Adventist University of Central Africa
P.O. Box 2461 Kigali, Rwanda | www.auca.ac.rw | info@auca.ac.rw

AUCA CLAIM GRADE SYSTEM

CASE STUDY: ADVENTIST UNIVERSITY OF CENTRAL AFRICA (AUCA)

STUDENTS' PROJECT PROPOSAL

Done By

Ishimwe M. Prince, # 234….

Major in

Software Engineering

March, 2023

PART I

INTRODUCTION OF THE CURRENT SYSTEM ENVIRONMENT

Historical Background

The Adventist University of Central Africa (AUCA) was founded in 1978. Following the 1994 genocide against the Tutsi, AUCA temporarily suspended its activities. From 7 May 1996, University relocated to Kigali City, and reopened a transition Campus at Gishushu, Rukiri III, Remera Sector, Kacyiru District. From that time, the University operated with only four facul-ties: Business Administration, Information Technology, Edu-cation, and Theology.

In 2019, the Faculty of Health Sciences was introduced, operating on its Nursing campus in Karongi District. Until today, AUCA has enjoy a good reputation locally and regionally for its track record in quality teaching. Currently the university operates on three beautiful campuses of Masoro, Gishushu (Kigali City) and Ngoma (Karongi District in the Western Province).

Mission

Provide Christ-centered wholistic quality education to prepare for service in this world, and in the life to come.

Vision

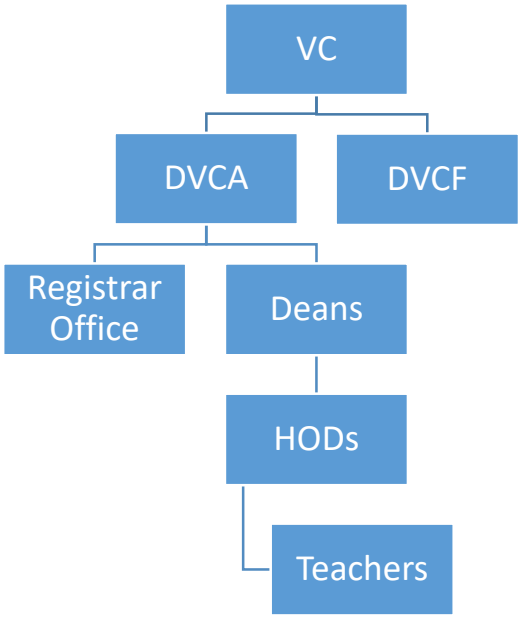
Become an international center of academic learning with global impact..

Core Belief and Values

The Adventist University of Central Africa has the following belief and Value:

- Faith
- Love
- Integrity
- Compassion
- Fairness and Justice
- Excellence

Organizational Structure



PART II

PRESENTATION OF THE CURRENT SYSTEM

Description of the Current System

Departement where to Locate the Problem

The Directorate in charge of student's grades management is the registrar office, and work in collaboration with the faculties. Normally, after the teachers have finished to grades the final exams, they make a grades report that they submit to the faculty, and the faculty submit to the registrar office.

However, the same process happens when there is a claim case, except that this time it starts with the student. From the student to the teacher, from the teacher to the head of the department, and from the head of department to the registrar office.

Actors Role and Responsibilities in the Department

S/N	Actors	Responsibilities
1	Student	• Download Claim • Fill the Form • Submit the form to the teacher
2	Teacher	• Receive the form • Find the student exam copy • Comment the claim form • Submit the form to the HOD
3	HOD	• Receives Claim form • Verify Claims • Submit claims form to the registrar office • Sign on the grades report modification
4	Registrar	• Receives Claim Report • Update Student Grades

.

AS IS Process Model

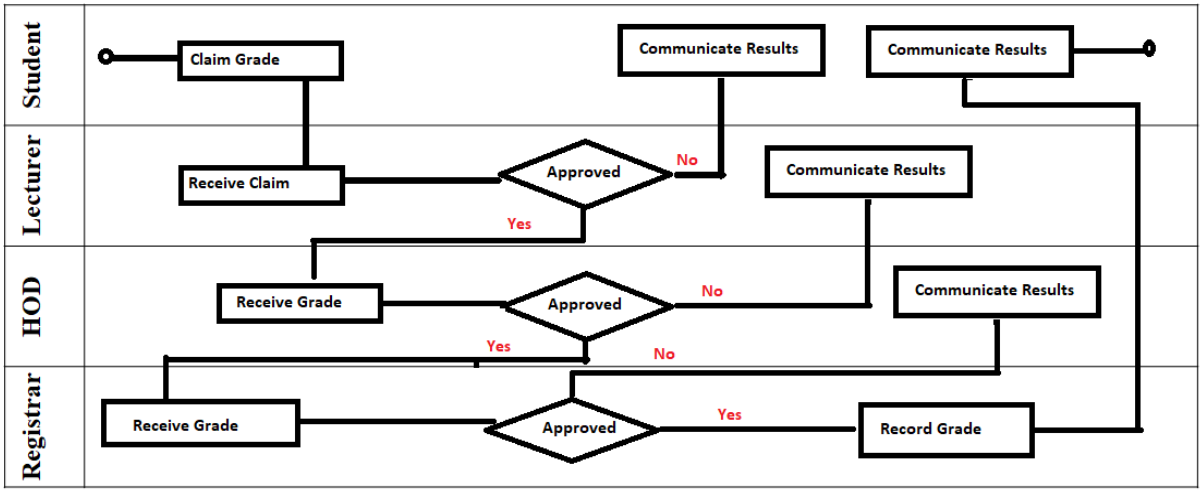


Figure 1: As Is Process mode of Grade Claim System

PART III

PROBLEMS IN THE CURRENT SYSTEM

Performance

Throughput

- The Student can't access all the lecturers he need claims at the same time
- It is difficult for the lecturer to process the students claims in short period
- It is difficult to the HOD to analyze the validity of the students claim in a short period
- It is difficult for the registration office to verity the authenticity of claims in a short period

Response Time

- It take time for a student to know the outcome of his/her claim
- It take time to the lecturer to know if the update on the students grades has been made
- It take time for the HOD to know if the students grades has been updated
- It take time the Registrar office to communicate the change on the grade to the student

Information

Input: Student, the lecturer and the registrar office use papers for claims

Output: No Reports are made for student's claims

Storage: Claim form are kept in the files at registration office

Economics

The Student: The System cost the student the transport and Airtime to access the lecturer.

The Lecturer: The current system Cost the lecturer the transport to submit claim forms to the HOD.

HOD: For Gishushu and Ngoma Campus, it cost the transport the HODs to submit grades

The registrar office: it cost the registrar office to enlarge the storage space for Claim forms.

Control

Security on Lecturer Side: Claim forms are hardly kept by the lecturer before submission to the HOD.

Security on the HOD side: Claim forms are hardly kept by the HOD before submission to the Registrar office.

Security on the Registrar side: Claims forms are hardly kept by registrar office after recording grades.

Efficiency

The current system is not efficient to the: student, lecturer, HOD and the registrar office, therefore it need improvement.

Service

The grade claim process is very tiresome and time consuming for Student, lecturer, HOD and the registrar office.

PART IV

NEW SYSTEM REQUIREMENTS

To Be Process Model

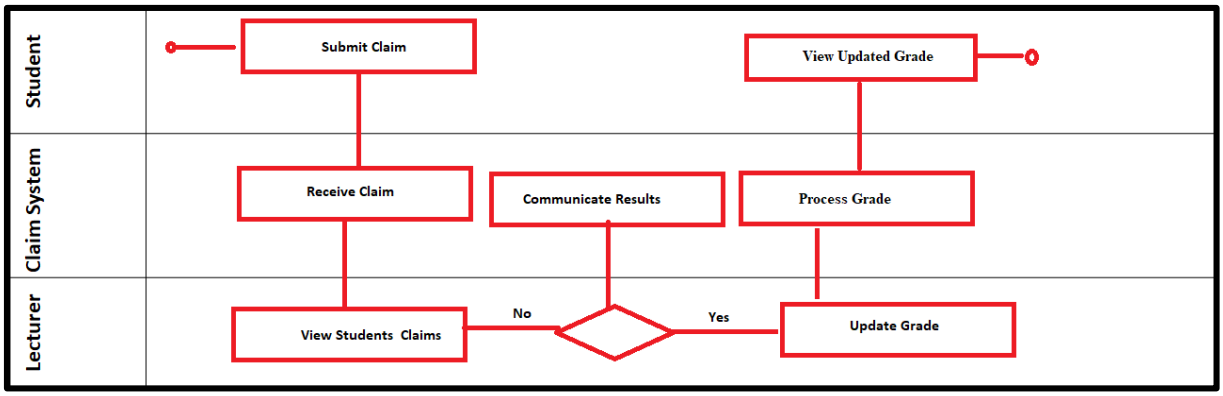


Figure 2: The New System Process Model

System Requirements

Function Requirements

REQ 1: The Admin shall be able to create the users account
REQ 2: The Student Shall be to select the Course he/she need to claim
REQ 3: The Student Shall be able to submit a claim
REQ 4: The System Shall be able to receive the student claim
REQ 5: The Lecturer shall be able to view the students claim in his/her courses
REQ 6: The Lecturer Shall be able to approve the claim
REQ 7: The Lecturer shall be able to reject the claim
REQ 8: The Lecturer Shall be able to update the grade
REQ 9: The Student shall be able to view the status of his /her claim

Non Functional Requirements

Performance

- REQ 10: The system must support 5,000 users per hour
- REQ 11: The system must provide 6 second or less response time in a chrome desktop browser.

Scalability

- REQ 12: The system must be scalable enough to support 10,000 students at the same time while maintaining optimal performance

Portability

- REQ 13: The must be run on window 10 or window 11 without change in its behavior

Reliability

- REQ 14: The System must perform without failure in 95 percent of use cases during a month

Maintainability

- REQ 15: The mean time to restore the system (MTTRS) following a failure must not be greater 10 minutes.

Security

- REQ 16: All data inside the system shall be protected against malware attacks or unauthorized access

PART V

TECHNOLOGY TO BE USED

Front End

To develop our system front end side, we shall use the python framework called Django. This will assist us in:

- Assists in defining patterns for the URLs
- Authentication
- Object-oriented programming language database
- To create automatic admin interface feature that will enables editing, adding, and deleting

Back End

Django will also be used for back end development because of the following advantages:

- Optimal pluggability
- Greater reusability
- and faster development

PART VI

PROJECT PLAN AND SCHEDULE

S/N	ACTIVITIES	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	Chapter 1							
2	Chapter 2							
3	Chapter 3							
4	Chapter 4 & 5							
5	Submit Book							