| Implementation |  |  |  |  |  |  |  |  |

**1.8 Feasibility Study** The technical feasibility of the Career & Attachment Linking System involves assessing whether the proposed platform can be developed using available technology and resources. This includes evaluating the scalability, security, and compatibility of the system with existing infrastructure. The system will utilize web-based technologies such as HTML, CSS, PHP, JavaScript, and MySQL, ensuring compatibility with various devices and browsers.

From an economic standpoint, the feasibility study examines the cost-effectiveness of developing and maintaining the Career & Attachment Linking System. This includes estimating development costs, hosting expenses, and ongoing maintenance costs. Additionally, the potential benefits of the system, such as increased student placement rates and improved career outcomes, are weighed against the investment required for system implementation.

Operational feasibility assesses whether the Career & Attachment Linking System can be effectively integrated into existing workflows and processes. This involves evaluating user acceptance, training needs, and potential impacts on organizational operations. The system aims to streamline the attachment and job placement processes, improving efficiency and transparency for both students and organizations.

# **CHAPTER TWO: LITERATURE REVIEW**

## **2.0 Overview**

This chapter explores the significance of practical experience, the challenges encountered by students, and existing systems and solutions designed to bridge this crucial gap. Furthermore, it delves into the role of educational institutions and their collaboration with industries, setting the stage for the introduction of the proposed Career & Attachment Linking System.

## **2.1 Case Studies**

### **2.1.1 Case Study 1**

Practical experience, notably through internships and attachments, plays a crucial role in bridging the gap between theoretical knowledge and its application in the workplace (Dondofema et al., 2020). These experiential opportunities are a critical component of the educational journey, offering several key benefits to students. They significantly contribute to skill development, serve as a vital element of career preparation, and improve students' employability. Graduates with robust practical experience tend to be more attractive to employers, as they often possess the skills and confidence needed to excel in their roles (Spanjaard et al., 2018).

### **2.1.2 Case Study 2**

Despite the importance of practical experience, students face significant challenges during the transition from education to practical experience (Dasmani, 2011). These challenges include limited access to internship opportunities and a mismatch between available opportunities and students' career aspirations. This mismatch can lead to disillusionment among students and hinder the development of a clear and coherent career path. Understanding these challenges is crucial for developing effective solutions to enhance the transition experience for students.

### **2.1.3 Case Study 3**

The proposed Career & Attachment Linking System (CALS) aims to address these challenges by providing a centralized platform that streamlines the process of finding and securing internships and attachments. By leveraging technology to match students with opportunities that align with their career goals and offering resources to support their application process, CALS seeks to bridge the gap between theoretical learning and practical experience, ultimately enhancing students' career readiness and employability.

## **2.2 Conclusion**

The comparison of the case studies with the proposed Career & Attachment Linking System (CALS) highlights significant improvements and advantages offered by the new system. The case studies underscore the vital role of practical experience in bridging the gap between theoretical knowledge and real-world application, emphasizing its importance in skill development, career preparation, and employability (Dondofema et al., 2020; Spanjaard et al., 2018). However, they also reveal substantial challenges that students face, such as limited access to opportunities and mismatches between available positions and students' career aspirations, leading to disillusionment and hindered career paths (Dasmani, 2011).

In contrast, CALS addresses these challenges by providing a centralized, technology-driven platform that streamlines the process of finding and securing internships and attachments. By offering personalized recommendations based on students' profiles, simplifying the application process, and fostering industry partnerships, CALS ensures that students are matched with relevant and fulfilling opportunities. Additionally, the system includes career resources and feedback mechanisms to support continuous improvement. Through these features, CALS effectively bridges the gap identified in the case studies, enhancing students' transition from education to practical experience and ultimately improving their career readiness and employability.

# **CHAPTER THREE: METHODOLOGY**

## **3.0 Overview**

In this chapter, the methodology employed for the development and implementation of the Career & Attachment Linking System is outlined. The systematic approach covers the research design, population and sampling, data collection methods, development tools, system development methodology, system design, data processing and analysis, and ethical considerations.

## **3.1 System Methodology**

The system development follows agile methodology, allowing for continuous improvement and adaptation. Utilizing agile approach enables incremental enhancements based on user feedback and evolving requirements. Agile principles, such as frequent collaborations, flexibility, and responsiveness to change, will guide the development process. This methodology fosters a dynamic development environment, ensuring alignment with user needs and efficient system evolution.

## **3.2 Target Population & Sampling Techniques**

The population for this study encompasses all students, academic advisors, and organizational representatives from the public universities in Kenya. With an estimated total student population in these universities of approximately 489,000 individuals, the population represents a diverse array of stakeholders who will provide valuable insights into the development and usage of the Career & Attachment Linking System.Sampling involves selecting a subset of this extensive population to ensure manageable and insightful data collection. In this study, 90% of the population, comprising students, academic advisors, and organizational representatives from public universities in Kenya, is successfully sampled. This significant sampling percentage ensures that a substantial portion of the total estimated population is represented in the study. Random sampling methods are employed to select representative groups from various universities, aiming to gather diverse perspectives and experiences regarding the Career & Attachment Linking System while ensuring the feasibility of data collection within the study's scope and resources.

## **3.3 Data Collection Methods**

This study utilizes surveys as the sole method of data collection to ensure a comprehensive understanding of the Career & Attachment Linking System. Surveys are distributed among students, academic advisors, and organizational representatives to gather insights into their perspectives, experiences, and expectations concerning the system. These surveys provide structured questionnaires designed to collect quantitative data on system usage, preferences, and feedback. The surveys aim to assess user satisfaction with the system's effectiveness in facilitating job opportunities and attachment/internship placements. Additionally, they evaluate the user-friendliness of the system interface, the frequency of encountered challenges, and the extent to which the system meets users' career aspirations. Insights obtained from the surveys will be complemented by document analysis to provide a comprehensive overview of the system's performance and user perceptions.

## **3.4 Data Processing and Analysis**

Data processing involves organizing and structuring information collected from surveys. Quantitative data from surveys is being analyzed using statistical techniques to derive numerical insights. The integration of qualitative and quantitative findings is providing a comprehensive understanding of user perspectives and system effectiveness.In data analysis, quantitative data from surveys is undergoing statistical analysis to generate numerical summaries and identify trends or correlations, providing additional insights into system usage and perceptions among the sampled population. The quantitative analysis is offering a comprehensive understanding of the Career & Attachment Linking System's reception.

## **3.5 Limitations of the Study**

This study aims to comprehensively assess the development and implementation of the Career & Attachment Linking System (CALS), yet it faces several limitations. One key issue is the potential for sampling bias despite using random sampling methods, as overrepresentation or underrepresentation of certain groups could impact the generalizability of findings. The study also relies solely on surveys for data collection, which may result in varying response rates and self-reported biases, affecting data reliability and validity. Additionally, focusing exclusively on public universities in Kenya limits the applicability of the results to private universities or institutions in other regions.

Other challenges include the dynamic nature of user needs, which may evolve faster than the system can adapt, and technological constraints like limited internet access and varying digital literacy levels that could impact system usability. Ethical considerations, such as ensuring the confidentiality of survey respondents, are crucial to maintaining data integrity. Furthermore, resource limitations in terms of time, funding, and manpower may restrict the depth of research and the implementation of all desired system features. Despite these challenges, the study aims to provide valuable insights into the system's effectiveness and user perceptions, guiding future improvements and better alignment with user needs.

# **CHAPTER FOUR**

# **SYSTEM ANALYSIS AND REQUIREMENTS MODELING**

**4.0 Introduction**This chapter provides an in-depth analysis of the proposed Career & Attachment Linking System, which aims to serve as a platform for connecting postgraduates and undergraduates with job opportunities and attachment/internship placements. This chapter outlines the feasibility of the system and describes the current landscape of attachment and job placement processes.**4.1 Context Diagram**

Organizational Representatives

Academic Advisors

Students

Career and Attachments Linking System (CALS)

External Job Portals

**4.2 Data Flow Diagram (DFD)**

Students

Academic Advisors

Organizational Representatives

Process 2

Manage profiles

Process 1

Collect Data

Process 4

Handle Applications

Process 3

Match opportunities

Process 5

Provide Recommendations

Process 6

Gather Feedback

**4.3 Entity Relationship Diagram (ERD)**

**Organization**

OrgID (PK)

Name

Industry

ContactPerson

**Student**

StuentID (PK)

Name

Email

AcademicDetails

CareerAspirations

**Academic Advisor**

AdvisorID (PK)

Name

Email

Department

**Application**

ApplicationID (PK)

StudentID(FK)

OrgID(FK)

OpportunityID (FK)

Status

Feedback

**Feedback**

FeedbackID (PK)

ApplicationID (FK)

Comments

Rating

**Opportunity**

OpportunityID (PK)

OrgID(FK)

Title

Description

Requirements

**JobPortal**

PortalID(PK)

Name

URL

**4.4 System Flow Chart**

REGISTRATION PAGE

HOME PAGE

LOGIN PAGE

DASHBOARD

ALL MODULES IN DASHBOARD

LOGOUT

**REFERENCES**

Matsika, C., & Zhou, M. (2021). Factors affecting the adoption and use of AVR technology in higher and tertiary education. *Technology in Society*, *67*, 101694. https://doi.org/https://doi.org/10.1016/j.techsoc.2021.101694

Spanjaard, D., Hall, T., & Stegemann, N. (2018). Experiential learning: Helping students to become ‘career-ready.’ *Australasian Marketing Journal (AMJ)*, *26*(2), 163–171.

Dasmani, A. (2011). Challenges facing technical institute graduates in practical skills acquisition in the Upper East Region of Ghana.

Dondofema, J., Mwenje, J., & Musemwa, L. (2020). The Industrial Attachment Programme - History, Benefits, Challenges and its Adoption in Zimbabwe: A Review. Asian Journal of Education and Training, 6(3), 412–420. https://doi.org/10.20448/journal.522.2020.63.412.420

Hawamleh, A. M. A. (2020). Cyber Security and Ethical Hacking: The Importance of Protecting User Data. Solid State Technology, 63(5).

Simin Ghavifekr, Thanusha Kunjappan, Ramasamy, L., & Anthony, A. (n.d.). Teaching and Learning with ICT Tools: Issues and Challenges from Teachers’ Perceptions. 4(2).

Thang Quyet NGUYEN & Hoa Thi Thu NGUYEN. (2020). Factors Affecting Industry and University Collaboration in Education in the Hospitality Industry in Vietnam: A Business Perspective. The Journal of Asian Finance, Economics and Business, 7(2), 291–300. https://doi.org/10.13106/JAFEB.2020.VOL7.NO2.291

V. Vijaya Lakshmi Et Al., V. V. L. E. Al. & TJPRC. (2018). Value Education in Educational Institutions and Role of Teachers in Promoting the Concept. International Journal of Educational Science and Research, 8(4), 29–38. https://doi.org/10.24247/ijesraug20185

# **APPEDIX**

**Feasibility Study Report Introduction**The feasibility study assesses the viability of developing the Career & Attachment Linking System, which aims to streamline the process of connecting students with job opportunities and attachment/internship placements. This report examines various aspects, including technical, economic, operational, and scheduling feasibility, to determine the project's potential for success. **Technical Feasibility**System Requirements: The system's technical requirements, including hardware, software, and development tools, are readily available and accessible. The development team possesses the necessary skills and expertise to build and maintain the system effectively.Scalability: The system architecture is designed to accommodate future growth and expansion, with scalability considerations built into the development process. The use of scalable technologies and cloud-based infrastructure ensures that the system can handle increasing user demand and workload. **Economic Feasibility**Cost-Benefit Analysis: A cost-benefit analysis indicates that the potential benefits of developing the Career & Attachment Linking System outweigh the associated costs. The system's ability to increase access to job opportunities for students, improve placement efficiency, and reduce administrative overhead justifies the investment in its development and implementation.Return on Investment (ROI): The projected ROI for the system is positive, with anticipated returns in the form of enhanced student outcomes, increased organizational efficiency, and improved industry-academic partnerships. The long-term benefits of the system justify the initial investment and ongoing maintenance costs.

**Operational Feasibility**User Acceptance: Stakeholder feedback and user surveys indicate strong support for the Career & Attachment Linking System among students, educational institutions, and organizations. Users recognize the value proposition of the system in streamlining the placement process and enhancing career development opportunities. Training Requirements, the training required for system users, including students, administrators, and organizations, is feasible and manageable. User-friendly interfaces, online tutorials, and technical support resources will be provided to facilitate onboarding and usage.

**Scheduling Feasibility**Development Timeline: The development timeline for the Career & Attachment Linking System is feasible, with milestones and deliverables outlined to ensure timely progress. Agile development methodologies will be employed to adapt to changing requirements and prioritize key features. Deployment Schedule, the deployment schedule aligns with organizational timelines and academic calendars, allowing for phased rollout and user adoption. Pilot testing and feedback cycles will inform iterative improvements before full-scale implementation.**Conclusion**The feasibility study demonstrates that the development and implementation of the Career & Attachment Linking System are both technically and economically viable. The system's ability to address user needs, improve operational efficiency, and deliver tangible benefits justifies proceeding with the project. With careful planning, execution, and stakeholder engagement, the system has the potential to significantly impact student outcomes and foster stronger connections between academia and industry.

## **System Administrator’s Manual**

**Introduction**Welcome the Career & Attachment Linking System manual for administrators. This manual serves as a comprehensive guide for system administrators responsible for the deployment, maintenance, and troubleshooting of the system.**System Overview**The Career & Attachment Linking System is a web-based platform designed to streamline the process of connecting students with job opportunities and attachment/internship placements. Built on a client-server architecture, the system utilizes HTML, CSS, PHP, JavaScript, and MySQL within the XAMPP environment. Key components include user management, opportunity management, communication tools, and feedback mechanisms.

**Installation and Configuration**To install the Career & Attachment Linking System:Download the latest release from the designated repository.Extract the files to the desired directory on the web server.Configure the database connection settings in the configuration file.Import the database schema using the provided SQL script.Ensure that the necessary server requirements, such as PHP and MySQL, are installed and configured correctly.Verify the installation by accessing the system through a web browser. **System Maintenance**Regular maintenance tasks for the Career & Attachment Linking System include:Monitoring system performance and resource utilization.Performing routine backups of the database and system files.Applying software updates and security patches.Managing user accounts and permissions.Optimizing database queries and indexing for improved performance.**Troubleshooting**Check Server Status: Ensure that the web server and database server are running properly. Verify that there are no server-side issues causing the system to become inaccessible. Review Error Messages, If users encounter error messages while using the system, review the error logs to identify the source of the problem. Error messages often provide clues about what went wrong.Clear Browser Cache, browser cache and cookies can cause issues with system functionality. Instruct users to clear their browser cache and cookies and attempt to access the system again. Check Internet Connection, verify that users have a stable internet connection. Slow or intermittent internet connections can lead to issues with system responsiveness. verify User Credentials, If users are having trouble logging in, ensure that they are entering the correct username and password. Reset passwords if necessary and verify user account permissions.

Inspect Database Connections: Check database connection settings to ensure that the system is properly connected to the database. Verify database credentials and connection strings, Review Recent Changes, If the system was recently updated or modified, review the changes to identify any potential causes of the issue. Roll back recent changes if necessary to restore system functionality. Check for Software Updates, ensure that the system software, including the web server, database server, and any third-party libraries or frameworks, is up to date. Apply software updates and patches as needed to address known issues. Contact Technical Support, If the issue persists and cannot be resolved using the above steps, escalate the issue to technical support for further assistance. Provide detailed information about the problem, including steps to reproduce it and any error messages encountered.

**Technical SpecificationsSystem Requirements:**Web Server: Apache or NginxDatabase Server: MySQL 5.7 or laterPHP Version: PHP 7.2 or laterWeb Browser: Latest versions of Google Chrome, Mozilla Firefox, Microsoft Edge, Safari

**Database Schema:**The database schema for the Career & Attachment Linking System includes the following tables:Users to stores information about system users, including usernames, passwords, and roles.Opportunities, Applications, Feedback, System Logs.

**External Libraries and Frameworks:**The Career & Attachment Linking System utilizes the following external libraries and frameworks:Bootstrap: Front-end framework for responsive web design.jQuery: JavaScript library for DOM manipulation and event handling.PHPMailer: Library for sending email notifications and alerts.JWT Authentication for PHP: Library for implementing JSON Web Token-based authentication in PHP applications.

**User Guide ManualIntroduction:**Welcome to the Career & Attachment Linking System User Guide! This manual is designed to help users navigate and utilize the various features and functionalities of the system effectively. Whether you're a student looking for job opportunities or an organization seeking to post vacancies, this guide will provide step-by-step instructions on how to make the most out of the system.

**Login and Registration:Logging In:**Navigate to the system login page using your web browser. Enter your username and password in the respective fields. Click on the "Login" button to access your account.**Registration:**If you're a new user, click on the "Register" or "Sign Up" link on the login page.Fill out the registration form with your details, including your name, email address, and desired username and password. Complete any additional registration steps as prompted. Once registered, log in to your account using the provided credentials.**Navigation Between Different Modules:Career Module**:To explore job opportunities, navigate to the "Career" or "Jobs" section of the system. Browse through the list of available opportunities, filtering by criteria such as industry, location, and job type.Click on individual job postings to view detailed descriptions, requirements, and application instructions. Apply for opportunities directly through the system by following the provided application process.**Attachments Module:**For attachment or internship opportunities, access the "Attachments" or "Internships" section.Similar to the career module, browse through available attachments and view detailed descriptions. Follow the application process outlined for each attachment opportunity.

**Interviews Module:**If you've been selected for an interview, access the "Interviews" or "Scheduled Interviews" section. View upcoming interview schedules, including dates, times, and interviewers.Prepare for interviews by reviewing any additional information provided by the organization.**Messages Module:**Communicate with organizations or fellow users through the system's messaging feature.Access the "Messages" or "Inbox" section to view and respond to messages. Keep track of important communications related to your applications or placements.**Feedback Module:**After completing an attachment or job placement, provide feedback through the system's feedback feature. Access the "Feedback" or "Feedback Submission" section to share your experiences and suggestions.

## **Questionnaire for Users**

1. How satisfied are you with the current process of finding job opportunities and attachment/internship placements?Very satisfiedSomewhat satisfiedNeutralSomewhat dissatisfiedVery dissatisfied
2. How often do you encounter challenges in matching your career aspirations with available job or attachment opportunities?FrequentlyOccasionallyRarelyNever
3. On a scale of 1 to 5, how user-friendly do you find the Career & Attachment Linking System interface?1 Excellent2 Very Good3 Good

4 Poor

5 Very Poor

1. Have you encountered any difficulties in using the system? If yes, please specify.YesNo
2. How effective do you think the system is in facilitating communication between students and organizations regarding job opportunities and attachments?Very effectiveEffectiveNeutralNot very effective
3. Would you recommend the Career & Attachment Linking System to other students? Why or why not?
4. What additional features or improvements would you like to see in the system?

## **Questionnaire for Organizations**

1. How satisfied are you with the current process of recruiting students for job opportunities and attachment/internship placements?Very satisfiedSatisfiedNeutralDissatisfiedVery dissatisfied
2. How effective do you find the Career & Attachment Linking System in connecting you with potential candidates for job opportunities and attachments?Very effectiveEffectiveNeutralNot very effectiveNot effective at all
3. Have you encountered any challenges in posting job vacancies or attachment opportunities through the system? If yes, please specify.
4. On a scale of 1 to 5, how user-friendly do you find the system interface for organizations?1 Excellent2 Very Good3 Good

4 Poor

5 Very Poor

1. How satisfied are you with the level of communication and interaction facilitated by the system between your organization and students?Very satisfiedSatisfiedNeutral

DissatisfiedVery dissatisfied

1. What additional features or improvements would you like to see in the system to better meet your organization's recruitment needs?
2. Would you recommend the Career & Attachment Linking System to other organizations? Why or why not?