



ADDIS ABABA UNIVERSITY

ADDIS ABABA INSTITUTE OF TECHNOLOGY

**SCHOOL OF INFORMATION AND
TECHNOLOGY ENGINEERING**

**AAiT Information Management System (AAiT IMS)
Project Proposal**

PREPARED BY: -

Name	ID
1. Tigist Wondimneh	UGR/2538/12
2. Tigist Zelalem	UGR/1852/12
3. Mekdes Kebede	UGR/3127/12
4. Abraham Shimekt	UGR/0129/12
5. Binyam Lemma	ATR/1341/10
6. Khansa Tahir	ATR/3185/11

ADVISOR: Ms. Nuniyat Kifle

Date: Nov 18, 2021

Acknowledgement

First of all, the greatest gratitude goes to the dedicated team members who have been doing awesome things from the inception of the project. Also we thank our advisor Ms. Nuniyat Kifle for her approval of the title to go to the next stage which is proposal preparation.

TABLE OF CONTENTS

ACRONYMS.....	v
ABSTRACT.....	vi
1. INTRODUCTION.....	1
1.1 Background of AAiT Information Management System.....	1
1.2 The Existing System.....	1
1.3 Statement of the Problem.....	2
1.4 Objective of the Project.....	3
1.4.1 General Objective.....	3
1.4.2 Specific Objective.....	3
1.5 Proposed System.....	4
1.6 Feasibility Study.....	5
1.6.1. Economic Feasibility.....	5
1.6.1.1. Developmental cost.....	5
1.6.1.2. Operational Cost.....	5
1.6.2. Technical Feasibility.....	5
1.6.3. Schedule Feasibility.....	6
1.7 Scope	7
1.8 Methodology.....	8
1.9 Project Management plan.....	8
1.9.1. Time Management plan.....	8
1.9.2. Quality Management Plan.....	8
1.9.3. Communication Management Plan.....	9
REFERENCE.....	x

LIST OF TABLES

GANT CHART.....	8
COMMUNICATION PLAN	10

ACRONYMS

AAiT.....	Addis Ababa Institute of Technology
IMS.....	Information Management System
GUI.....	Graphical User Interface
IDE.....	Integrated Development Environment

ABSTRACT

Nowadays, every communication and sharing of information is being done through online communication networks. Having these information sharing platforms is thus becoming a necessity. Our project, AAiT information management system website application, is targeted for AAiT students to ease up their academic life by helping them have an easy access of all the information about their campus and their schools essential to them.

Our project is aimed at developing a website application that will come across all the difficulties on the AAiT website by first converting the website into a website application and adding much more additional features. The significance and purpose of this project is to provide a simple and user friendly application.

The goal of this project is to ensure that students be able to get relevant, accurate, updated, and detailed information about their campus, schools, centers, departments, instructors, advisors, and so many other information in a simple way. This project's main motto is to make students life simple and become the backbone of communication for students.

.

1. INTRODUCTION

1.1 Background

AAiT has its own information sharing website. The website has a lot of functionalities. All concerned bodies of the institute are currently using this website. However there are still some problems in it that are faced by the students. That is why we are inspired to do this project.

Based on the problems we identified with the current IMS we have come up with a solution in this project which benefits the students specially the freshman students. Students can use this application to get any information related to their department easily. It is also useful as it has a lot of features.

This project will be delivering a web application that substitute the existing website with additional features. And the web application will contain only student based information that means only students are eligible to use. The efforts require in achieving the desired application can economically and efficiently be effective by the implementation of better design and hard work.

In this project the AAiT campus will take the major part to participate as we are developing an IMS for the campus.

1.2 The Existing System

As we mentioned before the AAiT uses a website as its IMS. We are initiated to do this project because the existing website has its own problems and difficulties while in use. Because of these problems students are unable to get the information that they should have access to. We are intending to make this project a web application, minimize the problems and narrow its niche of users to just students of the campus.

1.3 Statement of the Problem

Students, staff members and other members of the community should have a means to access a complete and sufficient amount of data information about AAiT. To promote students achievement and success, campuses must have access to a complete, accurate, and timely information.

There exists an information management system for AAiT. The website. Then what is the problem? The AAiT website that is currently in use as it is good, it also has its own limitations through the perspectives of a student.

The website is a general purpose website where there are snippets of information for everyone: students, staffs and the outside community. There is no information management system that is fully dedicated to provide service to students only. This inhibited students from accessing information tailored to them.

Viewing the website using our phones is also difficult since the graphics is a bit messed up and complex. Even on devices like desktops and laptops the user interface is not user friendly as much. There is too much content on some pages and the organization of the content makes it difficult to navigate through pages. If you visit the website you will find different information like the weather, the calendar, the contact information displayed in the home page in a way that makes it difficult to view the page. The UI of the website is simply not user friendly.

The information displayed in the website about the schools of the campus are general pieces of information. The students, generally, are not able to get information's they need about their departments. This often leads to students ending up with the wrong information and conception about the departments in the campus.

Probably the most important thing a student needs is resource. In the website there is not enough materials that students can salvage. It is difficult and sometimes getting course materials though it's most important for a student. Traditionally students get resources in a traditional way of copying an exam sheet or by asking their seniors and instructors for more materials. This should not be so.

The portal system is also not simple to access. The page is bulky and contains a lot of information that is additional. For example there are sections in the portal like dormitory, clinic and other services listed but not function. The portal system should have been easy to use.

When the students are not properly informed it will make the task of directing students a hard task. There must exist a system in which AAIT students will be able to depend on. The lack of these kind of system inhibited students from getting proper information and data.

1.4 Objectives of the Project

1.4.1 General Objectives

The general objective of this project is to solve the limitations of the website system that is currently in use. Since this project is an extension and somewhat a modification and simplification of the current website, its general objective is to make the system more accessible and also make it user friendly. Additionally it is to incorporate some additional useful features in it.

1.4.2 Specific Objectives

- To identify the limitations of the current website system
- To analyse requirements and design a new IMS
- To incorporate offline access to the system
- To make the GUI of the system simple and easily adaptable
- To develop a database that holds data about the campus and all its services
- To develop a platform in which students can get the necessary information directly
- To make the system hold all the necessary documents that the student is going to use
- To make the information posting area a more interactive platform

1.5 Proposed System

The Team aims to accomplish the following with AAiT Information Management System (AAiT IMS):

- ✚ To deploy a system archive that could store
 - course materials,
 - must and recommended books for every student,
 - Exams-previously taken
 - Projects done by students
- ✚ To create an app that is far better than the existing website in terms of GUI and accessibility. By minimizing the number of pages a student has to visit in order to access a particular information, by limiting the amount information included in a page and by generally enhancing the UI we plan to make the UX more interact able.
- ✚ Let take a scenario: most freshman students do not have enough information which school to join. They do not know which school is the most suited to themselves or which school is most wanted in the market. They just blow where the wind blows. As a team we value information highly. Thus we are going to include an Advisory section in our app where students can easily get the information on who to contact when they want help or have requests. This will solve the problem of the having an information gap.
- ✚ Our application will include a platform where senior students experience and advice will be shared.
- ✚ Create an event gallery where students can see different events held in the campus by students like graduation ceremonies and the like in photos, videos and other formats.
- ✚ To include a section which contains information about instructors, class representatives, student council members and other essential personnel's in the campus.

- ✚ To create a Guide section that shows where the offices are found and who to contact there. And also guides where café, lounge, library and other important places are found.

1.6 Feasibility Study

1.6.1 Economic Feasibility

1.6.1.1 Development cost

- We will use the campus Wi-Fi which is freely available to build our application.
- We will not expend money for UI and GUI graphics software tools. Because they are freely available and most of them are open source.
- There is no cost for frameworks while building our web app. We can get open source and free frameworks.

1.6.1.2 Operation /Implementation cost

- We are going to launch our app on local network.
- This will be a free web application and users won't be charged to use the service.

1.6.2 Technical Feasibility

To build the app we will use the pre-existing AAiT website, open source frameworks, you tube videos, different image assets from Google and XML for the UI of our app and so many other freely available resources.

1.6.2.1 Resource Requirement

Basic web development markup and scripting languages will be used to implement this project. We will also be using different browsers, IDE's, Graphics editors and version control systems for this project.

1.6.2.2 Labor Requirements

- The whole 6 members of the team will participate on the project. No particular person is assigned to do a particular section of the project as we are yet to figure out our talents and interests. We will specify this requirement in the coming weeks.

1.6.2.3 Physical location Requirement

- Local cloud storage and local network will be used for the deployment of our app.

1.6.3 Schedule Feasibility

Since the app has so many features, it will require a lot of resources and codes for the design and implementation respectively. We are dedicated to finish the app in accordance with the academic calendar of the campus with testings' and good UI design.

1.7 Scope

The system is to be developed for AAiT students. Our system will have features like:

- For students (users):
 - ✓ Obtain academic materials-from the archive of materials
 - ✓ Obtain academic and non-academic information-through the notice board platform and the advisory section
 - ✓ Give and share academic or non-academic advice-through the platform where senior students give advices and suggestions
- For admins:
 - ✓ Post academic or non-academic information-notice board

1.8 Methodology

1.8.1 Data Collection Methods

Online questionnaire will be used as a primary tool for collecting data for our project. The campuses website will also be used as an input. Other than that any research related to our project will be used as a reference.

1.8.2 Description of Dataset

Our database will include student databases with their information. Another is the materials that are going to be provided to the students.

1.8.3 Implementation

In our app development process we are going to use the waterfall model. The waterfall model is a successional approach in which each stage is dependent on one another.

The next phase cannot be started until the first phase is done. This method is easily applicable for projects whose requirements are well known and we chose it since it is a scheduled model which will enable us to do our work with in a good time and manageable resources.

Every processes and results are documented and it is important for us for further documentation. It is also simple to understand and use.

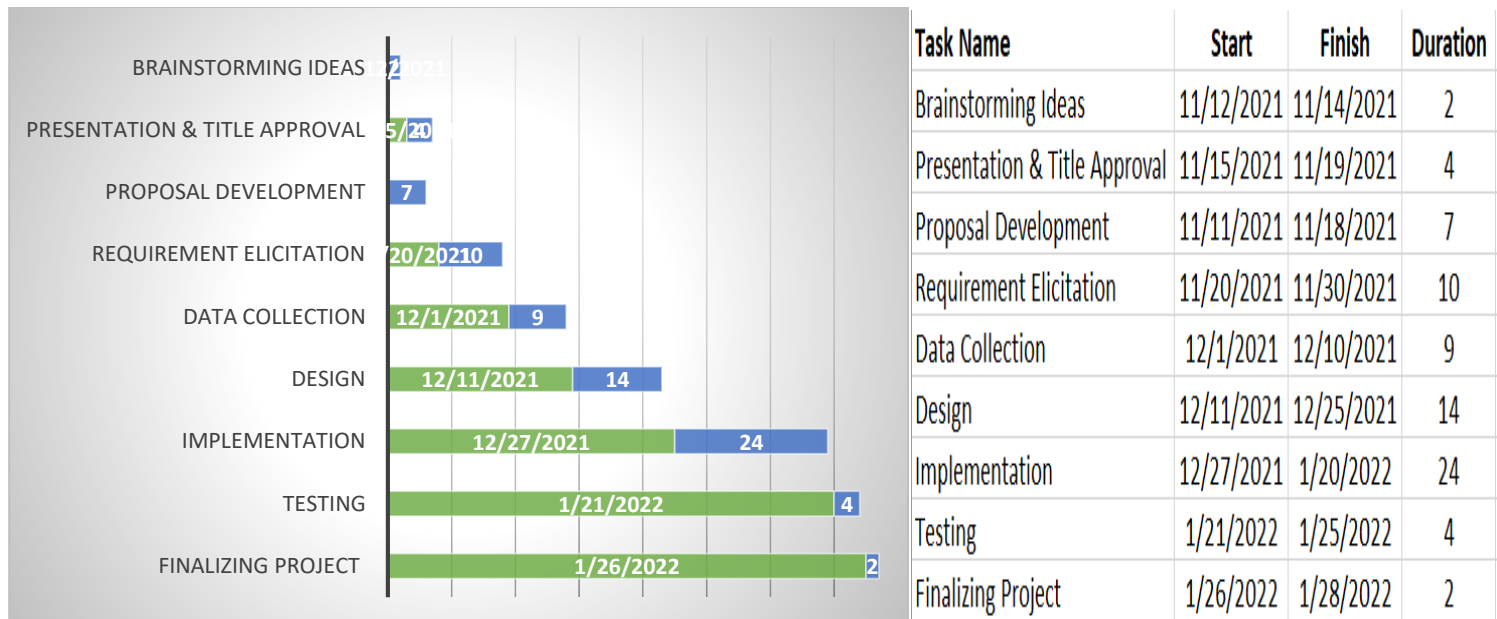
In waterfall model:

1. Requirements are very well understood
2. The projects are short
3. Steps of software development are followed strictly
4. Documents are produced at each stage

Since requirements are defined clearly and the time given for the completion of the project is considerably short using the waterfall method is preferable.

1.9 Project Management plan

1.9.1. Time Management plan



1.9.2. Quality Management Plan

Quality management plan will help us monitor the quality of the software we are developing throughout the stages. The consistent documentations and reviews of the development stage will make sure that our software is consistent with the quality plan that has been planned. During the testing stage the software quality is measured for efficiency and usability.

Potential risks related to software quality might include:

- Lack of Strategy
- Not meeting Organizational Needs
- Going against change
- Not Integrating new technologies/ Lack of Scalability

Plans to enable quality

- Analysing data properly
- Meeting customer Requirements
- Repeated Testing to make sure there is no problem in functionality
- Accepting feedbacks

1.9.3 Communication Management Plan

1.9.3.1 Internal Communication and Report

Internal communications will be through in person meetings. The meetings will be held three times a week for two hours. And the information provided in the meeting is project status, problems, risks and other topics to be discussed about. Sharing of project data and is done through Google drive and a social media dedicated to the project only.

1.9.3.2 External Communication and Report

Information will be provided to our advisor through project reports, email and various documentations.

Communication type	Method / Tool	Frequency /Schedule	Information	Participants
Internal Communication:				
Project Meetings	In person	3 days a week	Project status, problems, risks	Team
Sharing of project data	Google drive, social media	When available	All project documentations and report	Team
External communication and Report:				
Project Report	Email	When necessary	Project status - progress , forecast ,risks	Team Leader

REFERENCE

1. Software - Engineering - 9th - edition by - Ian - Somerville
2. Fundamental of software engineering – 4th – Edition-by- Rajib Mall
3. <https://www.investopedia.com>
4. <https://www.slideshare.net>
5. <https://blog.planeview.com>