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ADMAS UNIVERSITY

COLLEGE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCES

**College Management System**

BY

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1. **INTRODUCTION**

* 1. **Background of the Organization**

Admas University is one of the biggest private university in Ethiopia. And have many students and employee. As time has progressed management system has also progressed in to the modern times. So in accordance with progress of collage, changing the way of maintaining college information is needed on par with other universities.

Most of the college work is done manually such as student registering, announcing student information using notice board, student payment made with a long wait in line, the way of reporting grade is too traditional meant using small paper and not having enough information about the students grade, the existing library do not contain the up-to-date books and softcopy on its E-library and so on. This whole processes take too much time. If all the work is include in an online system then it can reduce the time taken and work load. The intended college management system is internet based system that can be accessed through out the campus and also wherever you are.

The system is helpful for students, lecturers and the rest of the staff. The main principle of behind Admas university collage management system is the easy supervision of collage. The system tries to explore all or half of the collage activities happening inside the campus. It can handle the details of student and lecturer notes, class details, course details and fee details.

**Vision**

Admas University College envisions being the most reputable Private Higher Education Institution in terms of outstanding quality Education, Research, Training, and Community Development services in East Africa by 2020.

**Missions**

Admas University has the following missions to accomplish:

* provide quality higher education at all levels for affordable price through regular, continuing, and distance education modes so as to produce competent professionals who can support the development endeavour of the country;
* undertake research that helps to solve the economic and social problems of the country and that can also add new values and knowledge to the society;
* render consultancy and short–term training services to businesses, government, and nongovernment organizations to help them accomplish their objectives;
* render various community services to fulfill social responsibilities expected of it as an academic institution;
* conduct quality and outcome-based training to produce middle level human resources and supply to the industry;
* Produce competent entrepreneurs who could contribute to the technology transfer endeavours of the country.

**1.2. Statement of the Problem**

Since there is no system in the organization, we have come up with the main problems student, teachers and other employee’s see in the school:

* Unable to see their day to day activities and plan out their day, semester or even their year.
* Not having the Latest news, schedules and other important information.
* Not having a place to see there grade, this will help students see if they are performing good or bad, and can prevent going to the school to see their grades.
* Students missing out on assignment, books and handouts just because the teachers changed their mind.
* Not having a place for students to meet and share their thoughts, works and classwork.
* Not having a place to register online without having to go to school.

**1.3. Objectives of the Project**

**1.3.1 General objective**

This project will help the students put their valuable time to a more appropriate place like in their studies, and for the teachers, they will be managing their time properly so they can prepare for the lesson they are about teach. This have a great impact to all the users that have been struggling to better organize their work.

The things that have to be done in order to achieve the desired features are the main thing that user will appreciate from the service we give. Like:

1. Personal Accounts for students
2. Having a calendar of the annual activity
3. Place to put your assignments, books and other important documents
4. A place to see or monitor your grades.

**1.3.2. Specific Objectives**

* Studying the existing system
* Collecting data about the organization
* Identifying and analyzing the major problems of the current system
* Analyzing the existing system
* Defining system requirements
* Designing the new system
* Implementing or coding the designed system
* Testing the system

**1.4. Feasibility Analysis**

We have taken one weeks in feasibility study with our group members. The contents and recommendations of this feasibility study helped us as a sound basis for deciding how to precede the project. It helped in taking decisions such as which software to use, hardware combinations, etc. The user consent is very important for the new plan. Along with, for implementing the new system, the ability of the organization is also checked. Besides that, a set of alternatives and their feasibility is also considered in case of any failure in the proposed system. In this course we conducted three tests for Project feasibility namely, Technical, Economical, and Operational feasibilities

**1.4.1. Technical Feasibility**

The proposed system can run on any machines supporting Windows and Internet services and works on the best software and hardware that had been used while designing the system so it would be feasible in all technical terms of feasibility.

**1.4.2. Operational Feasibility**

It is not only important to evaluate whether a system can work. We must also evaluate whether a system will work. A workable solution might fail because of Students, lecturers, Staff members. In case of our project the collage management system we have examined all the concerns that can further affect its operational feasibility. It has complete support of the Student/Staff as an online reporting and access the information. It has made the role of Student easiest one. The Student Staff feel comfortable and upgraded with this system

**1.4.3. Economic Feasibility**

As we know that the system development costs are usually one-time costs that will not recur after the project has been completed. For calculating the Development costs, we evaluated certain cost categories via.

* Internet Cost
* Time
* Paper printing and binding
* Cost of Copy

**1.5. Scope and Limitation of the Project**

**1.5.1. Scope of the Project**

Admas University college management system will work only among the student, lecturers and staff members. Under this system it will include computer science departments under the particular college. It can have online notes and notice board so that students can get all the information by using their valid registration id and password. Administrator will able to get all the information regarding any college members on any day and time. The Admin panel will also able to edit the login display panel of teachers, staff members, students etc. admin can add person, delete and give special permission. For the student section they can get any particular lecturer’s notes for any particular day and other information regarding the college. Such as an upcoming college lecture in a particular month or week, group work schedules, assignments, test and exam notification and many more. Student section will also include learning section, so that students can prepare for their exams.

**1.5.2. Limitation of the Project**

The project is limited to Megenegna campus…………

The limitation of our platform is:

* Only the administrator can add, delete or change the password of the users
* We have only implemented the payment locally, not related with bank systems yet.
* Unable to chat the rest of the student
* The system will only work for the pre-existing student of campus
* Do not work on the drop/add problems
* For the time being it work only for computer science students. Since it have to be applicable on the implementation step.

**1.6. Significance of the Project**

**1.6.1. Beneficiary of the Project for the org**

This project aims to enhance efficiency and at the same time maintain information accurateness the study will go a long way to cutting down on time wastage, inefficient use of statistical data, manual errors and duplication of efforts by both staff and academic personnel. It will also enhance efficient query and inquiring, endure security of records and assist the college in coping with the daily work based.

On the other hand, the implementation of the project will improve the quality of service, creating an automated application to plan and manage the delivery of course. The management system will provide more ease for managing data rather than manually maintaining documents. Valuable time will be saved and lives will be made easier.

This are the ones using the platform day in and day out, like the student, the major beneficiary

Of the platform. To name a few:

* Students
* Registration
* Finance

**1.6.2. For the developer**

**Fmjghfilhjik**

**1.7. Methodology of the Project**

**1.7.1. Data Collection Tools/Techniques**

The required data including department details, course details, student personal details, semester details, exam details etc. were collected. The data collected would help identify attributes, relationships, classes, entities/objects that describe, relate and interact with the system.

**Interview**

Interview is a powerful tool for data gathering since it allows the interviewer to probe and clarify a number of issues. Face to face interview was used to interact with the registrar and the students of the proposed system to obtain the data required for the collage management system.

**Observation**

As long as we are student of a collage we are one society of the organization. Therefore we observed how users carrying out their activities in natural setting. Observation allows us to collect data in real time where activities are being performed.

**1.7.2. System Analysis and Design**

Purposes of the current Collage management system analysis are:

* To identify problems inhibiting the current student information system
* To know how data is being managed
* To examine the methods used in current student information system
* To know the data flow in the system

The current Collage management system was studied to get some useful information for developing an effectual online Collage Management System. Currently, the various departments manage student information manually. There are inadequate common, standardized process and program for capturing, processing and storing student’s information. This has kept student information fragmented in different departments and information provided to the various departments by the students is characterized by discrepancies

The various departments have systems in place to store and process student data but the systems are not able to talk to each other (Interoperable). This makes it difficult for the registrar to collect information of students across departments. On the other hand, students are unable to view their result online for them to know whether they are continuing the program and also to know the courses they can register for the next semester.

**1.7.3. System Development Model**

The Process Model used in our projects “College Management System” is waterfall model.

The Waterfall Model:

The waterfall model is a sequential design process, used in software development processes, in which progress is seen as flowing steadily downwards (like a waterfall) through the phases of Conception, Initiation, Analysis, Design, Construction, Testing, Production/Implementation and Maintenance.

The waterfall development model originates in the manufacturing and construction industries: highly structured physical environments in which after-the-fact changes are prohibitively costly, if not impossible. Since no formal software development methodologies existed at the time, this hardware-oriented model was simply adapted for software development.

Diagram:

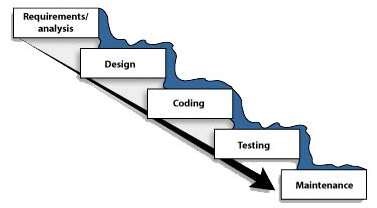


Figure 1.1

Reason the waterfall model in the software development cycle:

Since we have well known, clean and fixed requirements therefore it best suits for our software development. Our product definitions is stable. Technology is clearly understood. The project is short.

**1.7.4. Testing Methodology**

We would use acceptance testing because: it is level of software testing where a system is tested for acceptability. The purpose of this test is to evaluate the system’s compliance with the business requirements and assess whether it is acceptable for delivery.

The first phase in waterfall model is the requirements phase in which all the project requirements are completely defined before starting the testing. During this phase, the test team brainstorms the scope of testing , test strategy and drafts a detailed test plan.

Only once the design of software is complete, the team will move on to execution of the test cases to ensure that the developed software behaves as it expected.

In this methodology, the testing team proceeds to the next phase only when the previous phase is completed.

**1.7.5. Development Tools and Technologies**

Those are hardware’s and software’s our system required for development

Hardware tools required are:-

**1.7.5.1.** Client Side Scripting / Coding

Below are some common Client Side Scripting technologies:

* HTML (HyperText Markup Language)
* CSS (Cascading Style Sheets)
* JavaScript
* Ajax (Asynchronous JavaScript and XML)
* jQuery (JavaScript Framework Library - commonly used in Ajax development)

**1.7.5.2**. Server Side Scripting / Coding

* PHP (very common Server Side Scripting language - Linux / Unix based Open Source - free redistribution, usually combines with MySQL database)
* NODE JS is a JavaScript runtime environment.
* EXPRESS is a minimal and flexible Node.js web application framework that provides a robust set of features for web and mobile applications.

**1.7.5.3. Documentation and Modeling Tools**

Modeling tool are a large category of tools which are designed specifically for logical and physical engine-independent data modeling. They provide forward and reverse engineering functionalities. They are good for creating ER Diagrams, but much less for describing data elements (creating Data Dictionaries), and a documentation generator is a programming tool that generates software documentation intended for programmers (API documentation) or end user (End-user Guide), or both, from a set of source code file, and in some cases, binary files.

As explained above we have picked some of the most used tool for our project, like:

**Microsoft Word**

**Microsoft is a graphical word processing program that users can type with. It is made by the computer company Microsoft. The purpose of the MS Word is to allow the users to type and save documents. Similar to other word processors, it has helpful tools to make documents.**The main features that compiled us to use MS Word than others are

* **Checking your spelling**
* **Find & replace**
* **Using hyperlinks strategically**

**Visual Paradigm**

Visual Paradigm is a UML CASE Tool supporting UML 2, SysML and Business Process Modeling Notation from the Object Management Group. In addition to modeling support, it provides report generation and code engineering capabilities including code generation.

Gantt ….

**1.7.5.4. Deployment Environment**

The deployment environment we hope to achieve is a WEB based, this can help our platform to be reachable from anywhere, and can help them be more productive. As we know the web is the primary way of transferring information across the globe. In seeing this opportunity, our users can access the information they desire from our platform any time.

**1.8. Budget and Time Schedule of the Project**

**1.8.1. Budget of the Project**

The following table lists the budget required for the system development

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Types of costs | Tool name | Quantity | Unit price (in Birr) | Total price (in Birr) |
|  | Flash(32 GB) | 1 | 350 | 150 |
| Pen | 6 | 3 | 18 |
| Paper | 1 packet | 100 | 100 |
| Note book | 1 | 30 | 30 |
| Software costs | Wamp server | 1 | Free | Free |
| Microsoft office 2016 | 1 | Free | Free |
| Visual code | 1 | Free | Free |
| Ganttproject | 1 | Free | Free |
| Visual paradignm | 1 | free | free |
| Windows 8,10 OS | 1 | Free | Free |
| Other costs | Transport | - | - | 200 |
| Miscellaneous cost | - | - | 150 |
| Total cost | - | - | - | 1198 |