ACADEMIC DEPARTMENT MANAGEMENT SYSTEM

DAR ES SALAAM INSTITUTE OF TECHNOLOGY

DEPARTMENT OF COMPUTER ENGINEERING.

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MODULE TITLE: **SOFTWARE ENGINEERING**
MODULE CODE: **COU 07505**

ACADEMIC DEPARTMENT MANAGEMENT SYSTEM

1. Introduction

Purpose

The purpose of this document is to outline the requirements for the development of an Academic Department Management System to efficiently manage departments, their curricula, modules, and lectures within an academic DIT institution.

Project Overview

Dar es Salaam Institute of Technology (DIT) was established by the Act of Parliament No.6 of 1997 as a higher technical training institution in Tanzania. One of the core bussiness training and consultant. One of the core bussiness is training both long courses and short courses. All courses are owned by departments. In Dit there are many departments like computer department, mechanical depeartment, civili department, electrical engineering, institute consultancy Bureau, electronics and telecommunication department.

Departments own instructors, curricula for training and students. In order for core aim of DIT to facilitate training there is need to have human resource managment. It's very crucial so that lectures should be assigned modules and classses to teach.

The software is going to automate some department activities also system also is entertprise which is going to be extended to do performance like extra teaching load, extra script payments if instructors teach extra script than standard, payrolll.

This system also is entertprise which is going to be extended because example in computing extra teaching load there is extra script there is standard number script instructor must reach if he/she exceed must be paid, examination setting, project supervision which depend on project marking and student has supervised he/she must be paid.

The software is fundamentel for large DIT management system here we will focuss on deparments, curriculum, modules and classes.

Project Objectives

The project objective is to automate and manage classes, modules, curricula and departments

Target audience

The system will be used by administrators, faculty members, and staff within the academic institution.

Scope

The system will cover the management of academic departments, their curricula, modules, and lectures. It aims to streamline administrative processes, enhance communication, and provide a centralized platform for information management.

Product Features

1. **Department Management:**
   Add, edit, and delete academic departments.
   Assign department heads.
2. **Curriculum Management:**
   Create, modify, and delete curricula.
   Associate curricula with specific departments.
3. **Module Management:**
   Define modules and assign them to curricula.
   Specify module details, such as credits, prerequisites, and description.
4. **Lecture Scheduling:**
   Schedule lectures based on modules and faculty availability.
   View and manage lecture profile.
5. **User Authentication and Authorization:**
   Differentiate between roles (admin, faculty, staff) and assign appropriate permissions.

Functionality

a) User registration
b) Deparment registration
c) Curriculum registration
d) Modules registration
e) Assigning modules to curriculum
f) Classes registration
g) See modules has which department
h) See lecture teaches how many module

Product Perspective

The Academic Department Management System will be a standalone system that interacts with existing databases, such as student records and faculty information systems.

Technology Stack

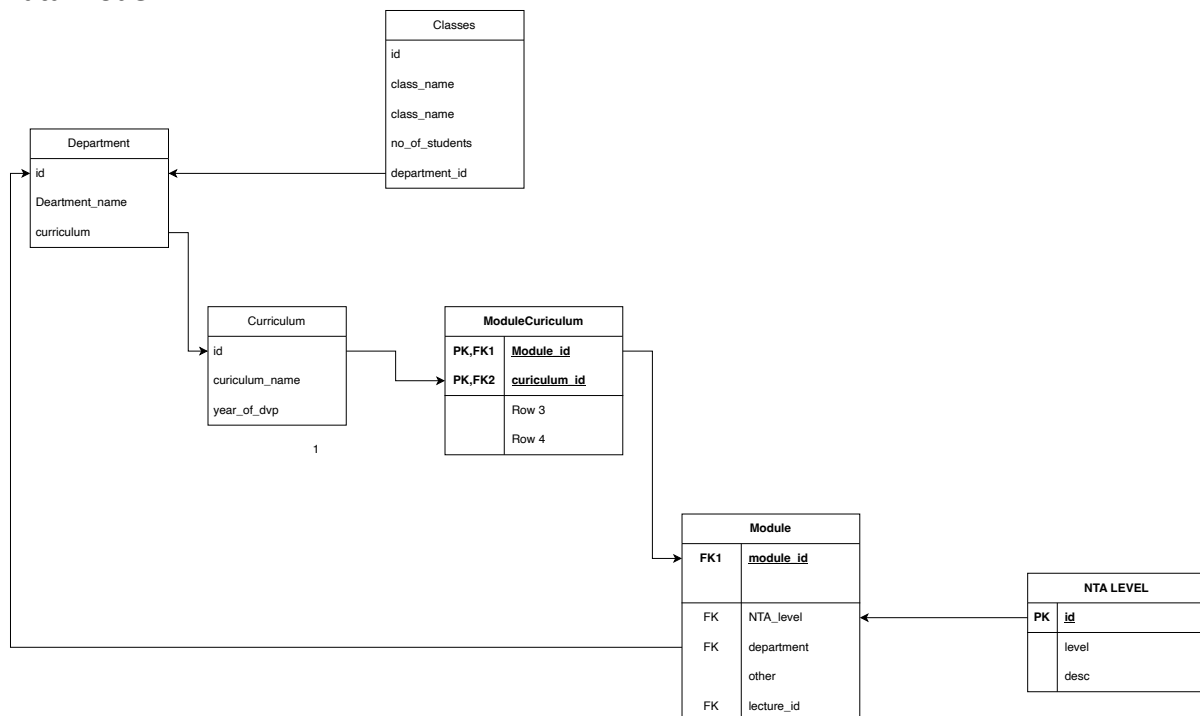the technology stack used in developing this web system.

Backend: node.js
Frontend: PUG , tailwind CSS(using CDN link)
Database: MySQL

Development methodology

I used waterfall development methodology were each phase was must be completed then move to another phase.

Data model

Hosting Environment

The system must be hosted on a cloud secure and reliable server infrastructure, with regular backups and disaster recovery measures in place. I am going to deploy it in Microsoft azure.

Constraints

1. The system should be accessible through modern web browsers.
2. A user must be connected to internet to access the information.
3. Compatibility with existing databases and systems must be ensured.

Budget

The system will be developed within a specified budget, with a maximum cost of Tshs.6,000,000

Timeframe

The system must be completed within a timeframe of 3months, with a launch date of march 16, 2024.