CHAPTER ONE

**Introduction**

1.1. Background of the Organization

Ambo is a vibrant city in Ethiopia, serving as the capital of the West Shewa Zone in the Oromia Regional State. Located just 112 km west of Addis Ababa, it has a population of around 50,000 and is known for its pleasant, livable climate.

Ambo University, founded in 1947 (1939 E.C.), has grown significantly over the years and now includes multiple colleges and departments. Like many universities across Ethiopia, it requires students to complete internships as part of their academic programs. As a result, the demand for internship opportunities in companies and organizations continues to rise, both in Ambo and nationwide.How can they get it? One of the most inconvenient situations for students. Since internship is supervised how the advisor or supervisor visits or know how the students follow their training?

In the current system it’s impossible to follow the students during their internship unless they visit them physically which requires the highest transportation cost as students take their intern in area near to their home. Another thing is during intern everything is manual or paperwork. Like evaluation of students, sending request papers, generating reports or result. If there is damage to the hard copy of the documents the internship is valueless. So that we intend to develop a system that solves such problems named as Internship and career management system (ICMS).

An internshipis a professional learning experience that offers meaningful, practical work.

related to a student’s field of study or career interest. An internship gives a student the

opportunity for career exploration and development, and to learn new skills. It offers the

employer the opportunity to bring new ideas and energy into the workplace, develop talent and

potentially build a pipeline for future full-time employees. Internships are supervised and structured learning experiences in a professional setting that allow you to gain valuable work experience in a student’s chosen field of study. Internships require a minimum of 120 hours (typically, at least 10 hours per week during the fall and spring and either part-time or full-time during the summer).

Internship management system (IMS) is a comprehensive tool for coordinating an internship.

class with the goal of facilitating continuous communication between the instructor and the

student. By using IMS. Students save a lot of time as they can communicate electronically with

the instructor. A student wishing to take an internship class can access the system for getting.

information on companies having internship programs. The system also allows students to

electronically submit proposal to the advisor of their choice.

An advisor could add and modify company information as well as view all the students they are advising for the internship. Advisories also notified when a new student submits a proposal, and the advisor has a choice of accepting or rejecting it. The advisor can update the progress of a student and students after successfully signing into the system, can view their progress and email the advisor should any questions arise. The administrator would be a caretaker of the entire system responsible for important tasks of backing up the database and restoring an archived database if needed. Administrator is the only one who can add faculty members to the system. All users of the system can update their personal information like password, email address and phone number.

Career management system (CMS)applying only for jobs. Students attach all required.

criteria for job position to company then the company sent the confirmation of selection. This

project shall enable the university students to apply for internship programs also for career.

Through this interface the students shall be able to view the available positions for internship and

job. That our paper is do both systems for providing internship and career management system for students and for every person.

1.2. Statement of the Problem and Justification

Ambo University, which was established around 1939 E.C (1947 G.C) now have several colleges and departments in which the number of students taking internships for their fulfillment of their courses are increasing as well as throughout the country. Students at Ambo University submit their internship applications manually since there is no specific interface or system to do so. As the data we have shows the applications are submitted manually, requiring a lot of staff to sort out the information. During the internship, students must document their daily activities in a report and their performance is manually evaluated by university advisors. The abundant documentation that goes into this increases operational costs for university*.* The manual reporting and evaluation processes also complicate the experience. Advisors are also unable to meet with students on a frequent basis due to logistical constraints, and students must report on their daily activities by hand, which is ineffective and time-consuming.

In addition to these issues, there are individual challenges for students. Most students lack any information about what internships are, how they are conducted, and what areas are suitable for their field of study. This lack of information makes it difficult for students to secure suitable opportunities. Even if students can locate internships, it is difficult for them to identify areas that can provide quality training and mentorship.

These inefficiencies clearly show the need for an automated system to streamline the internship and career management process.

1.3. Objective of the Project

1.3.1. General Objective

The general objective of this project is to develop an automated web-based system for managing internships, career opportunities, and communication between students, faculty, and employers

1.3.2. Specific Objectives

 To build a secure database for storing student records, company info, and application data.

 To develop a user-friendly web system for student registration and internship/job applications.

 To simplify the application process by enabling companies to post positions and manage candidates.

 To enable file sharing and feedback between students, faculty, and company supervisors.

 To support communication through attachments, notifications, and status updates.

 To provide admin tools for managing accounts and posting announcements.

1.4 Methodology

1.4.1 Requirement Gathering method

The following primary and secondary methods of data collection are used.

Interview: - Interviews of stakeholders and users are critical to creating the great software. Without understanding the goals and expectations of the users and stakeholders, we are very unlikely to satisfy them. We also must recognize the perspective of each interviewee, so that we can properly weigh and address their inputs. Listening is the skill that helps a great analyst to get more value from an interview than an average analyst.

Firstly, we interviewed the Head of Computer Science of Ambo university. And also Coordinator of industrial linkage office gave us some information about students, Rules of internship like, duration of intern program, how students apply for intern and how they are assigned.

**Observation:** -we observed the total process of how students assigned for intern program as we are the parts of the program last year.

**Document analysis:** - we also collected information about the way students assigned to intern. Also, we review guidelines for internship programs.

1.4.2 Requirement Modelling

We use Object-Oriented methodology because of the reasons that it implements the concept of Object-Oriented Programming (OOP), inheritance, encapsulation and polymorphism; the ability to challenging the problem domains; to make simple communication among users, analysts, designers and programmers.

The reasons that we use the object-oriented approach are:

* These techniques have a reusability feature.
* These techniques provide greater opportunities for users to participate in the development process.
* This increases flexibility.
* This also improved quality.
* We can inherit properties of the class that are defined in the super class.
* We can reuse methods to avoid redundancy.
* The data and functions are encapsulated in objects that help us with easily debugging purpose.
* Modification of the object implementation is easy.
* Understanding the structure is easy because object-oriented modelling represents real world entities.
* Direct manipulation of architectural components is possible because several object-oriented programming languages exist.

1.5. Tools

| Hardware Tools |  |  | Software Tools |
| --- | --- | --- | --- |
| - Server (for data storage, request handling, and response generation) |  |  | Application Requirements: - Web browsers supporting Groovy/JavaScript (Maxthon, Firefox, Chrome) - OS compatibility: UNIX, Linux, Windows, Mac |
| - User devices: - Android smartphones - Computers (Windows/Mac/Linux) |  |  | External APIs: - MySQL API (for database communication) |
|  |  |  | Development Environment: - OS: Windows - IDEs: Notepad++, Sublime Text - Design tool: Microsoft Visio - Programming language: PHP |

1.6. Scope and Limitation

1.6.1 Scope of the project

This project focuses on designing and implementing web-based internship management.

system for Ambo University to provide a university with a friendly set of webs pages that are

easy to navigate and at the same time provides sufficient depth and information about the system

and how it works. By using this system, students will perform online registration process in order

to get the application letter from the coordinator. Since the process can be done anytime and

anywhere, students can save their time. They can focus on their lessons instead Spending huge

amount of time with internship application matters.

The project will cover the following activities:

✓ Allows students to apply online for intern

✓ Allows Students only to apply career.

✓ Allows companies to post their intern positions

✓ Manage all users of the system.

✓ Report of every activity during training.

✓ Sending the notification system via e-mail to both students, company supervisor and

Administrator

1.6.2 Limitation of the project

The project cannot provide the following functionality:

* Our system can’t provide online interviews and payment process
* Our system can’t provide other languages (i.e., our system will be developed by English language).
* Our system does not help visually impaired people
* Our system does not work only for Ambo university students only

1.7 Significance of the Project

Now a days we are living in an information age, so everything has changed from the manual

system to automated system, which makes everything simple, interactive, time saving and

requires less storage space for allocating resources. The manual system has so many drawbacks

like as in above expressed. So, automating the system has significance like: -

✓ To save time and resources needed.

✓ To easily manage and control the system.

✓ Reduce the problem facing the student when taking an internship and requires job.

✓ This automated system reduces the load from the advisor and enables access to

information easily about the host organization and the student taking internship.

✓ To provide immediate and updated information for the users.

✓ To store individual information and manage information permanently.

✓ To have an effective and efficient operations for the organization to the user.

**Target Beneficiaries & Their Benefits**

1. Ambo University

Tangible Benefits:

* Cost Savings: Reduces expenses on paper, printing, and manual documentation
* Operational Efficiency: Automates internship processes to reduce administrative workload

Intangible Benefits:

* Enhanced Reputation: Projects modern image through digital internship platform
* Improved Productivity: Streamlines workflows for staff and faculty advisors

2. Companies (Internship Providers)

Tangible Benefits:

* Lower Recruitment Expenses: Saves time and resources through digital intern selection

Intangible Benefits:

* Better Talent Access: Easily connects with qualified Ambo University students
* Improved Employer Branding: Enhances perception as tech-savvy organization

3. Faculty Advisors

Tangible Benefits:

* Time Savings: Automates student allocation/deallocation and performance tracking
* Reduced Paperwork: Digital submissions replace manual report handling

Intangible Benefits:

* Improved Mentorship: Enables communication with students/companies
* Job Satisfaction: Simplifies supervision tasks

4. Students

Tangible Benefits:

* Cost Savings: Eliminates transportation and printing expenses
* Convenience: Apply for internships anytime without physical visits

Intangible Benefits:

* Career Readiness: Improves employability through timely opportunities
* Confidence & Trust: Secure system enhances user satisfaction
* Skill Development: Prepares for modern workplaces through digital experience

5. Project Developers

Tangible Benefits:

* Financial Gain: Potential earnings from implementation/maintenance

Intangible Benefits:

* Skill Enhancement: Gains technical and project management expertise
* Reputation Boost: Recognition for developing an impactful university systemin the morale of our team.

1.8 Feasibility

The aim of our project is to objectively and really uncover the strength and weaknesses of the existing business or proposed opportunities and threats as presented by the environment

resources required or materials and any information or experience to the management of

internship.

As much as the university communicates by English language, this project will work in English

language only. So, we don’t have to use Cross Natural language and Speech Synthesizing (sound) machine. Therefore, it is feasible.

***Benefits after implementation:***

**Economic Feasibility**

❖ The system to be developed is economically feasible and the benefit outweighs the

cost. Since this project already computerizes the existing system, by now the reduction of

cost for materials used in manual operation becomes beneficiary to the organization.

**Political Feasibility**

Political feasibility is a measure of how well a solution to a policy problem, will be accepted by a

set of decision makers and the public. For a policy to be enacted and implemented, it

must be politically acceptable, or feasible. So, the developed system is protected by law not

duplicated without the permission of the developed team and not re-med it.

**Technical Feasibility:**

The system developers understand the scope, objectives including specific objectives and

limitations of the proposed system well and the users have technical capability to use this system.

As a result, they develop the website for internship and career successfully within proposed

resources (budget, time, etc.), so the project is technically feasible. Maybe these Risks may occur

Financial Risk, Technical Risk, and Security Risk

**Technology risks**: If the platform requirement is not fulfilled then maybe the system fails to

execute/ System crash

**Security risk**: Where unauthorized personnel may gain access to the system where they may

violate data confidentiality, integrity, and availability

**User risk**: Lack of user knowledge to use the system

**Estimation risk**: Budget imbalance

**Time Feasibility:**

✓ Our project to prepare or complete in each time of period property using some

methods like payback period (I.e., is concerned method of analysis with serious

limitations and qualifications for its use).

✓ Project team will develop the new system in the given period for the

industrial project.

**Operational feasibility:**

The new system can provide sufficient service for the students, there was bulky process in

giving service in manual processing like, the student or intern's candidate need to fill a paper

form and need to submit it by hand to the office. During the training, candidates need to

keep update in the training by writing it and paste any attachment in the schedule book. Finally,

progress of the training in the schedule book will be examined by supervisor in company every

week, and by university supervisor at the end of the training by writing it in the schedule book. This implies that the students cannot be satisfied with the service of finishing the internship process. But this proposed system is automated consequently the student can get sufficient service meaning that facilitates the process that saves student’s time. The system is operationally feasible as it quite easy for the End users to operate it. It only needs basic information about Windows platform.

1.9. Risk Assessment

Risk assessment is a critical part of the project planning process. It involves identifying potential risks that could impact the successful completion of the project and developing strategies to mitigate or manage those risks. Below is a detailed risk assessment for the Web-Based Internship and Career Management System (ICMS):

Technical Risks:

Risk: System failure due to inadequate server capacity or software compatibility.

Mitigation: Conduct rigorous load testing and compatibility with multiple browsers and operating systems.

Security Risks:

Risk: Insecure access to sensitive student or company data.

Mitigation: Implement encryption, secure authentication mechanisms, and security audits conducted on a regular basis.

User Adoption Risks

Risk: User resistance (students, instructors, businesses) because of unfamiliarity with the system.

Mitigation: Provide thorough training sessions and user-friendly documentation.

Budget and Timeline Risks:

Risk: Delays in development or unexpected expenses due to scope creep.

Mitigation: Remain committed to Agile methodologies, prioritize core functionalities, and maintain close budget oversight.

Internet Dependency:

Risk: System non-availability in low-internet areas.

Mitigation: Provide offline functionality for form submission and synchronize data upon connectivity return.

Data Loss Risks

Risk: Corruption or loss of valuable internship/career application information.

Mitigation: Provide automated daily backups and cloud-based redundancy.

**1.10 Work Breakdown Structure (WBS)**

