



**Wollo University**  
**Kombolcha Institute of Technology (KIOT)**  
**College of Informatics**  
**Department of Software Engineering**  
**Internship Report**

**Project Title: Employee Management System**

**Hosting Company: Amhara science and technology communication comision**

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**Submission Date: 11/02/2017**

**Declaration**

I hereby declare that this internship report is my original work and has not been submitted for any other academic purpose. The information presented in this report accurately reflects my experiences and learning during the internship. I take full responsibility for any errors or omissions and confirm that all sources of information have been properly cited.

**Approved By****Advisor Name**

1. Mr.Bihoneg

**Signature**

## Acknowledgments

I would like to express my heartfelt gratitude to several individuals and organizations that contributed to my successful internship experience.

First and foremost, I would like to thank my internship advisor, [mr.leul], for their invaluable guidance and support. Their expertise and constructive feedback helped me navigate the challenges of web development and significantly improved my skills.

I am also grateful to my colleagues at [mr.bihonegh], who provided a collaborative and encouraging environment. Their willingness to share knowledge and assist with problem-solving greatly enhanced my learning experience. Special thanks to [mr.bihonegh] for their mentorship during the projects, and for always being available to answer my questions.

Additionally, I would like to acknowledge the resources provided by Wollo University, which included access to valuable training materials, comprehensive documentation, and various tools that greatly facilitated my learning experience.

## Executive Summary

As a software engineering student, I have acquired a substantial amount of theoretical knowledge throughout my academic journey. However, I recognize that this theoretical foundation must be complemented by practical application to effectively contribute to the development of technology-driven solutions. The primary objective of my internship was to bridge the gap between classroom learning and real-world experience, enabling me to excel in the well-established field of Information Technology.

This report outlines my internship experiences over three months, during which I actively contributed to the company's objectives by applying the knowledge I gained during my studies. This included key aspects of software development such as requirements engineering, both fundamental and advanced software engineering principles, as well as programming languages like HTML, CSS, and JavaScript. Additionally, I had the opportunity to learn new frameworks, including php and Bootstrap.

This report provides a comprehensive account of my training at the ASTCC, including a brief history of the organization, its mission, vision, objectives, and overall structure. Writing this internship report allows me to reflect on my daily activities, document my experiences, and highlight the skills I developed.

These skills encompass practical abilities, theoretical knowledge, interpersonal communication, teamwork, and leadership—all of which were significantly enhanced through this enriching experience.



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## Acronyms

ASTCC	Amhara science and technology communication commission
FD	For Development
HTML	Hyper Text Markup Language
CSS	Cascading Style Sheet
API	Application Programming Interface
HTTP	Hyper Text Transfer Protocol



## CHAPTER ONE

### Introduction

#### 1.1 Background

ASTCC found in Bahir Dar city, which is established in 2011. The aim of the center is to foster the development of the nation by conducting information and developing ICT related projects. The center incorporates five major research groups which are e-service, Intelligent systems, wireless and mobile communication, Natural language Processing as well as privacy and security. The information center also has a training coordinator that is responsible to facilitating various trainings that are delivered in collaboration with national and international companies. ASTCC has conducted successfully three international conferences named International Conference on ICT for development Africa. The papers accepted are published on Springer and IEEE. The center has also done many community services, conducted various seminars, offered trainings and performed consultancy services.

#### Main Activities

- **Conducting Applied Researches:** The center carries high-quality applied researches with impact to society, market, demonstrating in a practical way the added value of research through the creation of systems, experimental validation, industrial applications, and social impact. The center has produced more than 30 publications.
- **Organize International Annual Conference:**
- **Provide Trainings:** various trainings in collaboration with Microsoft, Targeted Technology Institute (USA), League of Ethiopian Academics and Professionals (USA), and other local training are being given. We are also arranging an international exam center and training laboratory.
- **Other Activities:** community service, technology transfer and consultancy service activities are some other activities the research center is engaged.

## 1.2 Mission and Vision

### 1.2.1 Vision

The vision of the Amahara Science and Technology Communication Commission is that in the year of 2024, the life of the region society will be supported by science, technology and information communication.

### 1.2.2 Mission

The mission of the Amahara Science and Technology Communication Commission is finding, creating, selecting and adapting effective technology.

### Core values

- **Innovation:** Generate new idea and pursue a creative approach to get it implemented, and encourage others to be creative.
- **Excellence:** Meet high standards of performance and strive to exceed goals.
- **Professionalism:** Maintain confidentiality, speak truthfully and constructively, and work to find solutions rather than complain.
- **Integrity:** act with the quality of being honest and with strong moral principles
- **Accountability:** University staff performing duties in an accountable manner and taking full responsibility for actions and decisions they take thereof.
- **Team work:** Build a wide network of relationships throughout the programs, schools, institutes, and colleges of the university. Contribute fully to the activities of the team, and share information and resources within the team.
- **Work with Others:** Work with different stakeholders in a close relationship to serve the community.

## **Chapter two**

### **Internship Experience**

#### **2.1 Objective of internship**

The three-month internship program encompasses both general and specific objectives, aimed at enhancing the practical knowledge of the intern. These objectives are designed to provide a comprehensive learning experience that bridges theoretical concepts with real-world applications.

#### **2.2 General objective**

The primary objective of my three-month internship is to apply the theoretical knowledge I have gained during my four years of study in a practical work environment. I aim to understand the dynamics of the workplace, enhance my communication skills with colleagues and staff, and collaborate effectively with others while grasping professional ethics. Additionally, this internship will connect me with potential employers and allow me to explore the diverse career opportunities available within the hosting company.

#### **2.3 Specific objective**

The Specific objective of this internship program is to acquire and demonstrate competencies expected in a professional managerial environment such as: -

- Creating interrelation and interdependence to the internship organization.
- Developing communication, cooperativeness and team-work skills.
- Create beneficial atmosphere to assess professional qualification.
- Increase productivity of students.
- To acquire practical skill from the industry.
- Create a means to transfer knowledge and technology to the industry.
- Students get opportunity to see the real problem of industry so that they can find a solution.

## 2.4 To Amahar science and technology communication commision

I get entering this opportunity through my own efforts, as my department encourages us to seek out internships for three months. I chose the Amahar science and technology communication commision because I had heard it was an excellent place for an internship program.

## 2.5 Work Section

As I previously mentioned, my host company has various core processes. I am part of the system development and administration core process, which includes the following activities:

- System development and administration
- Database administration
- Network installation
- Project monitoring and evaluation

## 2.6 Work Tasks

### 2.6.1 Week 1-2: Learning Bootstrap and Understanding Bootstrap

During the first two weeks, I focused on learning Bootstrap, a popular front-end framework that facilitates responsive web design. Bootstrap offers a grid system, pre-designed components, and utilities that simplify the development process.

#### Application of Bootstrap

To solidify my understanding, I worked on a simple project that incorporated various Bootstrap elements. The project included:

- **Navigation Bar:** A responsive navigation bar that adjusts based on screen size.
- **Testimonials Section:** A dedicated area showcasing user testimonials with styled cards.
- **Contact Form:** A user-friendly contact form that utilized Bootstrap's form components.
- **Footer:** A footer containing essential links and information.



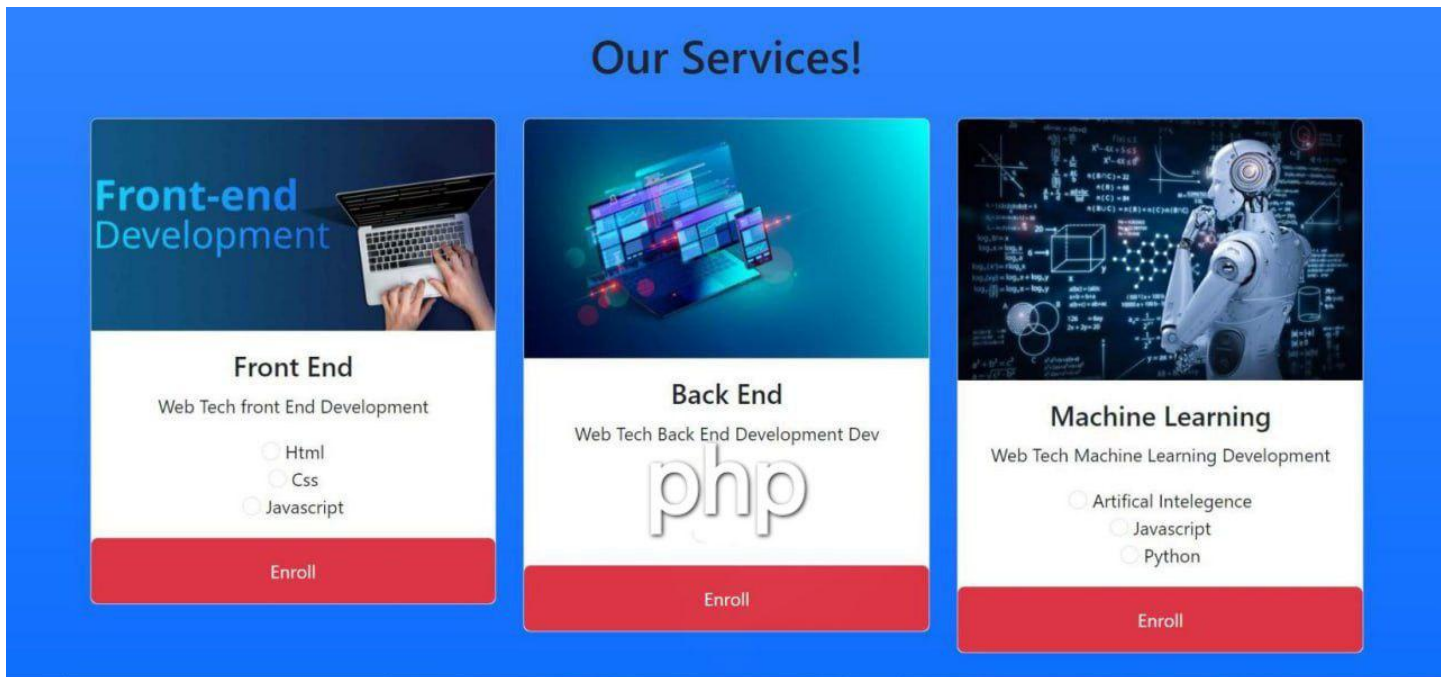


Figure 1: Bootstrap home page

This project allowed me to grasp the fundamentals of Bootstrap and its application in real-world scenarios.

### 2.6.2 Week 3-6: Learning php

### 2.6.3 Introduction to php

In the following weeks, I shifted my focus to php, a high-level web framework that encourages rapid development and clean, pragmatic design. I learned about its architecture, features, and advantages in building robust web applications.

### Healthcare Web Application Project

I developed a front-end project called the "Healthcare Web Application." Key features included:

- **Navigation Bar:** A consistent navigation system across all pages.
- **Make Appointment Feature:** A section for users to schedule appointments with healthcare providers.
- **Blogs Section:** A space for informative articles related to health and wellness.
- **Testimonials Section:** Highlighting patient experiences.
- **Contact Page:** Enabling users to reach out for inquiries.
- **Footer:** Providing quick access to essential links.

## Home page

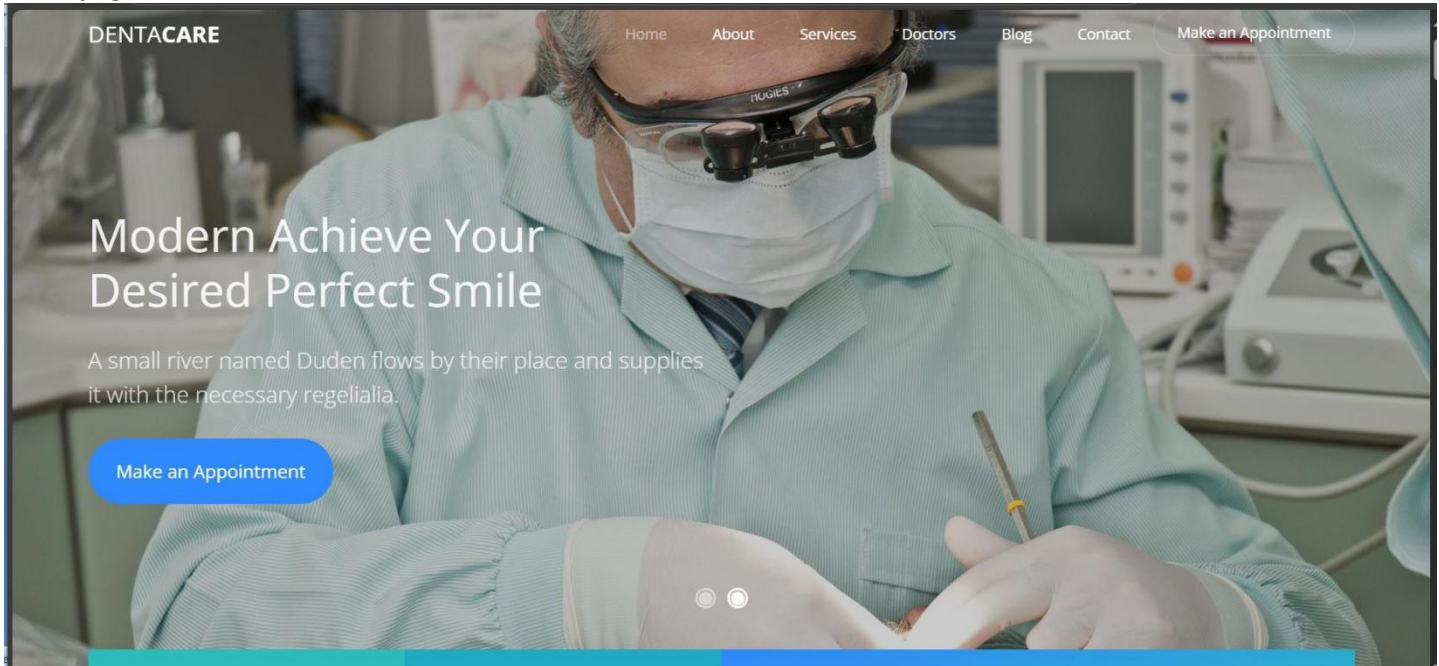


Figure 2:home page

## 2.6.4 Week 7-12:Documentation and implimantation your project

### Gathering information about ASTCC

In the frist time of weak 7 focused on gathering and collecting information about ASTCC.when collect the background of amhara science and technology communication commision and do your project documentation.

### Implementation

when gathered the information about amhara science and technology communication commision and then finished employee manegment system documentation I do implimentation of your project.

### Sample of implemantation login page

```

if(isset($_POST['login'])){

$id=mysqli_real_escape_string($conn, $_POST['id']);

$pwd=mysqli_real_escape_string($conn,$_POST['pwd']);

$sql="SELECT *FROM employee WHERE id='".$_.$id.'" AND

pwd='".$_.$pwd.'"
&& act_level='admin' limit 1";

$sql1="SELECT *FROM employee WHERE id='".$_.$id.'" AND

pwd='".$_.$pwd.'" && act_level='employee' limit 1";
$sql2="SELECT *FROM employee WHERE id='".$_.$id.'" AND

pwd='".$_.$pwd.'" && act_level='hr' limit 1";

$result = mysqli_query($conn,$sql);
$result2 = mysqli_query($conn,$sql1);
$result3 = mysqli_query($conn,$sql2);

if(empty($_POST["id"])) {

$error="emp_id is required!";

}else {  $id =($_POST["id"]);
}

if(empty($_POST["pwd"])) {

$error="password is required!";
}
if(mysqli_num_rows($result)==1){
    header('location:adminhome.php');
}
else{

```



```
$err="invalid emp_id or password!";
}
if(mysqli_num_rows($result2)==1){
    header('location:home.php');
}
else{
    $err="invalid emp_id or password!";
}
if(mysqli_num_rows($result3)==1){
    header('location:hrhome.php');
}
else{
    $err="invalid emp_id or password!";
}
}
```

```
}
?>
```

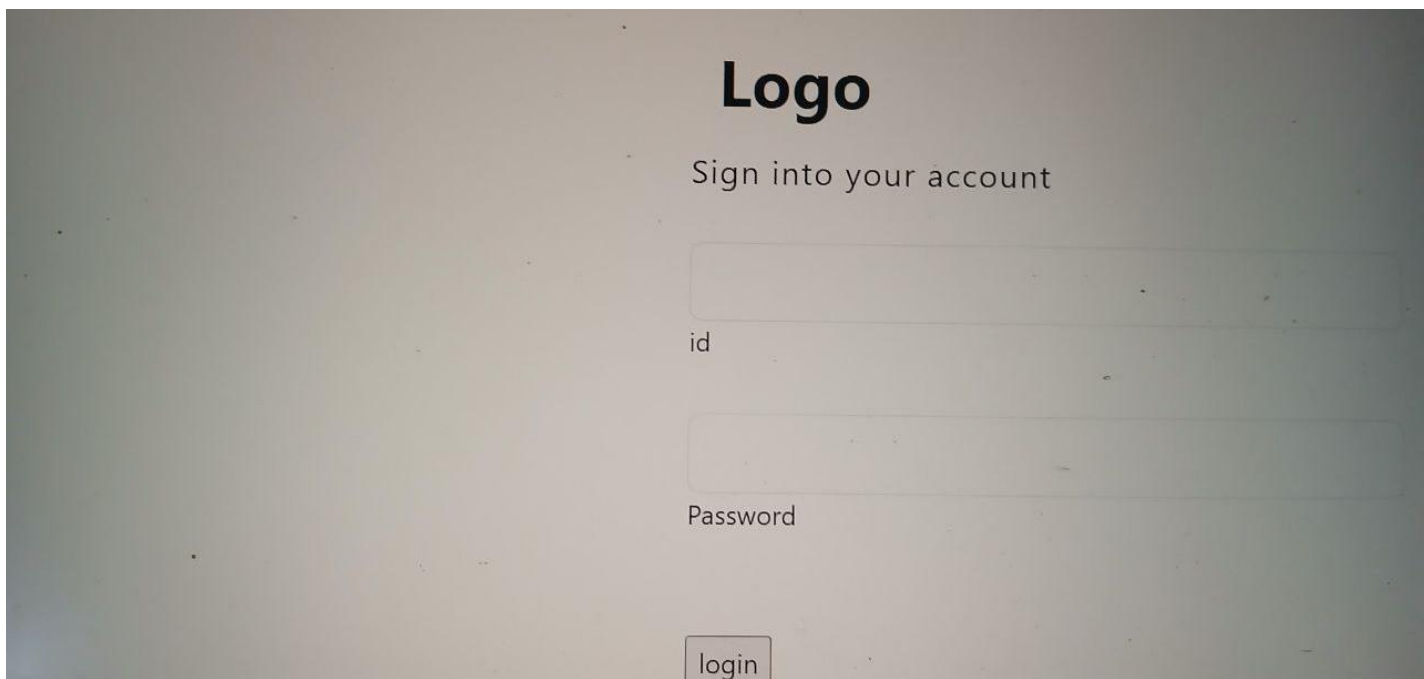


Figure 3: login page





This project allowed me to implement php's authentication system, create user roles, and develop a functional back-end that communicated with the front-end effectively.

## Conclusion

Throughout my internship, I gained valuable insights into web development with Bootstrap and php. Each project presented unique challenges that enhanced my technical skills and understanding of web applications. I am grateful for this opportunity and look forward to applying what I've learned in future endeavors.

### 2.7 Major Challenges

My internship was a completely new experience, marking my first encounter with the corporate world. Adapting to this environment proved to be challenging, as I faced several obstacles while trying to adjust to an unfamiliar setting. I had to learn new work standards, maintain a consistent schedule, and navigate various technologies. Below are some of the key challenges I encountered during the internship:

- **Insufficient Workspace for Practical Tasks:** There were limited designated areas for hands-on practice, which hindered my ability to fully engage with the material.

- **Limited Specialized Personnel:** The absence of experts for specific tasks made it difficult to gain in-depth knowledge and guidance.
- **No Standard Operating Procedures:** The lack of a manual for working procedures led to confusion and inefficiencies in completing tasks.
- **Learning New Technologies:** I needed to quickly familiarize myself with new technologies, which required a steep learning curve.
- **Poor Internet Connectivity:** Inconsistent internet access hindered my ability to conduct research and complete assignments effectively.
- **Financial Constraints:** Economic challenges impacted my overall experience and access to necessary resources.

## 2.8 Countermeasures for Challenges

To address these challenges, I implemented several strategies:

- **Effective Communication:** I proactively engaged with company advisors to clarify working procedures and seek guidance when needed.
- **Structured Training Schedule:** I developed a training plan to ensure consistent practice and skill development, allowing me to stay on track.
- **Personal Equipment Utilization:** When company computers were occupied, I utilized my own laptop to continue my work without interruption.
- **Peer Learning:** I reached out to colleagues to gain insights into processes and best practices, fostering a collaborative learning environment.
- **Cyber security Measures:** I installed the latest antivirus software and conducted regular scans to protect my work and ensure data security.
- **Accelerated Learning:** I focused on quickly grasping new technologies to enhance my skill set and improve my contributions to the team.

## 2.9 Experience Gained from the Internship

My internship has profoundly enhanced my awareness of various challenges and provided valuable opportunities to address these issues, ultimately improving my problem-solving skills. Since technical proficiency relies heavily on practical application, this experience has been instrumental in developing those skills. I believe I maximized this opportunity by actively seeking knowledge and improving my technical abilities, although I recognize that there is still much to learn on my journey toward mastery.

Throughout my internship, I gained substantial insights in areas such as practical application, theoretical knowledge, teamwork, leadership, work ethics, interpersonal communication, and entrepreneurial skills. Often, the knowledge acquired in the classroom is primarily theoretical and lacks practical support, making it challenging to develop the hands-on skills necessary to tackle real-world problems.

Reflecting on my three-month internship, I can identify several key improvements in my practical skills:

- **Documenting Systems by Gathering Real Requirements:** I learned the importance of effectively gathering requirements by engaging with administrators, employees, users, and customers. This experience not only enhanced my communication skills but also helped me understand diverse perspectives.
- **Analyzing and Managing Requirements:** I gained proficiency in analyzing, evaluating, prioritizing, and managing gathered requirements, which taught me how to design solutions that align with user needs and project goals.
- **System Design Using Advanced Tools:** I developed practical skills in utilizing advanced tools like Visual Studio Code. Initially challenging, this experience equipped me with the ability to design and develop systems effectively, which will be invaluable in my future endeavors.
- **Time Management for Individual Work:** I learned how to manage my time efficiently while working independently, a crucial skill for balancing multiple tasks and meeting deadlines in a professional environment.

Throughout the internship, I also upgraded my theoretical knowledge on the essential steps needed for developing a system, including proposal writing, requirement gathering, analysis, design, and familiarization with new frameworks. I have grown more confident in my ability to develop new solutions and apply my theoretical knowledge in practical settings.

## 2.10 Technical Skills Acquired

**Bootstrap Framework:** I gained experience with Bootstrap, including:

- **Grid System:** A flexible layout system that allows for responsive design across various screen sizes.
- **Navigation Bar:** Pre-designed components for creating responsive navigation menus.
- **Forms:** Styled form controls that enhance user experience with consistent design.
- **Modals:** Responsive dialog boxes for displaying content without leaving the page.
- **Utilities:** A set of helper classes for spacing, alignment, and visibility that streamline CSS styling.

## 2.11 Teamwork and Leadership Skills

Effective teamwork is essential for the success of any organization. A dedicated and well-functioning team can significantly contribute to a company's growth. For a team to thrive, each member must possess strong communication skills, decision-making abilities, and self-confidence. I believe I made significant improvements in these areas:

- **Listening:** I demonstrated the ability to actively listen to team members, allowing me to build upon their ideas.
- **Respecting:** I treated all team members with equal respect, fostering trust and collaboration.
- **Helping:** I stayed aware of my colleagues' tasks and offered assistance when possible.
- **Sharing:** I was open to sharing knowledge, ideas, and experiences with my fellow team members.
- **Asking:** I asked questions to ensure clarity on the team's objectives and goals.
- **Participation:** I contributed to the team while also being willing to lead and motivate when appropriate.

During my internship, I had the opportunity to observe leadership styles within the organization. Although I worked in a collaborative environment with shared authority, I gained valuable insights on:

- Keeping the flow of ideas when leading others.
- Categorizing tasks to simplify project completion.

- Respecting others' contributions and cultivating tolerance.
- Recognizing the uniqueness of each team member.
- Valuing the experiences and abilities of others.
- Providing motivational support to fellow team members.

## 2.12 Ethical Principles

Ethics plays a crucial role in achieving targeted success. It defines morality and provides a framework for understanding the right way to live, establishing correct values and appropriate ways to treat others. I developed key personal ethical principles during my internship, including honesty, fairness, compliance with the law, and respect for others.

I also adhered to professional ethical standards, such as transparency, integrity, accountability, and punctuality. My time in an entrepreneurial environment allowed me to gain insights into business operations and explore alternative revenue generation strategies in my field. As a technology student, I recognized that numerous opportunities exist beyond traditional government jobs, inspiring me to pursue a career in innovative settings, such as the Amhara science and technology communication commission.

Furthermore, I focused on enhancing my interpersonal skills through the design, development, and presentation of projects. I believe I made significant improvements in both formal and informal communication, listening skills, technical abilities, and conflict resolution skills.



## Chapter three

### Recommendations and Conclusion

#### 3.1 Recommendations

During my three-month internship, I identified several strengths and weaknesses within the organization, which allows me to confidently offer recommendations for improvement.

##### **Strengths:**

**Positive Environment:** The company fosters a welcoming atmosphere, demonstrating respect and support for interns. Maintaining this positive culture is essential, as it greatly enhances the interns' overall experience.

**Strong Work Ethic:** Employees exhibit commendable work ethics and are generally approachable. Their willingness to collaborate and share experiences significantly enriches the learning environment for interns.

**Community Impact:** The organization plays a vital role in serving the community by providing various services. It is crucial for them to continue this commitment, as it positively affects both local and national communities.

##### **Weaknesses:**

**Intern Capacity:** The organization accepted a large number of interns simultaneously, which led to employee fatigue and reduced opportunities for knowledge sharing. Limiting the number of interns could foster more effective relationships and enhance the overall learning experience.

**Technology Resources:** The company could benefit from upgrading its computer systems to better align with its service demands and workload. Improved technology would streamline operations and enhance productivity.

Despite these limitations, the organization operates cohesively with a clear objective, ultimately benefiting its surrounding communities both regionally and nationally.

#### 3.2 Conclusion

Throughout my internship, I gained numerous critical skills necessary for a professional environment, which I have detailed above. I learned what it truly means to be a professional employee, as well as the ethical

standards I need to uphold both in the workplace and beyond. This experience was invaluable in developing my teamwork, interpersonal, and leadership skills.

Overall, my internship provided me with satisfactory knowledge and significant benefits, reinforcing the idea that such programs are essential not only for me but for all students. I am deeply grateful to my friends and advisors from both KIOT and amhara science and technology communication commision for granting me this lifetime opportunity.

