Vocational Training Authority Sri Lanka

_____

Student Dropout

System

Software Programming Individual Project 2022

JL/22/ICT5/1/0014 – P. G. Janidi Dihara

Student Dropout System

Student Name

P	.	G	.	J	A	N	I	D	I		D	I	H	A	R	A					

Student NIC

1	9	9	7	6	4	0	2	2	4	4

Submission Date

2	0	2	2	/	0	8	/	0	4

Supervisor Name   Mr. Nishantha Gamage

Supervisor Comments

Signature of Supervisor

Official Use Only	*Approved*			*Revised*	*Reject/Resubmit*	

1. **Problem Statement**

   - **What is the problem?**

     If a student who registers for a course in an institution or a student stops the course for any reason, then the institution will face problems. The employee who does it will take a lot of time to confirm it and do the work. This system is used to solve the problems and remove and manage the student through the relevant system.

   - Who has the problem?

     The person doing this work in the respective organization will have a lot of time and a lot of work.

2. **Domain/ Problem area**

   Due to the fact that the company's needs are not properly met, there is a greater possibility of resorting to other options for it and due to such reasons; its well-being is adversely affected. Here a negative dialogue is built between the employees and students of the institution.

3. **Proposed Solution/ Scope**

   This system can apply any institution manage their students. When a student stop the course, automatically dropout that student. This system can warn students via email who will be dropout from the course in next few days.

4. **Project Assumptions and Constraints**

   - Assumptions
     - The code should be free of complication errors/syntax errors.
     - The employee must have an interface that is simple enough to understand.

5. **Methodologies going to be used.**

   Waterfall model is the methodological approach which will be used in the proposed system.
   - *STRENGTHS:*
     - Save Time
     - Save cost
     - No need experts
     - Reduce development time
     - Minimum errors
     - Allows modularization

6. **Weekly Basis Project Plan**

Java Project	start	end	
	08/01/22	08/31/22	
Identify and Select Project	08/01	08/01	
Proposal Submission	08/02	08/03	
Requirement Gathering Statement	08/04	08/05	
Process Design	08/06	08/07	
Database Design	08/08	08/09	
Logical Design	08/10	08/10	
SRS	08/11	08/12	
Development	08/13	08/22	
Testing	08/23	08/26	
Changes	08/27	08/29	
Riskdays	08/30	08/31	

7. **Supervisor**

8. **Approval**

Requirement Statement

Name of the Project:

Student Dropout System

Brief description about the Solution:

When a student stops a course, that student is withdrawn from the course. There will be a lot of time and problems for the employee doing it.Through this system the problems will be minimized and the student will be removed and managed.

User Requirements:

User Name	List of Requirements
Registration manager	1. Must have full permission to dropout and maintain the system.
	2. Allow to generate and access monthly reports.
	3. Dropout students if their attendance is very weak.

Vocational Training Authority Sri Lanka
NVTI-Baddegama
_____

Student Dropout System

SRS Document

ICT Level V
Software Programing Project 2022

JL/22/ICT5/1/0014

(P.G.J.Dihara)

Submitted to:

(Supervisor's signature)

…………………………..

Mr. Nishantha Gamage

Date of submission

Table of Contents

Revision History

Name	Date	Reason For Changes	Version

1. Introduction.

1.1 Purpose

SRS is the agreement document between the Client and the Software Developer. If   the SRS is written well, it will serve the following purposes.

Feedback to the customer - This software requirement specification assures the project management team and client that the development team has really understand the business requirements documentation properly.

This also provides confidence that the team will develop the functionally which has been detailed.

Breaking the Requirements Down - This document is document in such a way that it breaks the deliverables into smaller components which makes the participants in this project to understand what is to be done clearly.

Understanding what order the functionality will be developed means that developers will have the "BIG PICTURE" view of the development.

This gives us an opportunity to plan ahead which saves both PROJECT TIME and COST.

Facilitating Other Documentation - The SRS forms the basis for a load of other important documents such as the Software Design Specification.

Product Validation - It basically helps in validating with the client that the product which is being delivered meets what that they asked for.

That means the product we have produced is equal to the standards of the documentation in the SRS which the client satisfied and agreed on.

Characteristics of a Software Requirement Specification

1.1.1 Accuracy

We will ensure the accuracy of the Software and the data entered to the database.

1.1.2 Clarity

This SRS will be clearly stating what the user wants in the software.

1.1.3 Completeness

The SRS contains all the requirements stated in the business requirements documentation that the user specified.

1.1.4 Consistency

The document is consistent from beginning till the end. It helps the readers understand the requirements well.

1.1.5 Prioritizations of Requirements

The requirements will be full filed according to the order of priority and preference.

1.1.6 Verifiability

At the end of the project the user/client will be able to verify that all the agreed deliverables have in fact been produced and meet the project management requirements specified.

1.1.7 Modifiability

The SRS can be modified when the development team and user feel more things.

1.1.8 Traceability

Each requirement stated in the SRS is uniquely associated to a source such as a use case or interaction document etc.

1.2 Document of Conventions

This document is prepared by using Microsoft Word 2011 and has used the font type "CALIBRI". The fixed font size that has been used to type this document is **11pt,** 12**pt** and **14pt** with **1.15 line spacing.** It has used the **bold property**, **underline for main topics** and **black font color for sub topics.** All the pages except the cover page are numbered and the numbers appear on **the lower Left-hand corner** of the page. Every image and data table are numbered and referred to the main text.

Use case scenario is written accordingly to Alistair Cockburn's template. Standard IEEE template is the template used to organize the appearance of the document and its flow.

1.3 Intended Audience and Reading Suggestions

The intended audience of this document would be the client and project team, Supervisors with the objective to refer and analyze the information.

The SRS document can be used in any case regarding the requirements of the project and the solutions that have been taken.

1.4 Product Scope

The employee conducting the inspection through this project can use the necessary data through this application, which is expected to be created based on the data related to the absence of students. The employee will be given the opportunity to perform the duties using this application form regarding the absence of students in a course of an institution. After giving the information about the attendance of the students to the staff on duty, the staff will access this system and check the information and the absent students will be removed. After verifying the data recorded about the students' attendance, the student who does not come beyond the deadline will be removed. Names, enrollment numbers, e-mail addresses, addresses and telephone numbers of the concerned students are also included. The data of the students will be checked on the attendance and then displayed in the withdrawal system. The officer will be able to inform the concerned students as well.

1.5 References

[2]Lauesen, S, (2003), Task Descriptions as Functional Requirements, IEEE Computer Society, Available:http://www.itu.dk/~slauesen/Papers/IEEEtasks.pdf

2. Overall Description

2.1 Production Perspective

With the current problematic conditions in the institutions, there are problems such as delay in doing certain tasks. Through this project, the students who did not come to check the attendance of the students in a way that is more convenient for the institution will be removed and the institution's work will be done at low cost, in less time and better. Can be done with management.
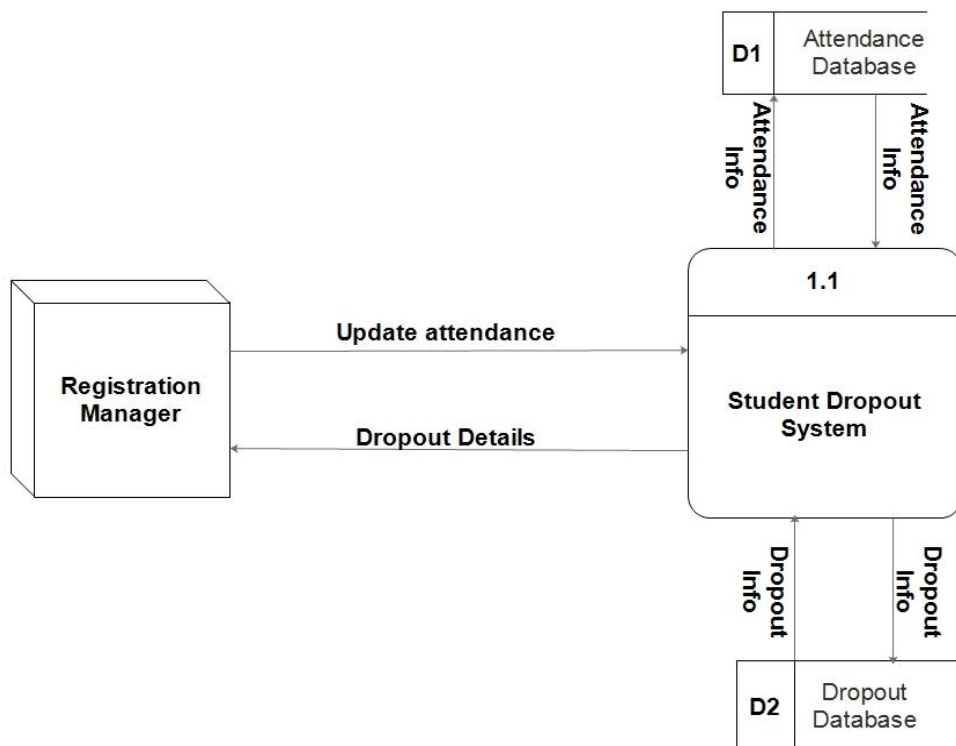
2.2 Production functions

Student Management
- Student Attendance and Entering Student details.

Student Absence Management
- Shows all details related to absent students.
- Absent students will be dropped by the system.

2.3

2.2.1 Figure

2.3 User Classes and Characteristics

- **Admin**

Admin has the full access to the system which means the is able to manage any activity with regard to the system. He is the highest privileged user who can access to the system.

Key Functions

- Viewing and editing relevant information.
- Delete dropout student
- Making policy changes

2.4 Operating Environment

Software Requirements.

- Front End   : Visual Studio .NET 2013 Professional Word 2019
- Back End   : Microsoft SQL Server 2014 Developer Edition
- Operating system   : WINDOWS 10
- Frame work   : .NET 4.5 & above

Hardware Requirements.

- I3
- 4GB RAM
- 500GB Hard Memory

2.5 Design & Implementation Constraints

- Only administrator can access the whole system.
- The entry and removal of data in the system can only be done by the officer in charge of the relevant work.
- Certain information required by the system can only be obtained from the relevant database and the data can be entered only by a valid officer

2.6 User Documentation

User Documentation As a part of the system itself a user documentation is provide to the customers which gives an over view of the system. It will include the full description about the product & complete orderly followed steps to install the software. The users will get the opportunity to use the system without having any trouble.

2.7 Project Documentation

Software Life Cycle Phase	Documentation	Intended Activities
Requirement Gathering, Analysis and Specification	• Project charter • Project proposal • Software requirement and Specification. (SRS)which includes. ✓ Entity relational diagram. ✓ Data flow Diagram.	Includes the customers expected software features, constrains, interfaces and other attributes. Moreover, the objective & the benefits gained through the system are clearly specified.
Software Design	• Software design description (SDD)	Describes the logical basis of design decisions taken & how it will give way in acquiring the requirement of the customer through the software.
Implementation	• Technical Documentation	Contains information regarding the implementation of the system using the programming concepts.
Software Testing	• Software test Documentation (STD)	Includes information degrading testing procedures to validate & verify the software results. Main types of techniques are unit testing, integration testing, system testing & acceptance testing.
Maintenance	• User Documentation	Includes manuals for the end user according to their position of action levels.

2.8 Assumptions and Dependencies

- Sever must be running for the system to function.
- Only the Administrator can delete records

3. External Interface Requirements

3.1 User Interfaces

Student Registration

Student JL

Student Name

| Save | Update | Delete | Clear |

Student JL	Student Name

NEXT

Student Attendance

StudentJL	Attendance mark
1	☐
10	☐
2	☐
3	☐
4	☐
5	☐
6	☐
7	☐
8	☐
9	☐

Submit

Back

NEXT

3.2 Hardware Interfaces

- **Laptop/Desktop PC**

    o Core i3 processor
    o 4GB ram
    o 500GB HDD

The purpose of this computer is to provide information when passengers ask for information about bus details and schedule times etc. A very efficient computer is required to perform such an operation. For

- **Wi-Fi router**

Wi-Fi router is used for internet work operations inside of a office and simple data transmission from pcs to server.

3.3 Software Interface.

Developing End

- Java
- Front end: PHP my admin
- Back end: Java Net Beans
- MySQL server- DB connectivity and management.

Client End

- Windows-OS

3.4 Communication Interfaces

The web system shall use the HTTPS protocol for communication over the internet and for the intranet communication.
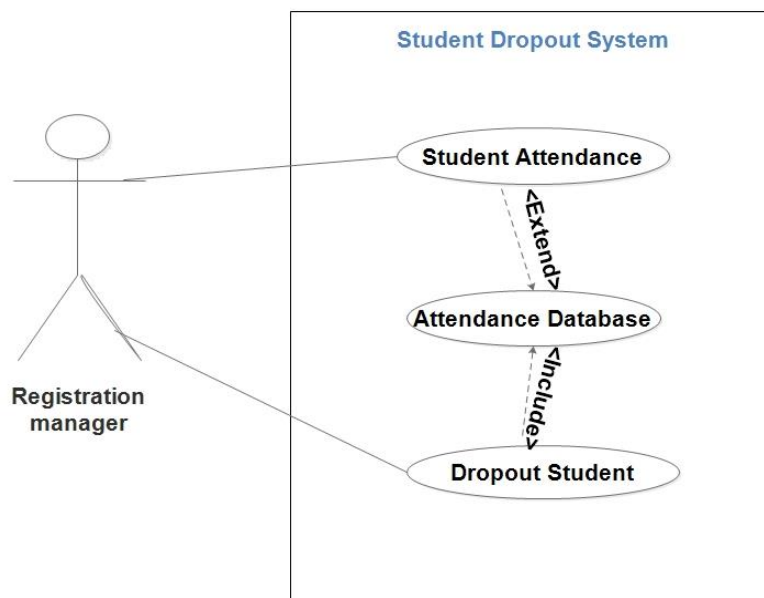
TCP/IP PROTOCOL- internet service provider to access and share information over the internet.

ETHERNET COMMUNICATIONS INTERFACE- Ethernet is a frame-based computer network technology for local area networks (LAN).
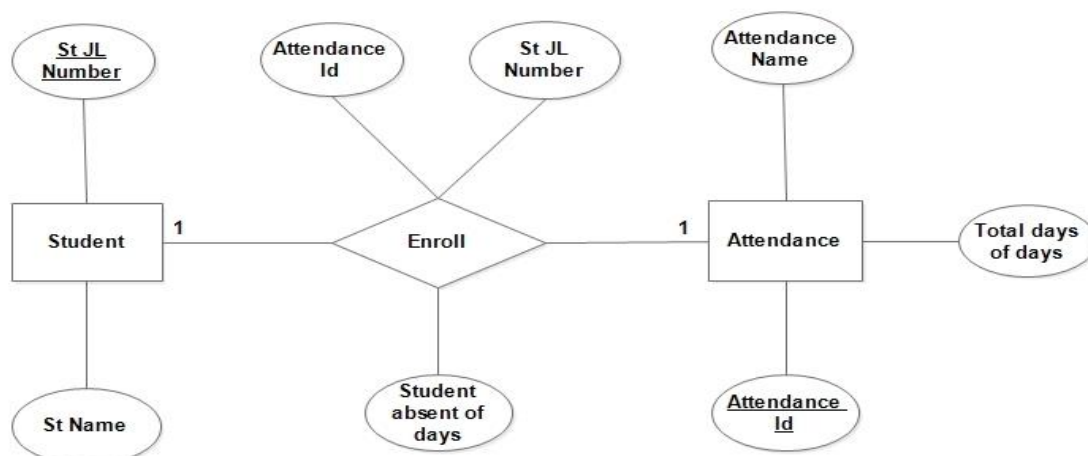
UBIQITORS- easy to set up and easy to use, low cost and high data transmission rates

4. System Features

USE CASE Diagram

ER Diagram

5. Other Nonfunctional Requirements

5.1 Performance Requirements
- No delayed actions in system
  - Quick load time between pressing Search button and being searching.
  - General quick load times for any page submission and page loading.
- Keep performance with multiple simultaneous connections.

5.2 Safety Requirements

We have taken two steps to prevent data damaged on the system for any reason.

- Update all data added to the system in Google drive.
- Maintaining another database in addition to the existing database in the system.

5.3 Security Requirements

Introducing the registration manager to use our system. Only he can access the system. He cannot modify and damage the valuable data of the system

5.4 Software Quality Attributes
- Availability: System service will be available 24 hours a day.
- Maintainability: System will be able to modify information, updates and fix problems of the system.
- Reliability: The system always works to provide an effective service to the users of the system.
- Stability: The system has the ability to give each user the required output for the desired input.

5.5 Business Rules

- We are not able to responsible for hardware failures malfunctioning.
- The warranty will be available for one year.
- Additional payments will be analyzed and charged for further maintenance
- If any error occurs due to a user's improper use, warranty will not be allocated to it.
- Must comply with the terms of the agreement within the agreed time frame.
- No money back returns for the software. If there is any issue, we will be able to solve that problem without any charge in warranty period.