Student Information System

A project report submitted to the department of Computer Science & Engineering of Sonargaon University (SU) in fulfillment of the requirements for the degree

of

Bachelor of Science in Computer Science & Engineering



Sonargaon University (SU)

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Sonargaon University

Date of Submission: 17 May, 2019



Department of Computer Science & Engineering

LETTER OF TRANSMITTAL

May 17, 2019

To

Sadia Tasnim Barsha

Lecturer

Department of Computer Science & Engineering

Sonargaon University (SU)

147/I, Green Road, Tejgaon, Dhaka-1215, Bangladesh.

Subject: Submission of Project Report.

Dear Madam,

This is the great pleasure that we are submitting here with the project of "student information system" It is an important topic. The project report has been done according to the requirement and guidelines of Sonargaon University (SU).

We hope that this report will certainly help you in evaluation our project report on "student information system" We Would be very glad to provide any assistance in interpreting any part of the paper, whenever necessary.

Thanking you

Md Uzzal Hossain

CSE1503006012

Group Leader



Department of Computer Science & Engineering

CERTIFICATION

This is to certify that the project paper on "Student Information System" is the confide record of project work done by Md Uzzal Hossain (Student ID: CSE1503006012) as a group Leader and others for partial fulfillment of the requirement of the degree of B.Sc. in Computer Science & Engineering from the Sonargaon University (SU).

This project work has been carried out under my guidance and is a record of successful work.

Supervisor

Sadia Tasnim Barsha

Lecturer

Department of Computer Science & Engineering

Sonargaon University (SU)

147/I, Green Road, Tejgaon, Dhaka-1215, Bangladesh.



Department of Computer Science & Engineering

DECLARATION

This is to declare that the work and material presented in the report has been carried out by us and has not previously been submitted to any University/College/Organization for any academic qualification.

We thereby ensure that the work that has been presented does not breach existing copyright. We undertake to identify the university against any loss or damage arising from breach of the foregoing obligation.

Thanking You Session 68

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Department of Computer Science & Engineering

LETTER OF ACCEPTANCE

This Project entitled "Student Information System" submitted By Md. Uzzal Hossain ID: CSE1503006012, Md. Saiful Islam Arif ID: CSE1503006002, Tareque Islam chowdhury ID: CSE1503006011, Farha Akter ID: CSE1503005002, Tinni Rahman ID: CSE1503006007 to the Department of Computer Science and Engineering, Sonargaon University, Dhaka, Bangladesh has been accepted as satisfactory for the partial fulfillment of the requirement for the degree of Bachelor of Science in Computer Science & Engineering and approved as to its style and contents.

Board of Examiners	
Examiner 1	Examiner 2
Examiner 3	Examiner 4
Examiner 5	Examiner 6



Department of Computer Science & Engineering

ACKNOWLEDGMENT

All praises and profound gratitude to the Almighty Allah who is the most beneficent and the most merciful for allowing great opportunity and ability to bring this effort to fruition safety and peacefully. We sincerely acknowledge and express my deep sense of gratitude to **Sadia Tasnim Barsha** (Lecturer) the guide of this project. As a guide, he gave maximum help and coordination in finishing the project work. With his past years of experience and teaching steered us to come out with success through the most difficult problems faced by us. His active interest in this topic and valuable advice was the source of the author's inspiration. We would like to place on record our deep sense of gratitude to our guides for their cooperation and unfailing courtesy to us at every stage.

We sincerely would like to thank all instructors and staffs of the Computer Science & Engineering Department of Sonargaon University (SU), Dhaka, which contributed in various ways to the completion of this project. Finally, we would like to express our deepest gratitude to our entire group member whose support and manual labor contributed in various ways for the completion of this thesis work.

Authors

Abstract

An organized and systematic solution is essential for all universities. There are many departments of administration for the maintenance of university information and student databases in any institution. All these departments provide various records regarding students and necessary information for a student. Most of these track records need to maintain information about the students and faculty. This information could be the general details like student, teacher, notice, result, feedback and specific information related to departments like collection of data. All the modules in university administration are interdependent. They are maintained manually. So, they need to be automated and centralized. For example, when a student needs any important lectures and education related document, this system able to provide. So, it needs to contact all the modules that are office, department and examination and result of students. Administrator and faculty using the system will find that the process of recording and retrieving student's information and managing their classes and provide educational resources for students. In general, this project aims to enhance efficiency and at the same time maintain information accurateness. Later in this report, features and improvement that allow achievement to this goal will be demonstrated and highlighted. Our work is useful for easy user interface. We are planning to utilize the powerful database management, data retrieval and data manipulation. We will provide more ease for managing the data than manually maintaining in the documents. Our work is useful for saving valuable time and reduces the huge paper work.

Keywords: Education, Database managements, student's database, students' academic performance, Results. Notice, Document management, Feedback, Session wise and course wise lecture.

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Chapter 1

Introduction

1.1 Introduction

Student Information System (SIS) deals with all kind of student details, academic related reports, course details, curriculum, batch details, session details, session and course wise lecture documents, teacher information and other resource related details too. It tracks all the details of a student from the day one to the end of his course which can be used for all reporting purpose, tracking of attendance, progress in the course, completed semesters years, coming semester year curriculum details, exam details, project or any other assignment details, important notices, feedback, final exam result etc.

The student Information system is an automated version of manual Student Information System.

Our design can facilitate us to explore all the activities happening in the college, even we can get to know which faculty is assigned to which course, the current status of a student, attendance percentage of a student and upcoming requirements of a student. The Student Information System is an automated version of manual Student Management System. It can handle all details about a student. The details include college details, subject details, student personnel details, academic details, exam details etc.

In case of manual system, they need a lot of time, manpower etc. Here almost all work is computerized. So, the accuracy is maintained. Maintaining backup is very easy. It can do with in a few minutes. Our system has three type of accessing modes, student, teacher and administrator. Student Information System is managed by an administrator. It is the job of the administrator to insert update and monitor the whole process. When a user logs in to the system. He/she would only view details of the student. He/she can't perform any changes. Our system has seven modules, they are administrator, student, course, department, exam, attendance, and section. These modules and its attributes with entity relationship module presented in the ER diagram section.

1.2 Project Top View

Project Id	SUSIS-01
Project Name	SU Student Information System
Project Manager	Sadia Tasnim Barsha
Project Quality Facilitator	Md Uzzal Hossain
Client Name	SU Student Information System
Project Category	Medium
Platform/ Technology Description	Platform-windows
(Operating system, database, language, front-	Technology-ASP .NET
end, etc.)	Database-SQL Server, Language – C#
Project Start Date	01/01/2019
Estimated Project End Date	16/05/2019
Total Estimated Calendar Days	82days
Total Estimated Size (say, QSU)	
Total Estimated Effort	

1.3 Project Scope, Objectives

- Student Information system is a management information system for education establishments to manage student data.
- Provide capabilities for registering students in courses, admitting students, tracking student attendance and submitting students' documents and Result.
- > Ensure data integrity, privacy, and security in an open-access environment.
- > To collect easily session wise and course wise lecture any time from online.

1.4 Motivation

- Student Information System is an online base software. So that, student collect their every course lecture and important document anytime from anywhere.
- Sometimes student collect their important file or document by pen drive. It is long time process and

file would be missing. The system is very secure. User can easily access and collect.

- Manage session and course wise document.
- Get student and teacher details.
- Manage and view feedback and notice.
- Show result, notice and another important document.

Chapter 2

Project Review

2.1 Project management

Project management skills are put to good use for this project. Having gone through project management modules in Time Series Analysis, Optimization and with two interns Project Management for Business and IT respectively, they enhanced my knowledge on managing a project. Project management focuses on achieving the objectives by applying five processes presented in Figure below.

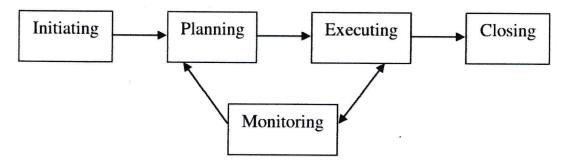


Figure 2.1: Project Development Phases

2.2 Student Information system

There are many software development companies that offer student management system for schools in the market. There are records on the past years projects on student management system is done by students. Through the researches, it is observed that there are features where this project can adopt and implement. One of it will be with addition of new course or class, or even upgrading of students to the next level, the school administrator can easily register all of them within a particular class into the new one using just a page and not having to register one at a time. With this feature, it helps administrator to save time as well as increase their efficiency.

Components

- Student features.
- Teacher features.
- Administrator features.

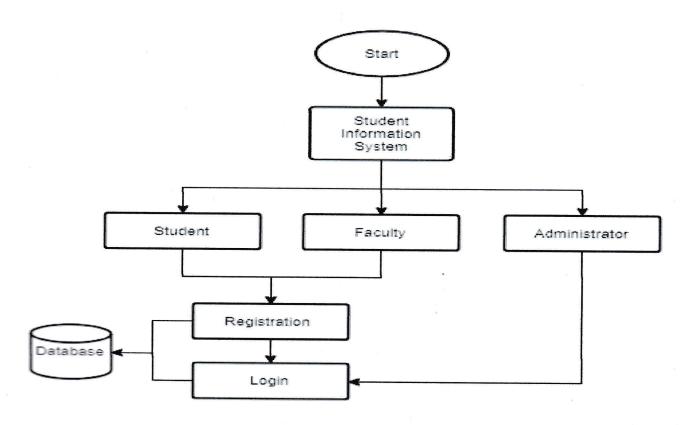


Figure 2.2.1: Data Flow Diagram for SIS Components

Roles or Features

- Document Management.
- Upload single file.
- Upload multiple file.
- > Session or Cabinet.
- > Course or Drawer.
- > Student Teacher details.
- Result.
- > Feedback.
- > Attendance.
- Notice.
- > Student Management.
- > Teacher Management.
- Batch.

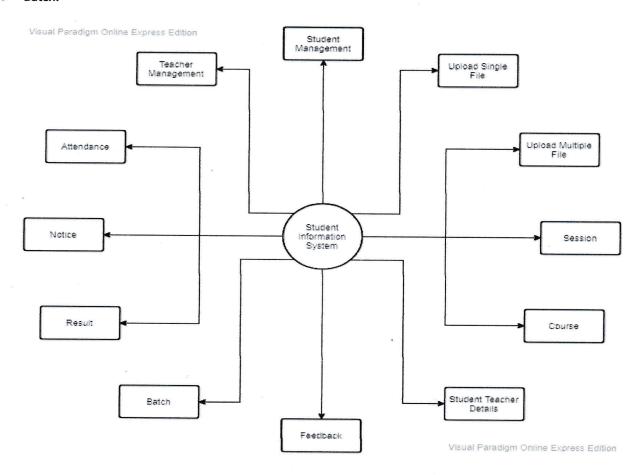


Figure 2.2.2: Data Flow Diagram for SIS Roles or Features

Student Features

- Document Management.
- Result.
- Feedback.
- > Attendance.
- Notice.
- Student Teacher details.

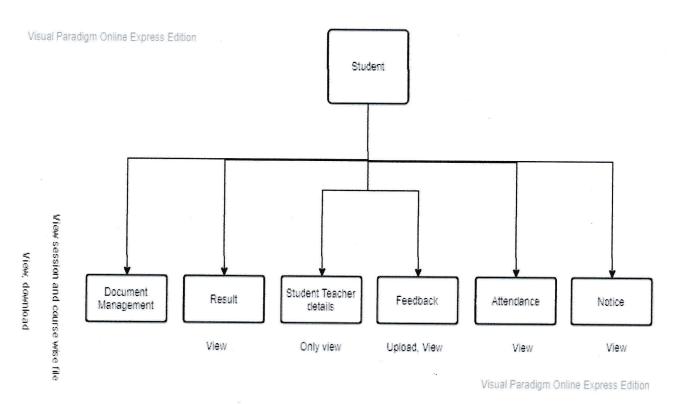


Figure 2.2.3: Data Flow Diagram for Student Features

Work Process:

- Firstly, Student registered SU Student Information System with their required all information.
- After registered SUSIS System then Login this system and get Home page (Document management).
- Document management module arrange session and course wise file. Suppose, Session-CSE0318-Neon(6B),
- Course- Software Engineering.

- Student can download and view their session and course wise file.
- > They search easily with all narrations. Suppose Section name, File Name, Subject Name etc.
- They send and receive feedback.
- Get semester result with details and generate mark sheet.
- Show notice.
- Get Student Teacher details information.

Teacher Features

- Document Management.
- Upload single file.
- Upload multiple file.
- Course or Drawer.
- Student Teacher details.
- Result.
- Feedback.
- > Attendance.
- Notice.

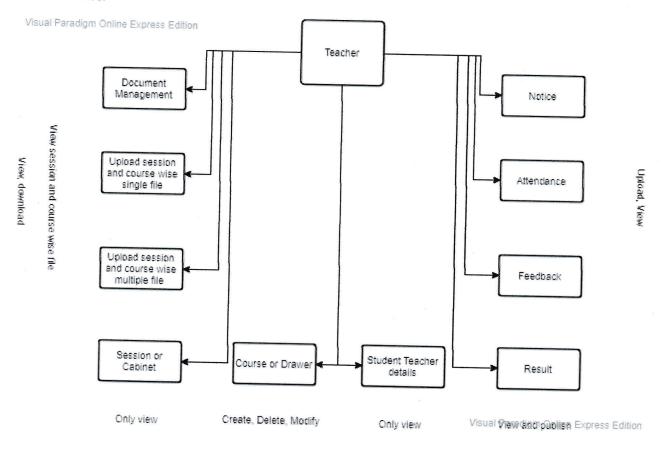


Figure 2.2.4: DFD for teacher

Work Process:

- > Firstly, registered SU Student Information System with their required all information.
- > After registered SUSIS System then Login this system and get Home page (Document management).
- Document management module arrange session and course wise file. Suppose, Session-CSE0318-Neon(6B),
- Course- Software Engineering.
- > Teacher can upload their session and course wise file.
- They search easily with all narrations. Suppose Section name, File Name, Subject Name etc.
- > They send and receive feedback.
- Published semester result session wise.
- Show notice.
- > Get Student Teacher details information.

Administrator Features

- > Administrator Features
- Document Management.
- Upload single file.
- Upload multiple file.
- Session or Cabinet.
- Course or Drawer.
- Student Teacher details.
- Result.
- > Feedback.
- Attendance.
- Notice.
- Student Management.
- Teacher Management.
- Batch.

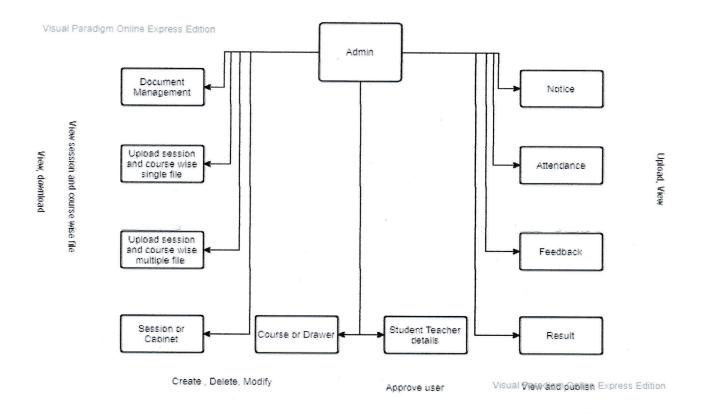


Figure 2.2.5: DFD for administrator

Work Process:

- Firstly, registered SU Student Information System with their required all information.
- > After registered SUSIS System then Login this system and get Home page (Document management).
- Document management module arrange session and course wise file. Suppose, Session-CSE0318-Neon(6B),
- Course- Software Engineering.
- Administrator get upload file system.
- Create session and course for upload file.
- Approved or denied user for login this system.
- Create batch.
- They search easily with all narrations. Suppose Section name, File Name, Subject Name etc.
- They send and receive feedback.
- Published semester result session wise.
- Show notice and Student Teacher details information.

Chapter 3

Resources

3.1 System Development life cycle

Systems Development Life Cycle (SDLC) is the most common process adopted to develop a project and not surprisingly, this project is following this model too. To be precise, waterfall model is being applied. Waterfall model is a sequential model process where the input of a phase actually results from the previous phase.

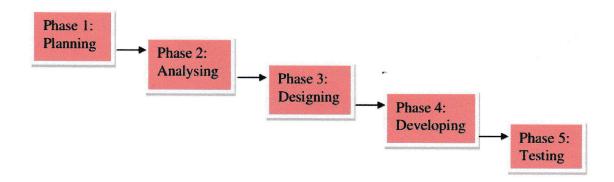


Figure 3.1: SDLC Phases

There are five phases in this model and the first phase is the planning stage. The planning stage determines the objectives of the project and whether the project should be given the green light to proceed. This is where the proposal submission comes into picture. After obtaining the approval, the next phase is analysis. Gathering and analyzing the system and user requirements is essential for entry to the design step.

With the user requirements gathering completed, there is a need to prepare the resources for the project. Be it software or hardware components, careful consideration and selection is to be taken care at this stage. The decision on the appropriate resources to be used is further elaborated under the subsections below. The next step is to design the system and database structure.

Results from the analysis and preparation that were concluded from the previous stage are put into action. With the user requirements in mind, the flow of the system is planned and

the user interface is designed to suit their easy navigation needs. In addition, the number of tables, attributes, primary and unique keys of the database is listed.

After completing the design, actual coding begins. Database is created and codes are written. Some of the codes required amendments and improvement to it so these are being developed at this fourth stage of the waterfall model. With the development completed, testing will begin. The codes and database are tested to ensure the results obtained are as intended. More time is spent on both development and testing stages because it is inevitable to have errors and issues and buffer time is allocated for troubleshooting.

Chapter 4

System Analysis and Design

4.1 Use case analysis

In order to provide a clearer picture of the functionality provided by the student management module, we have done a use case analysis. Figure below is a use case diagram to present the functionality in the student management module.

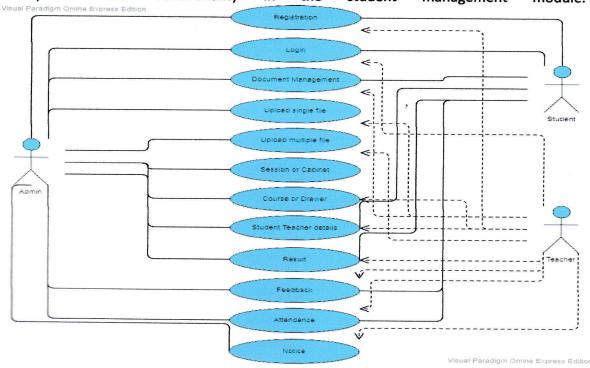
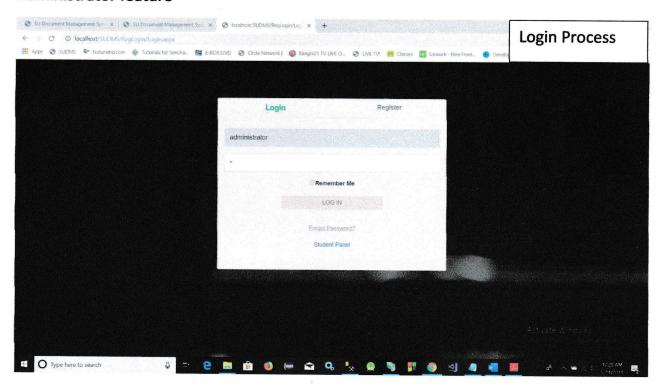
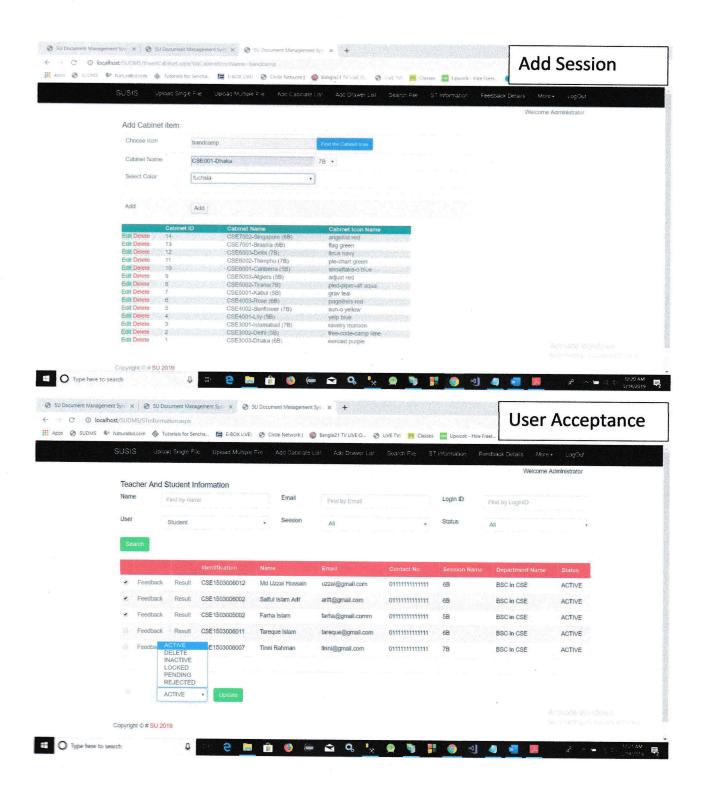


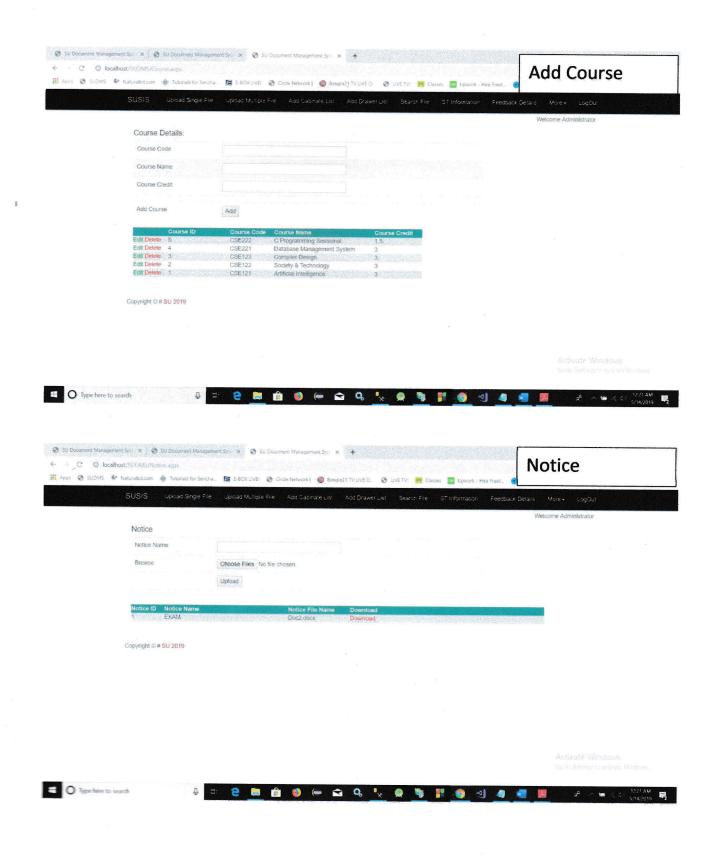
Figure 4.1: use case analysis

4.2 System Design

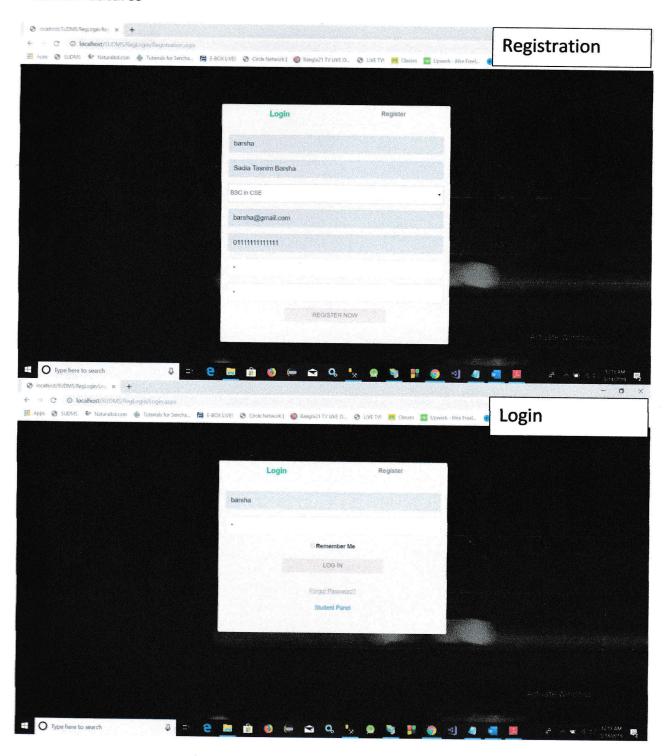
Administrator feature

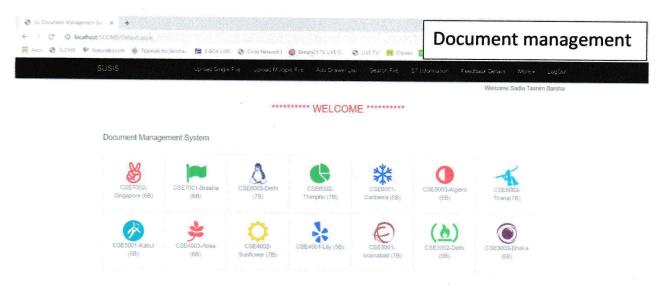




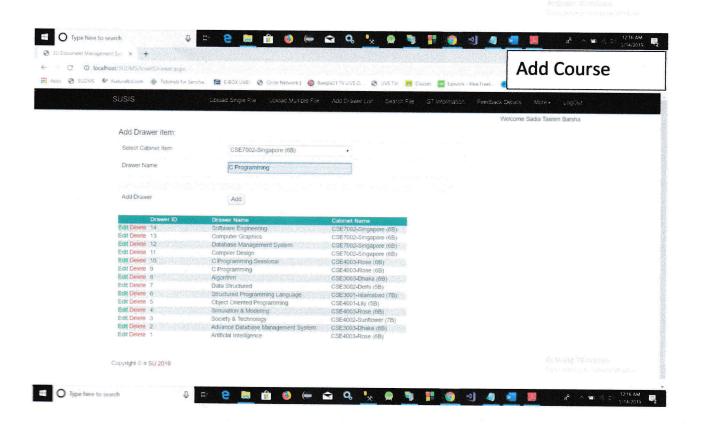


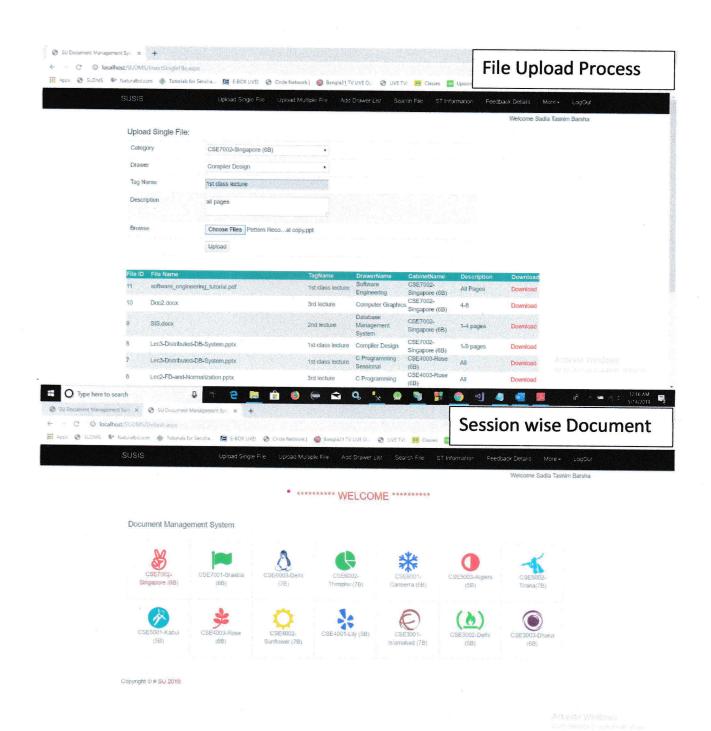
Teacher features





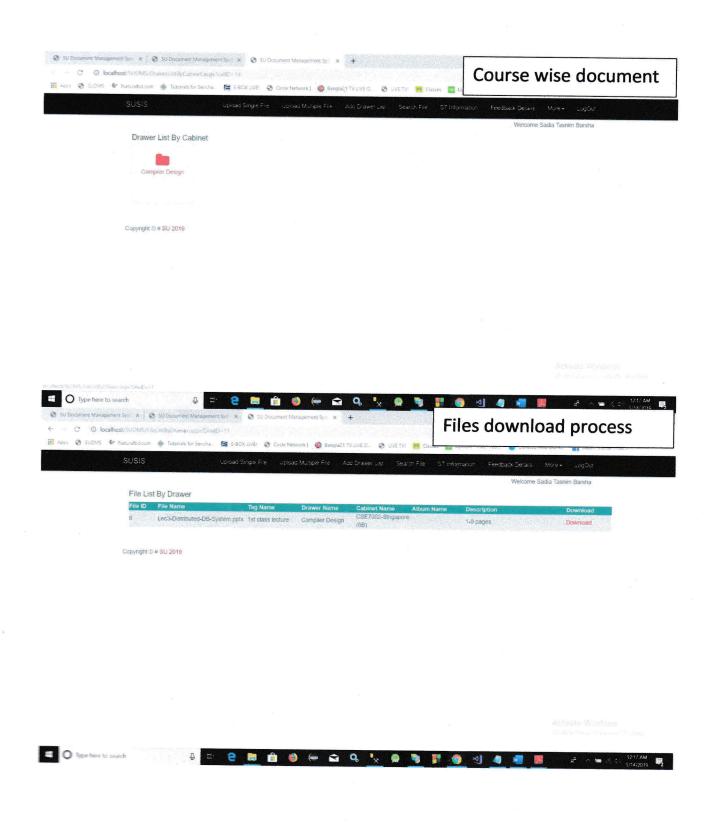
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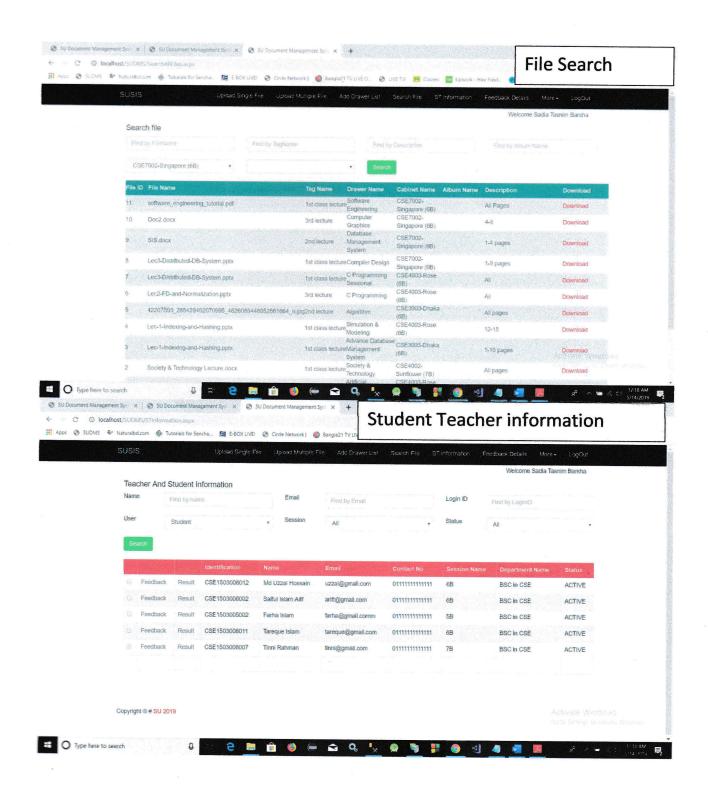


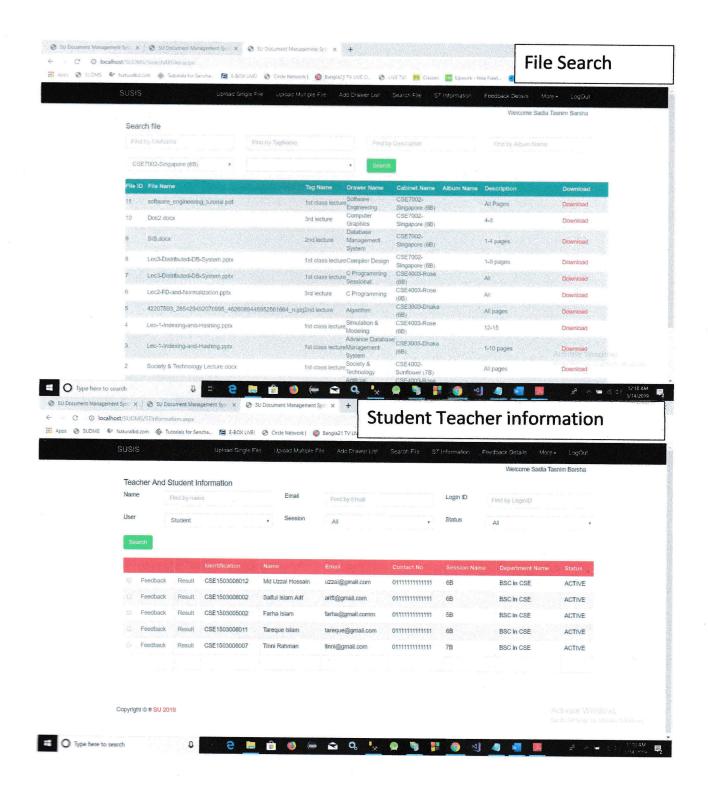


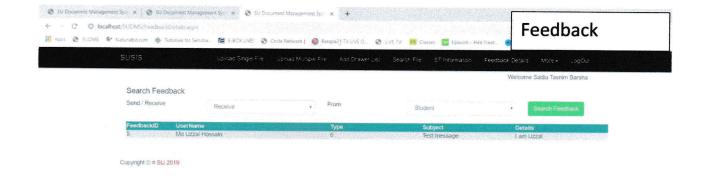
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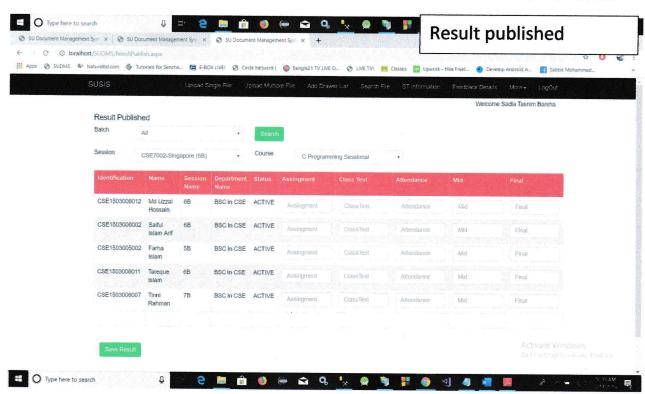


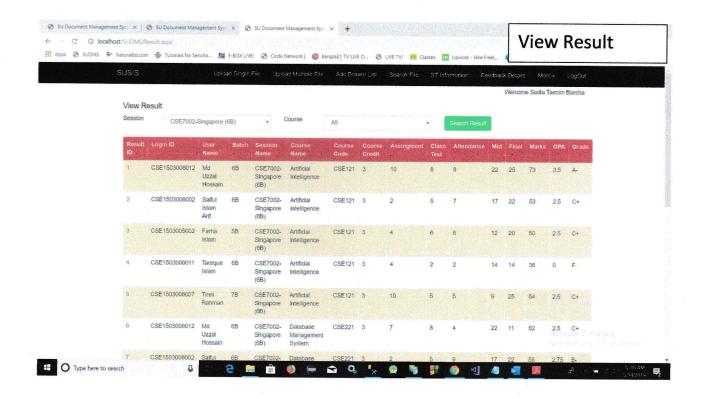




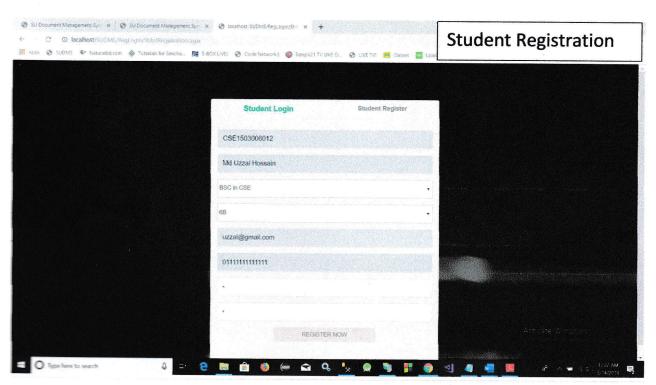


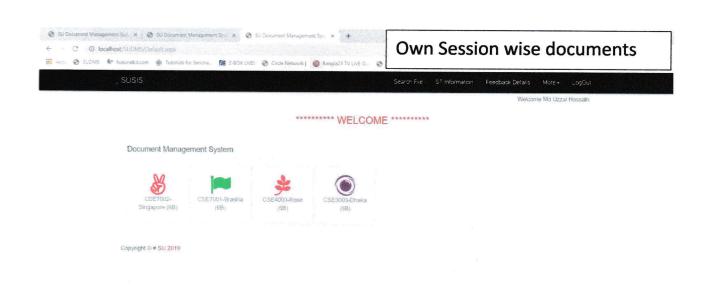
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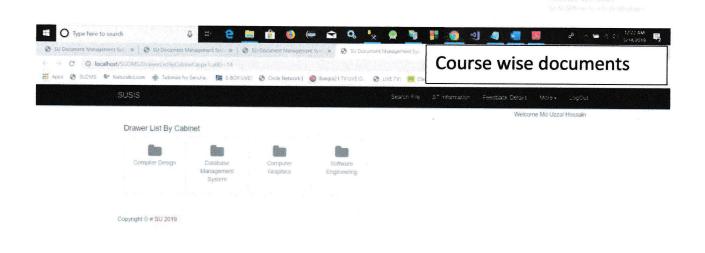




Student features

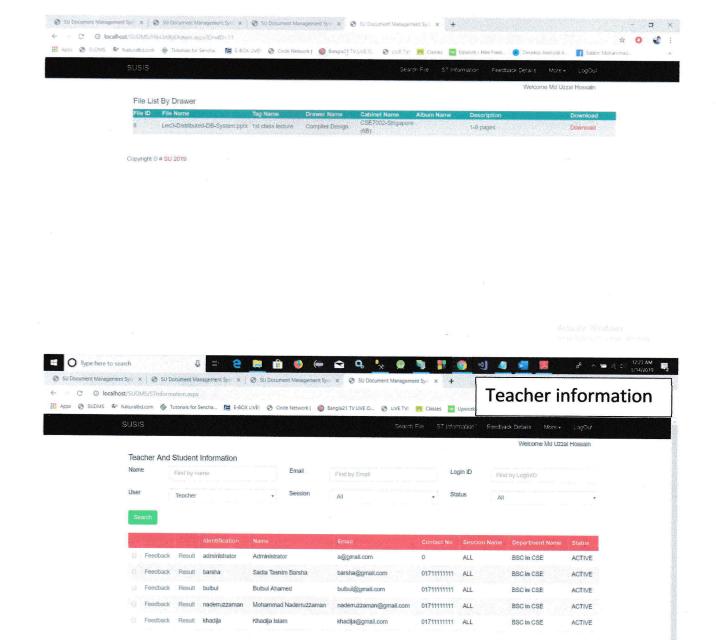








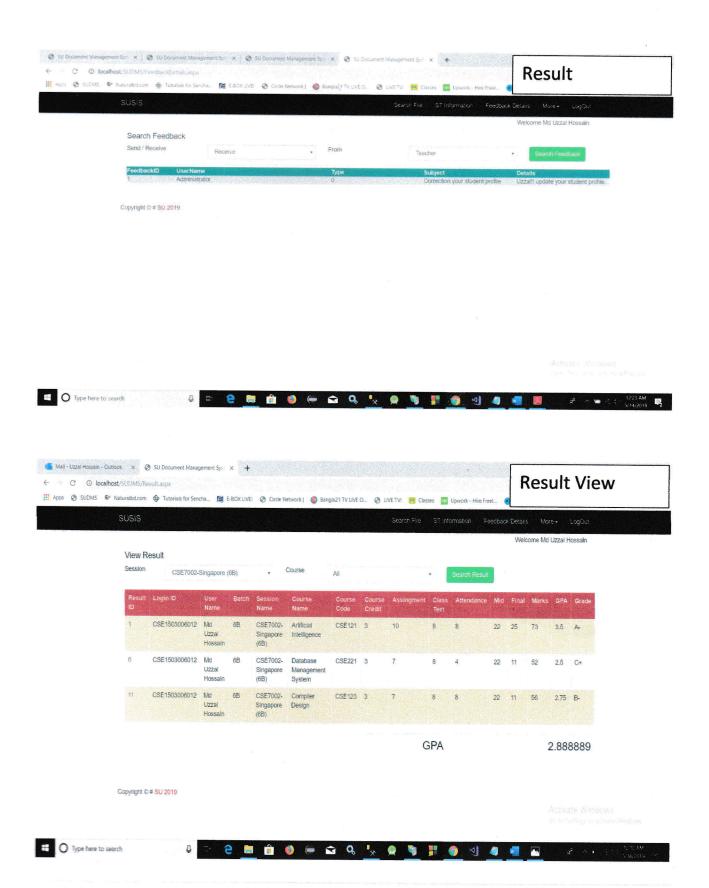
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Feedback



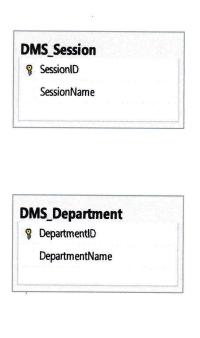
Chapter 5

Database Design and Development

5.1 Database design

ER Diagram







DMS_Color

ColorID

ColorName

DMS_lcon

8 IconID

IconName

DMS_Album **8** AlbumID

AlbumName

DMS_Cabinet

CabinetID

CabinetName

CabinetIconName

SessionID

UseriD

DMS_Files

₽ FileID

TagName

Description

FileName

FilePath

ContentType

Data

CatRefID

AlbumRefID

DrwRefID

SessionID

UserID

DMS_Course

CourseCode

CourseName

CourseCredit

DMS_Drawer

DrawerID

DrawerName

UserID

CatRefID

DMS_Feedback

Subject

Details

SenderID

SessionID

ReceiverID

ReceiverType

DMS_Result

ResultID

StudentID

SessionID SessionDetailsID

SessionDetailsName

CourselD

Credit

Assingment

ClassTest

Attendance

Mid

Final

Marks

GPA Grade

Status

DMS_Session

SessionID

SessionName

DMS_Status

StatusiD

StatusName

DMS_SessionDetails

SessionDetailsID

SessionDetailsName

5.2 Database development

Database creation script

CREATE DATABASE DMS

Database table creation scripts

```
SET ANSI NULLS ON
SET QUOTED_IDENTIFIER ON
SET ANSI_PADDING ON
CREATE TABLE [dbo].[Registration](
       [UserID] [int] IDENTITY(1,1) NOT FOR REPLICATION NOT NULL,
       [UserName] [varchar](50) NULL,
       [SessionID] [int] NULL,
       [DepartmentID] [int] NULL,
       [Email] [varchar](50) NULL,
       [ContactNo] [varchar](50) NULL,
       [LoginID] [varchar](50) NULL,
       [PasswordDate] [date] NULL,
       [Password] [nvarchar](50) NULL,
       [ConfirmPassword] [nvarchar](50) NULL,
       [IsLoginDMS] [bit] NULL,
       [IsActive] [bit] NULL,
       [StatusID] [int] NULL,
CONSTRAINT [PK Registration] PRIMARY KEY CLUSTERED
       [UserID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
ON [PRIMARY]
GO
SET ANSI PADDING OFF
SET ANSI NULLS ON
SET QUOTED_IDENTIFIER ON
SET ANSI_PADDING ON
CREATE TABLE [dbo]. [StdntRegistration](
       [UserID] [int] IDENTITY(1,1) NOT NULL,
       [UserName] [varchar](50) NULL,
```

```
[DepartmentID] [int] NULL,
       [SessionID] [int] NULL,
       [Email] [varchar](50) NULL,
       [ContactNo] [varchar](50) NULL,
       [LoginID] [varchar](50) NULL,
       [PasswordDate] [date] NULL,
       [Password] [nvarchar](50) NULL,
       [ConfirmPassword] [nvarchar](50) NULL,
       [IsLoginDMS] [bit] NULL,
       [IsActive] [bit] NULL,
       [StatusID] [int] NULL,
CONSTRAINT [PK_StdntRegistration] PRIMARY KEY CLUSTERED
       [UserID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
ON [PRIMARY]
GO
SET ANSI_PADDING OFF
GO
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
SET ANSI_PADDING ON
GO
CREATE TABLE [dbo].[DMS_Feedback](
       [FeedbackID] [int] IDENTITY(1,1) NOT NULL,
       [Subject] [varchar](100) NULL,
       [Details] [varchar](max) NULL,
       [SenderID] [int] NULL,
       [SessionID] [int] NULL,
       [ReceiverID] [int] NULL,
       [ReceiverType] [varchar](50) NULL,
CONSTRAINT [PK_DMS_Feedback] PRIMARY KEY CLUSTERED
       [FeedbackID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
) ON [PRIMARY] TEXTIMAGE_ON [PRIMARY]
SET ANSI_PADDING OFF
SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
SET ANSI_PADDING ON
```

```
CREATE TABLE [dbo].[DMS_Files](
        [FileID] [int] IDENTITY(1,1) NOT NULL,
        [TagName] [varchar](50) NULL,
        [Description] [varchar](100) NULL,
        [FileName] [varchar](50) NULL,
        [FilePath] [varchar](500) NULL,
        [ContentType] [nvarchar](50) NULL,
        [Data] [varbinary](max) NULL,
        [CatRefID] [int] NULL,
        [AlbumRefID] [int] NULL,
        [DrwRefID] [int] NULL,
        [SessionID] [int] NULL,
        [UserID] [int] NULL,
 CONSTRAINT [PK_DMS_Files] PRIMARY KEY CLUSTERED
        [FileID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
ON [PRIMARY] TEXTIMAGE_ON [PRIMARY]
SET ANSI PADDING OFF
GO
SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
SET ANSI PADDING ON
CREATE TABLE [dbo].[DMS_Result](
        [ResultID] [int] IDENTITY(1,1) NOT NULL,
        [StudentID] [int] NULL,
        [SessionID] [int] NULL,
        [SessionDetailsID] [int] NULL,
        [SessionDetailsName] [varchar](50) NULL,
        [CourseID] [int] NULL,
        [Credit] [float] NULL,
        [Assingment] [int] NULL,
        [ClassTest] [int] NULL,
        [Attendance] [int] NULL,
        [Mid] [int] NULL,
        [Final] [int] NULL,
        [Marks] \ AS \ (((([Assingment]+[ClassTest])+[Attendance])+[Mid])+[Final]),
        [GPA] [float] NULL,
        [Grade] [varchar](10) NULL,
        [Status] [bit] NULL,
CONSTRAINT [PK_DMS_Result] PRIMARY KEY CLUSTERED
        [ResultID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
ON [PRIMARY]
```

Store procedure creation scripts

```
USE [DMS]
/***** Object: StoredProcedure [dbo].[DMS_GetAllFile] Script Date: 5/13/2019 8:36:51 PM *****/
SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
CREATE PROCEDURE [dbo].[DMS_GetAllFile]
BEGIN
        SELECT
                         FileID,
                         TagName.
                         [Description],
                         [FileName],
                         ContentType,
                         Data,
                         DR.DrawerName,
                         C.CabinetName,
                         A.AlbumName
         FROM [dbo].[DMS Files] D
         LEFT JOIN [dbo].[DMS_Cabinet] C on C.CabinetID = D.CatRefID
         LEFT JOIN [dbo].[DMS_Album] A on A.AlbumID = D.AlbumRefID
         LEFT JOIN [dbo].[DMS_Drawer] DR on DR.DrawerID = D.DrwRefID
         ORDER BY FIIeID DESC
        SET NOCOUNT ON:
END
/***** Object: StoredProcedure [dbo].[DMS_GetResultMarkSheetByResultID] Script Date: 5/13/2019 8:36:51 PM *****/
SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
CREATE PROCEDURE [dbo].[DMS_GetResultMarkSheetByResultID]
        @ResultID int
AS
BEGIN
```

```
SELECT [ResultID]
         ,S.LoginID
          ,S.UserName
          ,SE.SessionName Batch
          ,SD.SessionDetailsName
   ,C.CourseName
         ,C.CourseCode
         ,C.CourseCredit
   ,[Assingment]
   ,[ClassTest]
   ,[Attendance]
   ,[Mid]
   ,[Final]
   ,[Marks]
   ,[GPA]
   [Grade]
 FROM [DMS].[dbo].[DMS_Result] R
 LEFT JOIN DMS.dbo.StdntRegistration S ON S.UserID=R.StudentID
 LEFT JOIN DMS.dbo.DMS_Course C ON C.CourseID=R.CourseID
 LEFT JOIN DMS.dbo.DMS_SessionDetails SD ON SD.SessionDetailsID=R.SessionDetailsID
 LEFT JOIN DMS.dbo.DMS_Session SE ON SE.SessionID=S.SessionID
 WHERE R.ResultID=@ResultID
         --ORDER BY FIIeID DESC
        SET NOCOUNT ON;
END
/***** Object: StoredProcedure [dbo].[DMS_SaveResult] Script Date: 5/13/2019 8:36:51 PM *****/
SET ANSI_NULLS ON
SET QUOTED_IDENTIFIER ON
GO
CREATE PROCEDURE [dbo].[DMS_SaveResult]
                         @xmlResult
                                                          xml,
                         @SessionDetailsIDint,
                         @CourseID
                                                          int,
                         @ResultID
                                                          int
                                                                  OUTPUT
```

AS BEGIN

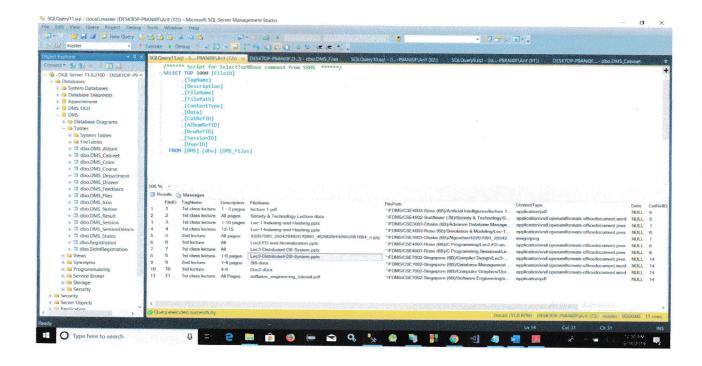
```
BEGIN TRANSACTION
        BEGIN
INSERT INTO [DMS].[dbo].[DMS Result]
                StudentID,
                SessionDetailsID.
                CourseID,
                Assingment,
                ClassTest,
                Attendance.
                Mid,
                Final,
                [Status]
        SELECT doc.c.value('@StdID', 'int'),
        @SessionDetailsID,
  @CourseID,
        doc.c.value('@Assingment','int'),
        doc.c.value('@ClassTest','int'),
        doc.c.value('@Attendance','int'),
        doc.c.value('@Mid','int'),
        doc.c.value('@Final','int'),
        0
        FROM @xmlResult.nodes('/publishResult/results')doc(c)
        SET @ResultID = @@IDENTITY
        END
COMMIT TRANSACTION
BEGIN TRANSACTION
        UPDATE DMS Result
        SET Grade = CASE
        WHEN Marks >= 80 THEN 'A+'
        WHEN Marks>=75 AND Marks<80 THEN 'A'
        WHEN Marks>=70 AND Marks<75 THEN 'A-'
        WHEN Marks>=65 AND Marks<70 THEN 'B+'
        WHEN Marks>=60 AND Marks<65 THEN 'B'
        WHEN Marks>=55 AND Marks<60 THEN 'B-'
        WHEN Marks>=50 AND Marks<55 THEN 'C+'
        WHEN Marks>=45 AND Marks<50 THEN 'C'
        WHEN Marks>=40 AND Marks<45 THEN 'D'
        ELSE 'F' END.
        GPA = CASE
        WHEN Marks >= 80 THEN 4.00
        WHEN Marks>=75 AND Marks<80 THEN 3.75
        WHEN Marks>=70 AND Marks<75 THEN 3.50
        WHEN Marks>=65 AND Marks<70 THEN 3.25
        WHEN Marks>=60 AND Marks<65 THEN 3.00
        WHEN Marks>=55 AND Marks<60 THEN 2.75
        WHEN Marks>=50 AND Marks<55 THEN 2.50
       WHEN Marks>=45 AND Marks<50 THEN 2.25
       WHEN Marks>=40 AND Marks<45 THEN 2.00
```

ELSE 0.00 END
WHERE GRADE IS NULL

COMMIT TRANSACTION

END

Database table with value



Chapter 6

Project Management

6.1 Work breakdown structure

The Work Breakdown Structure provides a clear picture of the items that are required to be completed for the project work scope. It is arranged in a tree structure manner to show all sub-sections required to be accomplished in each phase throughout the project.

6.2 Risk management

Every project has uncertainties and they may affect the project success. These uncertainties are known as risk. There is a need to determine the risks involved in the project to reduce the chance of its occurrence as well as develop a plan to either mitigate or avoid the risks that have been identified.

After identifying and determining the risks, they are recorded in a table called the risk assessment matrix. This matrix lists the severity which is also known as the impact level in terms of High, Medium and Low. In addition to those details, the action plan that can be taken for each of the risks is clearly stated too.

Risk Event	Consequence	Probability	Impact	Risk Response Plan
Incompatible software application with the operating system	Delay in system implementation	Medium	Medium	a) To source for other software applications that is compatible with the operating system b) To find another workstation
User requirements keep changing	More time is required as modification is to be done throughout the whole project period thus unable to meet expected deadline of each phase	Medium	High	a) To check with user on the requirements frequently b) To allocate more time for the development/implementation and testing stage
Difficulties with the coding	Delay in system implementation	Medium	Medium	a) To research more on PHP language and MySQL via sources such as books and tutorial websites
User do not accept the system	Unable to satisfy objectives and complete the project	Low	High	a) Make a check with the user after implementation to ensure the system functioned as per request

Figure 6.2: Risk Assessment Matrix

Chapter 7

Conclusions

7.1 Conclusions

It is concluded that automation of existing student information system, such as the delivery of enrolment procedures and keeping the records of students information such as: keeping of admission requirements during enrolment, personal information, student subjects enrolled and class schedules, and knowing the overall performance of students will maximize the utilization of the full range of benefits of Information and Communications Technology.

In a nutshell, all the stakeholders, such as the faculty members, students and the administrators found that the developed Student Information System had met their expectations with regards to the student information system.

7.2 Limitation

Without internet the system does not work.

7.3 Future work

- > Student will be able to want their credit completion status.
- Student will be able to request get extra credit.
- Manage student fee payment and discounts. Information on if the student needs financial aid and other debt management.
- Manage all information related to rooms, mess, goods, etc. Track details of menu, reduce food expenses and optimize room allocation.

- Maintain student's every day attendance period wise. Generate attendance related reports on-demand for the stakeholders.
- It will be including questionaries' management system.

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Appendix

Source Code

Student Registration

```
using SUDMS.DAC;
using System;
using System.Collections.Generic;
using System.Data.SqlClient;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace SUDMS.RegLogin
    public partial class StdntRegistration : System.Web.UI.Page
        protected void Page_Load(object sender, EventArgs e)
            if (!IsPostBack)
            {
                BindDepartmentList();
                BindSessionList();
            }
       }
        private void BindSessionList()
            AppDB db = new AppDB();
            ddlSession.DataSource = db.GetSession();
            ddlSession.DataBind();
            ddlSession.Items.Add(new System.Web.UI.WebControls.ListItem("All", "0"));
            ddlSession.SelectedValue = "0";
       private void BindDepartmentList()
           AppDB db = new AppDB();
            ddlDepartment.DataSource = db.GetDepartment();
            ddlDepartment.DataBind();
       }
       protected void Regbtn_Click(object sender, EventArgs e)
            string UserName = txtUserName.Text;
            int DepartmentID = Convert.ToInt32(ddlDepartment.SelectedValue);
           int SessionID = Convert.ToInt32(ddlSession.SelectedValue);
           string Email = txtEmail.Text;
           string ContactNo = txtContactNo.Text;
```

```
string LoginID = txtLoginID.Text;
            string Password = txtPassword.Text;
            string ConfirmPassword = txtConfirmPassword.Text;
            lblMessage.Text = "";
            if (Page.IsValid)
            {
                if (txtPassword.Text != txtConfirmPassword.Text)
                    lblMessage.Text = "Password was not confirmed.";
                }
                else
                {
                    UserDB db = new UserDB();
                    try
                    {
                        db.InsertStdntUser(UserName, DepartmentID, SessionID,
Email, ContactNo, LoginID, Password, ConfirmPassword);
                        txtUserName.Text = "";
                        txtEmail.Text = "";
                        txtLoginID.Text = "";
                        lblMessage.Text = "Registration complete";
                        lblMessage.CssClass = "alert-success";
                    }
                    catch (SqlException ex)
                        //lblMessage.Text = "Connection Failed";
                        lblMessage.Text = ex.Message;
                }
           }
       }
   }
}
```

Result Published

```
using SUDMS.DAC;
using System;
using System.Collections.Generic;
using System.Data;
using System.Data.SqlClient;
using System.IO;
using System.Linq;
using System.Text;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Xml;
namespace SUDMS
{
```

```
public partial class WebForm14 : System.Web.UI.Page
    protected void Page_Load(object sender, EventArgs e)
    {
        if (!IsPostBack)
       {
            BindUser();
            BindSessionList();
            BindCabinetList();
           BindCourse();
       }
   }
   private void BindCourse()
       AppDB db = new AppDB();
       ddlCourse.DataSource = db.GetCourse();
       ddlCourse.DataBind();
   }
   private void BindCabinetList()
       AppDB db = new AppDB();
       ddlCabinet.DataSource = db.GetCabinet();
       ddlCabinet.DataBind();
   }
   private void BindUser()
       UserDB db = new UserDB();
       MyDataGrid1.DataSource = db.BindUser();
       MyDataGrid1.DataBind();
   }
   private void BindSessionList()
       UserDB db = new UserDB();
       ddlSession.DataSource = db.GetSessionSearch();
       ddlSession.DataBind();
       ddlSession.Items.Add(new System.Web.UI.WebControls.ListItem("All", "0"));
       ddlSession.SelectedValue = "0";
   }
   protected void btnFind_Click(object sender, EventArgs e)
       int SessionID = Int32.Parse(ddlSession.SelectedItem.Value);
       AppDB db = new AppDB();
       MyDataGrid1.DataSource = db.GetStudentBySessionID(SessionID);
       MyDataGrid1.DataBind();
   public void btnSaveResult_Click(object sender, EventArgs e)
       int CabinetID = Int32.Parse(ddlCabinet.SelectedValue);
```

```
int CourseID = Int32.Parse(ddlCourse.SelectedItem.Value);
            StringBuilder xmlResult = new StringBuilder();
            using (XmlWriter writer = new XmlTextWriter(new StringWriter(xmlResult)))
                writer.WriteStartElement("publishResult");
                foreach (DataGridItem row in MyDataGrid1.Items)
                    writer.WriteStartElement("results");
                    string UserID = MyDataGrid1.DataKeys[row.ItemIndex].ToString();
                    TextBox txtAssingment = row.Cells[1].FindControl("txtAssingment") as
TextBox:
                    TextBox txtClassTest = row.Cells[2].FindControl("txtClassTest") as
TextBox:
                    TextBox txtAttendance = row.Cells[3].FindControl("txtAttendance") as
TextBox;
                    TextBox txtMid = row.Cells[4].FindControl("txtMid") as TextBox:
                    TextBox txtFinal = row.Cells[5].FindControl("txtFinal") as TextBox;
                    //writer.WriteStartElement("minnute");
                    //writer.WriteAttributeString("MinID",
dk.Values["MinID"].ToString());
                    writer.WriteAttributeString("StdID", UserID.Trim().ToString());
                    writer.WriteAttributeString("Assingment",
txtAssingment.Text.Trim().ToString());
                    writer.WriteAttributeString("ClassTest",
txtClassTest.Text.Trim().ToString());
                    writer.WriteAttributeString("Attendance",
txtAttendance.Text.Trim().ToString());
                    writer.WriteAttributeString("Mid", txtMid.Text.Trim().ToString());
                    writer.WriteAttributeString("Final",
txtFinal.Text.Trim().ToString());
                    writer.WriteEndElement();
                writer.WriteEndElement();
            AppDB db = new AppDB();
            db.SaveResult(xmlResult.ToString(), CabinetID, CourseID);
            lblMessage.Text = "Successfully result save";
           BindUser();
```

Results View

```
using SUDMS.DAC;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
namespace SUDMS
{
    public partial class WebForm13 : System.Web.UI.Page
        protected void Page_Load(object sender, EventArgs e)
            if (!IsPostBack)
                //BindUser();
                //BindSessionList();
                BindCabinetList();
                BindCourse();
                int UserID = Int32.Parse(Request.Cookies["UserID"].Value);
                int SessionID = Int32.Parse(Request.Cookies["SessionID"].Value);
                if (SessionID == 0)
                {
                    BindResult();
                }
                else
                {
                    BindResultByStudent(UserID);
           }
       }
       private void BindResultByStudent(int UserID)
            AppDB db = new AppDB();
           GridView2.DataSource = db.BindResultByStudent(UserID);
           GridView2.DataBind();
       }
       private void BindResult()
           AppDB db = new AppDB();
           GridView2.DataSource = db.BindResult();
           GridView2.DataBind();
       private void BindCourse()
           AppDB db = new AppDB();
           ddlCourse.DataSource = db.GetCourse();
           ddlCourse.DataBind();
           ddlCourse.Items.Add(new System.Web.UI.WebControls.ListItem("All", "0"));
           ddlCourse.SelectedValue = "0";
```

```
}
        private void BindCabinetList()
            AppDB db = new AppDB();
            ddlCabinet.DataSource = db.GetCabinet();
            ddlCabinet.DataBind();
            //ddlCabinet.Items.Add(new System.Web.UI.WebControls.ListItem("All", "0"));
            //ddlCabinet.SelectedValue = "0";
        }
        protected void GridView1_PageIndexChanging(object sender, GridViewPageEventArgs
e)
        {
            GridView2.PageIndex = e.NewPageIndex;
            BindResult();
            GridView2.DataBind();
        }
        protected void GridView2_RowCancelingEdit(object sender,
GridViewCancelEditEventArgs e)
            GridView2.EditIndex = -1;
            BindResult();
        }
        protected void GridView2_RowDeleting(object sender, GridViewDeleteEventArgs e)
        protected void GridView2_RowEditing(object sender, GridViewEditEventArgs e)
            GridView2.EditIndex = e.NewEditIndex;
            BindResult();
        protected woid GridView2_RowUpdating(object sender, GridViewUpdateEventArgs e)
        protected void GridView1_RowCancelingEdit(object sender,
GridViewCancelEditEventArgs e)
        {
            GridView2.EditIndex = -1;
            BindResult();
        protected void SearchResult_Click(object sender, EventArgs e)
            int UserID = Int32.Parse(Request.Cookies["UserID"].Value);
            int SessionID = Int32.Parse(Request.Cookies["SessionID"].Value);
            int CabinetID = Int32.Parse(ddlCabinet.SelectedItem.Value);
            int CourseID = Int32.Parse(ddlCourse.SelectedItem.Value);
            AppDB db = new AppDB();
```

```
if(SessionID==0)
{
         GridView2.DataSource = db.SearchResult(CabinetID, CourseID);
         GridView2.DataBind();
}
else
{
         GridView2.DataSource = db.SearchResultByStudent(CabinetID, CourseID,UserID);
         GridView2.DataBind();
}
}
```

Create table and store procedure

```
USE [DMS]
SET ANSI NULLS ON
GO
SET QUOTED IDENTIFIER ON
GO
SET ANSI PADDING ON
60
CREATE TABLE [dbo].[DMS_Result](
       [ResultID] [int] IDENTITY(1,1) NOT NULL,
      [StudentID] [int] NULL,
[SessionID] [int] NULL,
       [SessionDetailsID] [int] NULL,
      [SessionDetailsName] [varchar](50) NULL,
      [CourseID] [int] NULL,
      [Credit] [float] NULL,
      [Assingment] [int] NULL,
      [ClassTest] [int] NULL,
      [Attendance] [int] NULL,
      [Mid] [int] NULL,
      [Final] [int] NULL,
      [Marks] AS (((([Assingment]+[ClassTest])+[Attendance])+[Mid])+[Final]),
      [GPA] [float] NULL,
      [Grade] [varchar](10) NULL,
      [Status] [bit] NULL,
CONSTRAINT [PK_DMS_Result] PRIMARY KEY CLUSTERED
      [ResultID] ASC
MAITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF,
ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
) ON [PRIMARY]
```

```
SET AMSI_PADDING OFF
 /****** Object: StoredProcedure [dbo].[DMS_GetResultByStudent] Script Date: 5/15/2019
 11:18:02 PM *****/
 SET ANSI_NULLS ON
 60
SET QUOTED_IDENTIFIER ON
CREATE PROCEDURE [dbo].[DMS_GetResultByStudent]
AS
BEGIN
       SELECT [ResultID]
         ,S.LoginID
         , S. UserName
         ,SE.SessionName Batch
         ,CB.CabinetName
       ,C.CourseName
         , C. CourseCode
         , C. CourseCredit
      ,[Assingment]
      ,[ClassTest]
      ,[Attendance]
      ,[Mid]
      ,[Final]
      ,[Marks]
      ,[GPA]
      ,[Grade]
  FROM [DMS].[dbo].[DMS_Result] R
  LEFT JOIN DMS.dbo.StdntRegistration S ON S.UserID=R.StudentID
  LEFT JOIN DMS.dbo.DMS_Course C ON C.CourseID=R.CourseID
  LEFT JOIN DMS.dbo.DMS_Cabinet CB ON CB.CabinetID=R.SessionDetailsID
  LEFT JOIN DMS.dbo.DMS_Session SE ON SE.SessionID=S.SessionID
  WHERE R.StudentID=@UserID
         --ORDER BY FileID DESC
       SET NOCOUNT ON;
END
/****** Object: StoredProcedure [dbo].[DMS_SaveResult] Script Date: 5/15/2019
11:18:02 PM *****/
SET ANSI_NULLS ON
GD
SET QUOTED_IDENTIFIER ON
CREATE PROCEDURE [dbo].[DMS_SaveResult]
```

```
@xmlResult
                                              xml,
                @CabinetID
                                              int,
                @CourseID
                                              int,
                @ResultID
                                              int
                                                      OUTPUT
BEGIN TRANSACTION
        BEGIN
 INSERT INTO [DMS].[dbo].[DMS Result]
               StudentID,
               SessionDetailsID,
               CourseID,
               Assingment,
               ClassTest,
               Attendance,
               Mid,
               Final,
               [Status]
       SELECT doc.c.value('@StdID', 'int'),
       @CabinetID,
    @CourseID,
       doc.c.value('@Assingment','int'),
doc.c.value('@ClassTest','int'),
doc.c.value('@Attendance','int'),
       doc.c.value('@Mid','int'),
       doc.c.value('@Final','int'),
       FROM @xmlResult.nodes('/publishResult/results')doc(c)
       SET @ResultID = @@IDENTITY
       END
COMMIT TRANSACTION
BEGIN TRANSACTION
       UPDATE DMS Result
       SET Grade = CASE
       WHEN Marks >= 80 THEN 'A+'
       WHEN Marks>=75 AND Marks<80 THEN 'A'
       WHEN Marks>=70 AND Marks<75 THEN 'A-'
       WHEN Marks>=65 AND Marks<70 THEN 'B+'
       WHEN Marks>=60 AND Marks<65 THEN 'B'
       WHEN Marks>=55 AND Marks<60 THEN 'B-'
       WHEN Marks>=50 AND Marks<55 THEN 'C+'
       WHEN Marks>=45 AND Marks<50 THEN 'C'
       WHEN Marks>=40 AND Marks<45 THEN 'D'
       ELSE 'F' END.
```

GPA = CASE
WHEN Marks >= 80 THEN 4.00
WHEN Marks>=75 AND Marks<80 THEN 3.75
WHEN Marks>=70 AND Marks<75 THEN 3.50
WHEN Marks>=65 AND Marks<70 THEN 3.25
WHEN Marks>=60 AND Marks<65 THEN 3.00
WHEN Marks>=55 AND Marks<60 THEN 2.75
WHEN Marks>=50 AND Marks<55 THEN 2.50
WHEN Marks>=45 AND Marks<50 THEN 2.25
WHEN Marks>=40 AND Marks<45 THEN 2.00
ELSE 0.00 END
WHERE GRADE IS NULL

COMMIT TRANSACTION

END

GO