

A
PROJECT REPORT ON

STUDENT MANAGEMENT SYSTEM

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CERTIFICATE

This is to certify that the practical / term work carried out in the subject of

System Design Practice and recorded in this journal is the

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Contents

1. Abstract.....	4
2. Introduction.....	5
3. Software Requirement Specifications.....	7
4. Design Documents.....	12
5. Data Dictionary.....	20
6. Implementation Details.....	22
7. Testing.....	26
8. Screen Shots.....	28
9. Conclusion.....	35
10. Limitations.....	36
11. Bibliography.....	37

1. Abstract

Student Management System can be used by education institutes to maintain the records of students easily. Achieving this objective is difficult using a manual system as the information is scattered, can be redundant and collecting relevant information may be very time consuming. All these problems can be solved using this project.

Without a Student Management System managing and maintaining the details of the student is a tedious job for any organization.

This system will store all the details of the students including their background information, educational qualifications, personal details and all the information related to their resume. Due to this many reasons, we want to create a system which can handle student information so that these difficulties can be decreased.

This system will also maintain records of the teacher. Teachers will be able to upload material for students, which can be read or downloaded by students. Our system will send email regarding students username, password and due fees after their admission is done.

2. Introduction

1.1 Brief Introduction :

The objective of Student Management System is to allow the users of any organization to edit and find out the personal details of a student and allows the student to keep up to date his profile .It'll also facilitate keeping all the records of students, such as their id, name, mailing address, phone number, DOB etc. So all the information about a student will be available in a few seconds. It'll also facilitate keeping all the records of faculties, such as their id, name, mailing address, phone number, DOB etc. It will provide facility of uploading materials online and students can easily download it .Overall, it'll make Student Management an easier job for the administrator and the student of any organization. The main purpose of this document is to illustrate the requirements of the project Student Management System and is intended to help any organization to maintain and manage its student's personal data.

1.2 Tools / Technologies Used :

- **Technologies :**

- Front End :
 - HTML
 - CSS
 - Javascript
 - Web Designing Language :
 - C# (ASP.NET Framework)
- Back End :
 - MSSQL
- **Tools :**
 - Visual Studio
 - Git
 - WonderShare Edrawmax IDE (for design document)
 - Chrome Browser

3. Software Requirement Specifications

Student Management System

Admin:

R.0 Login

Description: Admin can login here by provided id, Password

Input: Input Credential

Output: Home page

R.1 Manage students

Description: Admin manage student's details here

R.1.1 Add student

Description: Admin can add student here

Input: details of students

Output: "confirmation message" (student added successfully)

R.1.2 View Students

Description: Admin can view Students here

Input: “view option”

Output: Display Details (of teacher)

R.1.3 Remove/Delete student

Description: Admin can remove student here

Input: click on delete link

Output: “confirmation message” (student deleted successfully)

R.1.4 Edit Student

Description: Admin can edit student here

Input: click on update link

Output: “confirmation message” (student edited successfully)

R.2 Manage Teacher

Description: Admin manage teachers here

R.2.1 Add teacher

Description: Admin can add teacher here

Input: details of students

Output: “confirmation message” (teacher added successfully)

R.2.2 View Teachers

Description: Admin can view teachers here

Input: “view option”

Output: Display Details (of teacher)

R.2.2 Remove/Delete teacher

Description: Admin can remove teacher here

Input: click on delete link

Output: “confirmation message” (teacher deleted successfully)

R.2.3 Edit Teacher

Description: Admin can edit teacher here

Input: click on update link

Output: “confirmation message” (teacher edited successfully)

Teacher:

R.1 Login

Description: teacher can login here by provided id, Password

Input: Input Credential

Output: Home page

R.2 Manage personal details

Description: teacher can view their personal details

R.2.1 View details

Description: teacher can view their detail here

Output: Display Details

R.3 Upload Material

Description: teacher can upload material here

Input: Upload option

Output: Material Uploaded

R.3.1 Delete Material

Input : Delete option

Output: Material deleted.

R.3.2 View and Download Material

Input : view and download option

Output: Material can be viewed and also downloaded

Student:

R.1 Login

Description: Student can login here by provided id, Password

Input: Input Credential

Output: Home page

R.2 Manage personal details

Description: teacher can show their personal details

R .2.1 View details

Description: Students can view their detail
here

Output: Display Details

R.3 View and Download Material

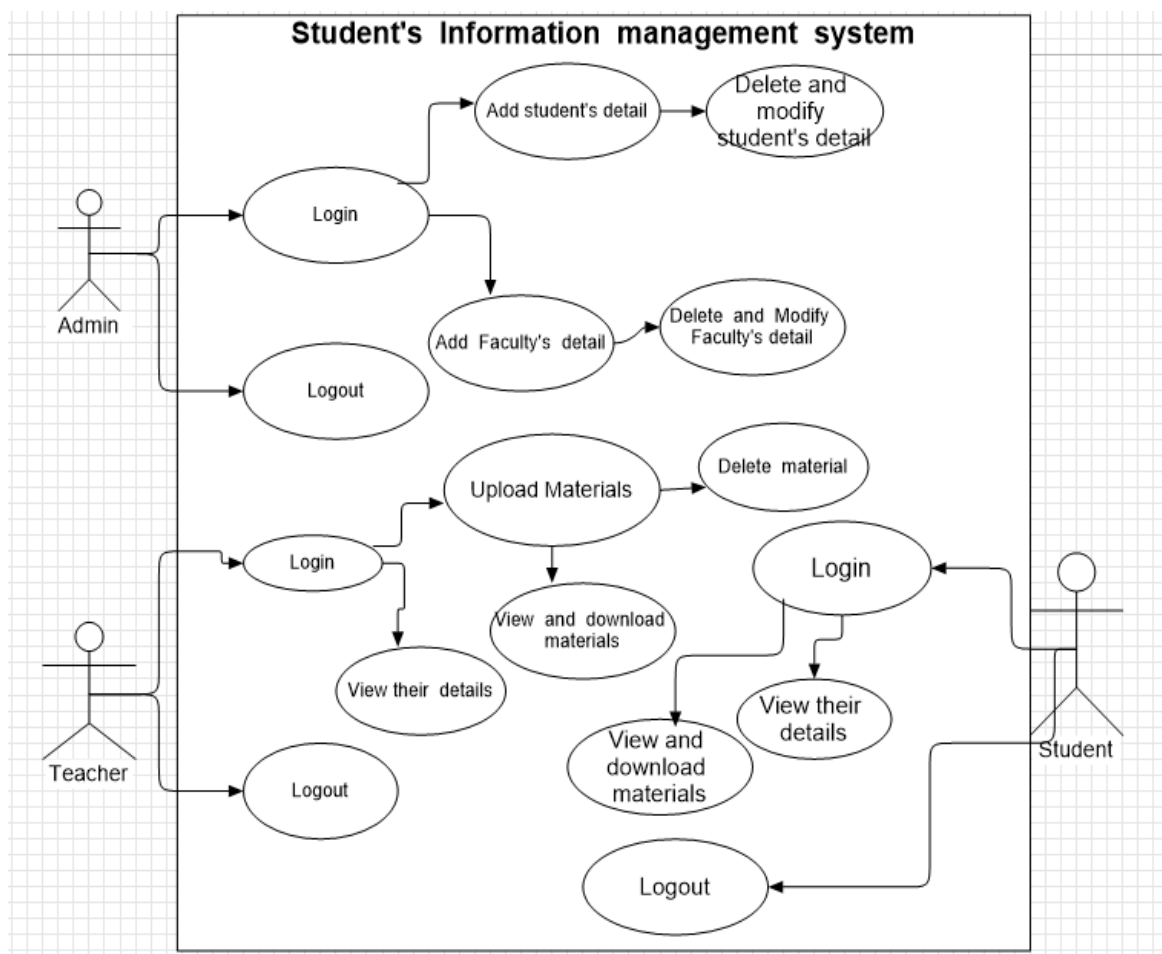
Description: Students can view and download materials here

Input: view and download option

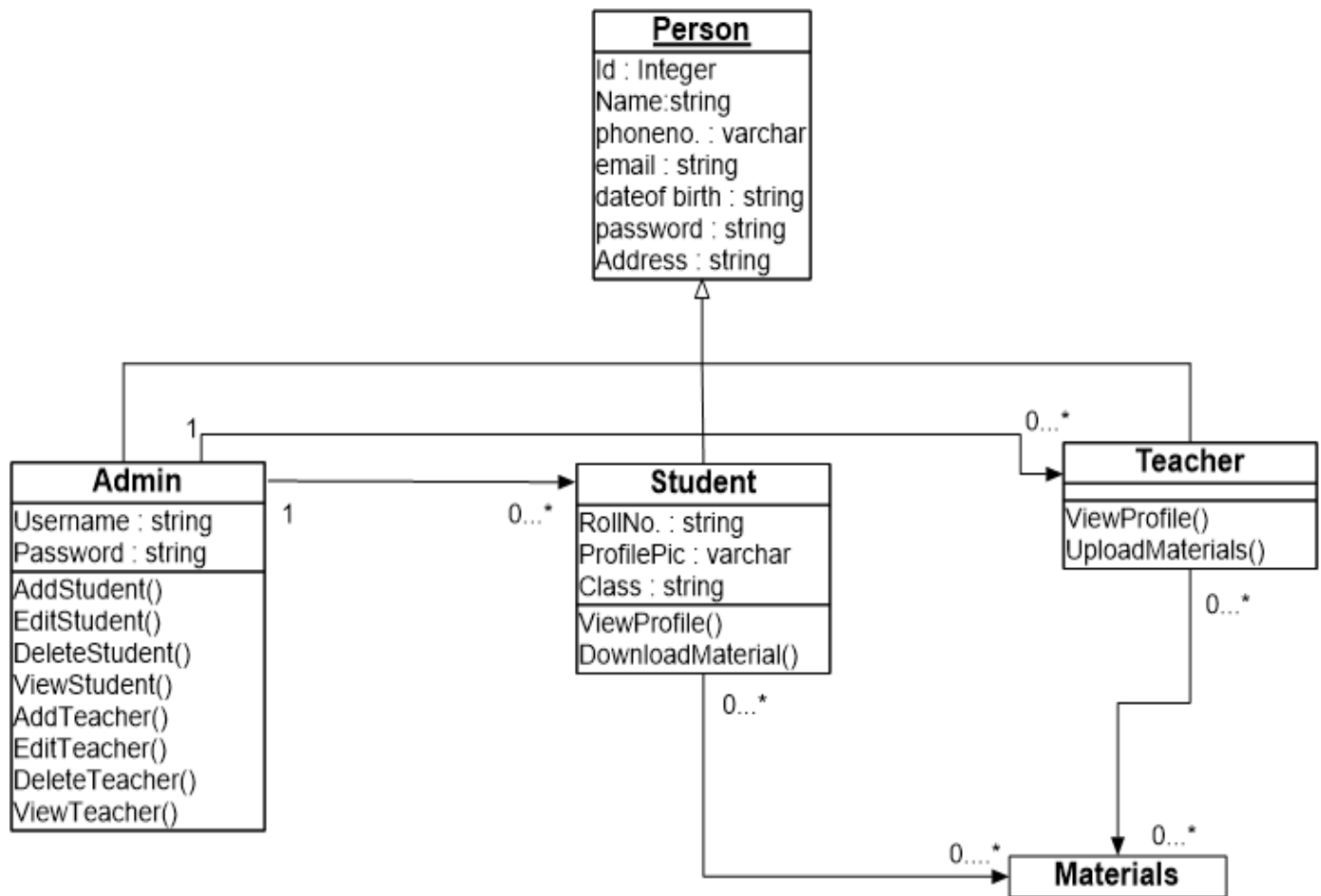
Output: Material Shown and can be downloaded

4. Design Documents

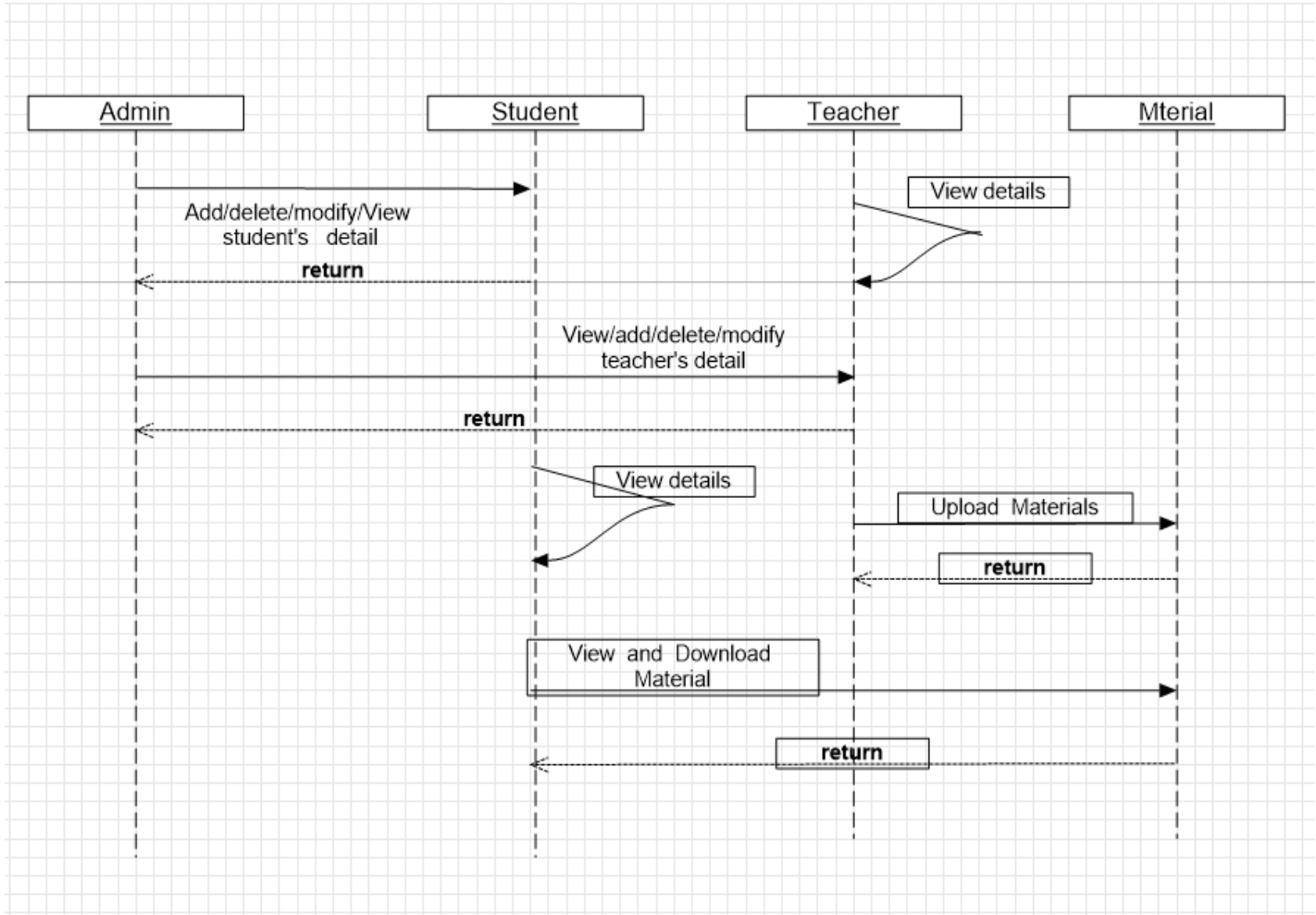
1. Use case Diagram :



2. Class Diagram

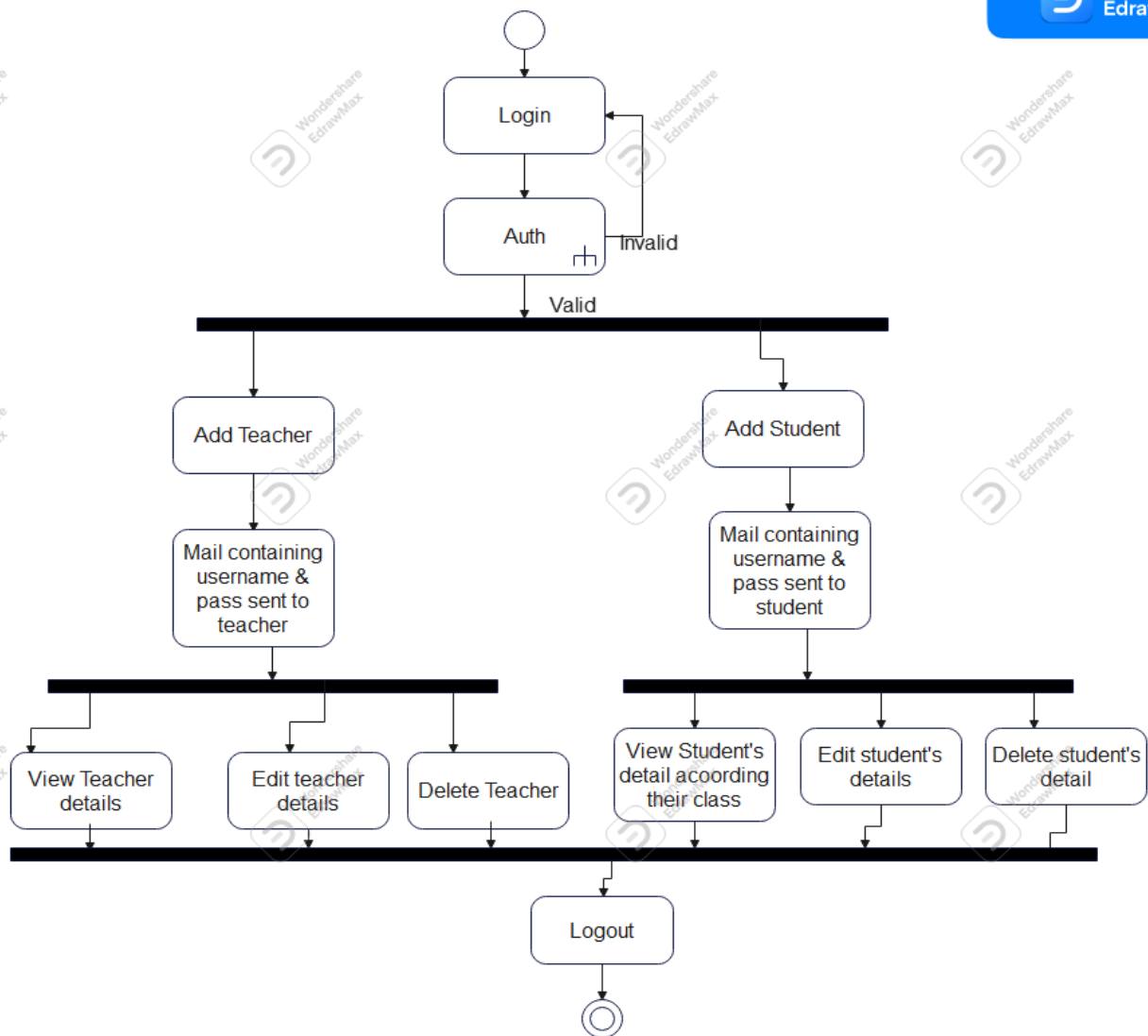


3. Sequence diagram:

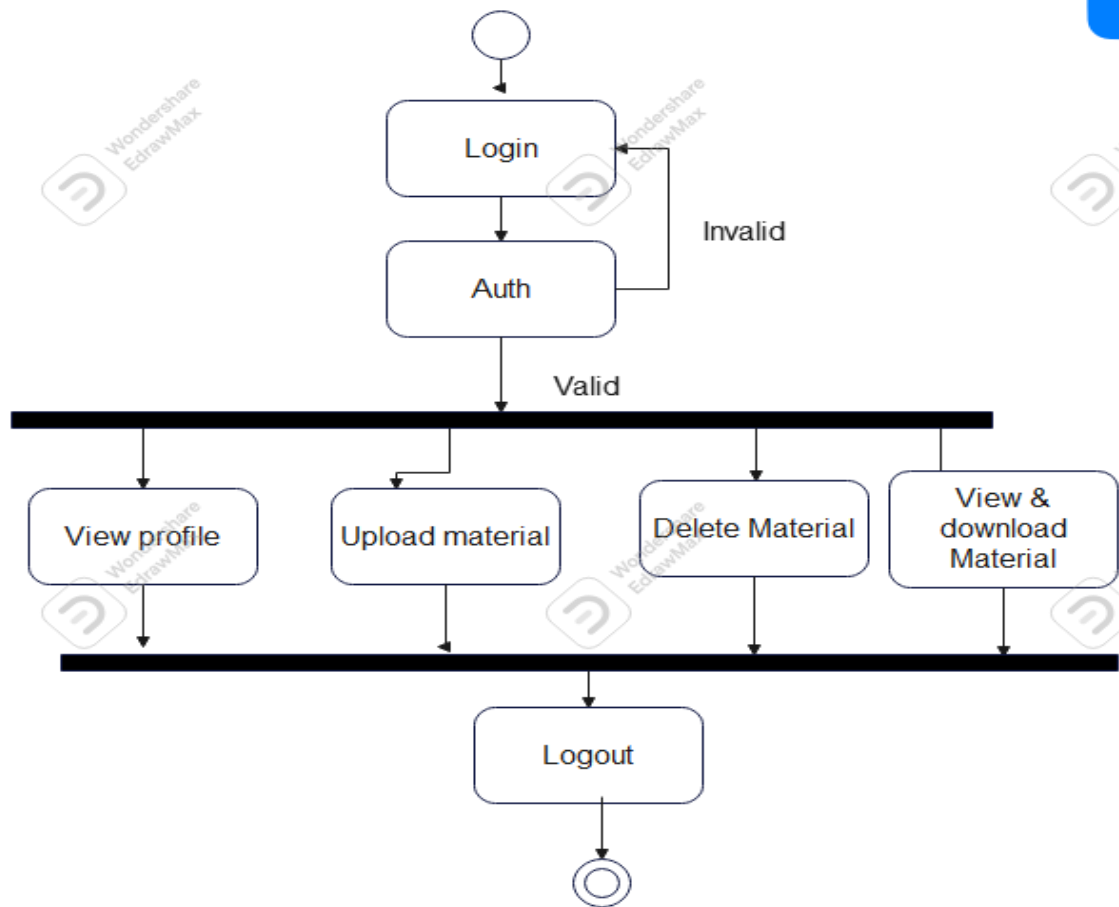


4. Activity Diagram:

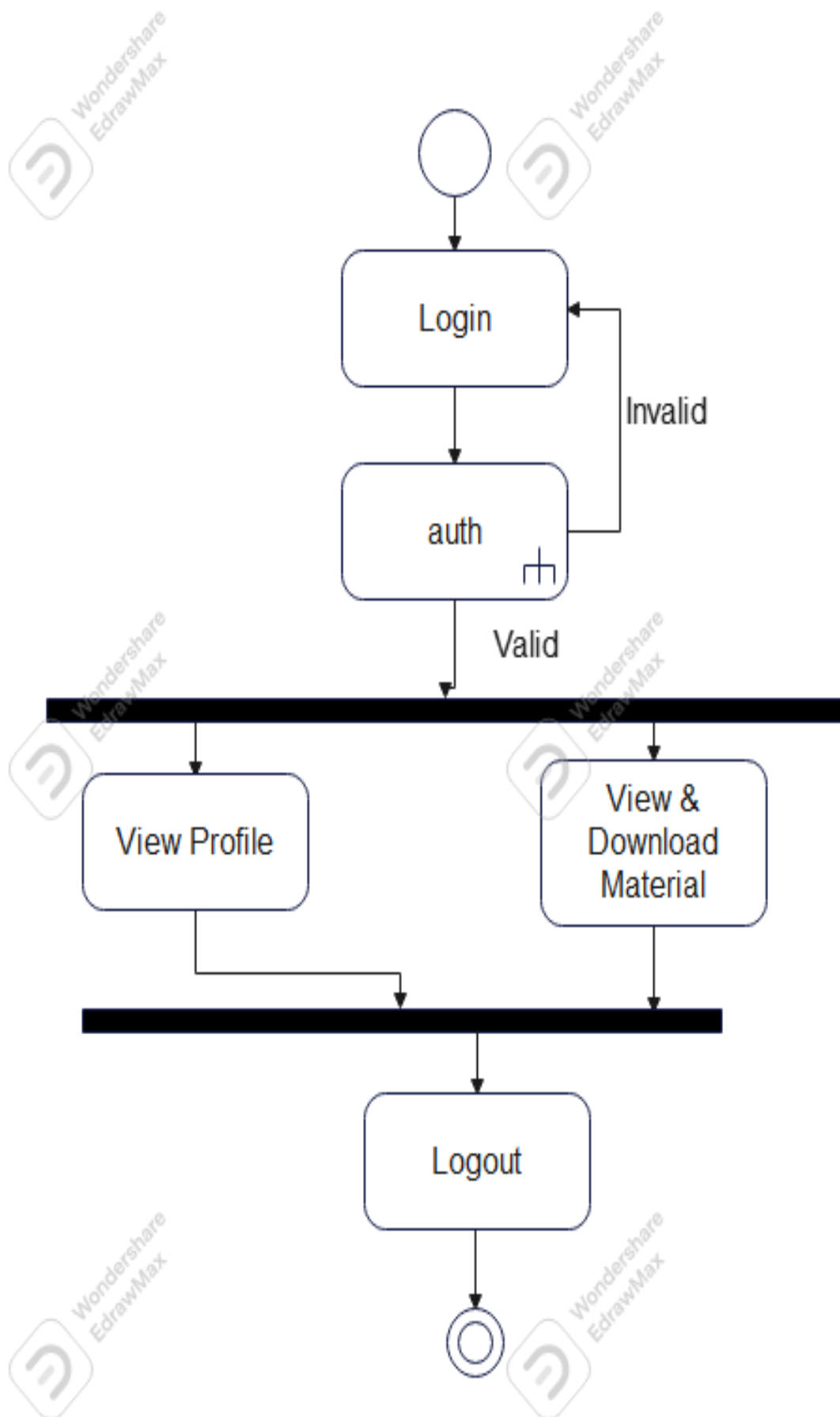
(i) Admin:



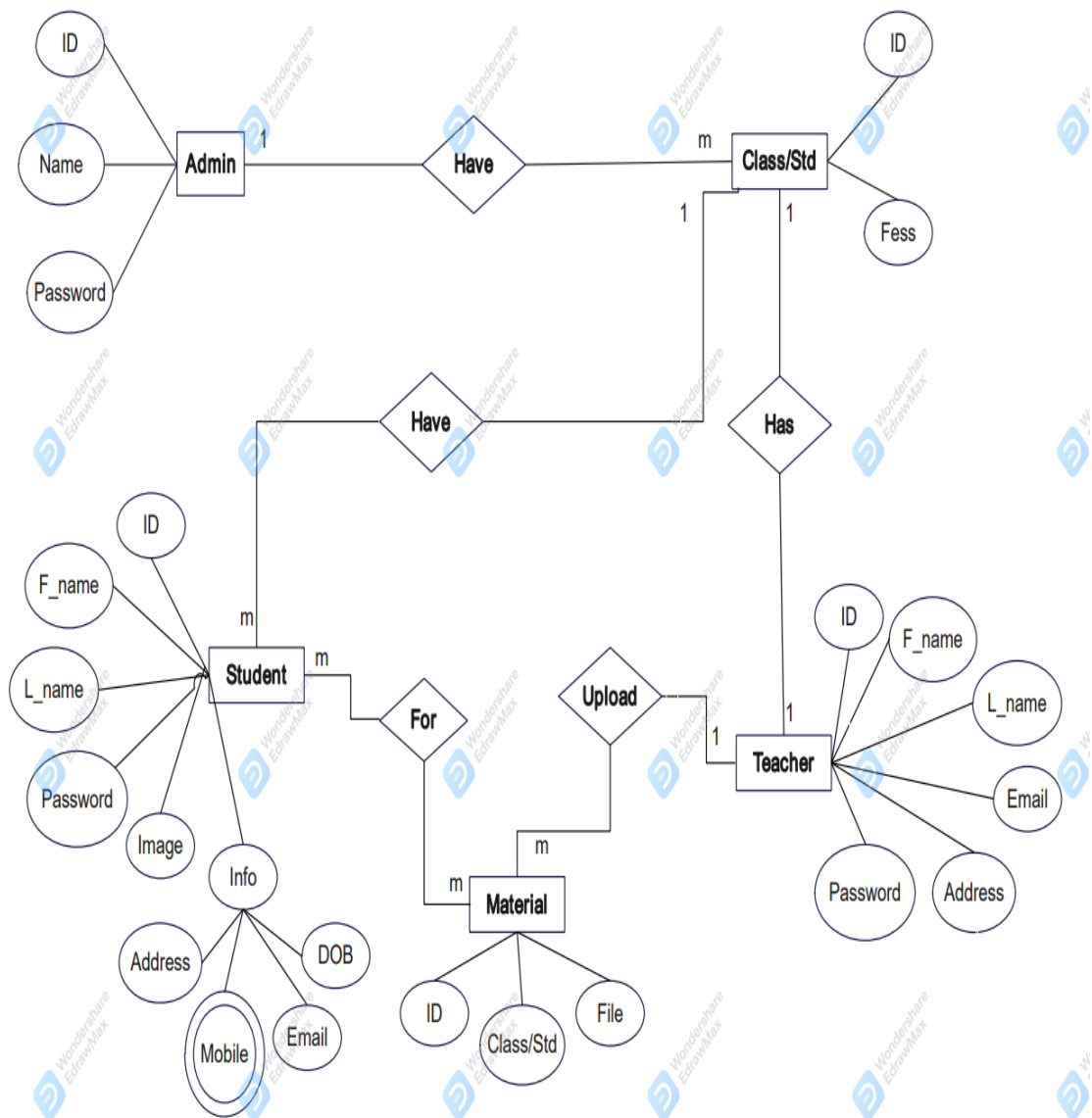
(ii)Teacher



(iii)Student



5.ER DIAGRAM:



5. Data Dictionary

• Teacher table:

Server Explorer SQL Server Object Explorer

files_12.aspx ▢

dbo.Teacher [Design] ▢ ×

dbo.Stu [Design]

Update | Script File: dbo.Teacher.sql ▾

	Name	Data Type	Allow Nulls	Default
PK	Id	int	<input type="checkbox"/>	
	firstname	varchar(50)	<input type="checkbox"/>	
	lastname	varchar(50)	<input type="checkbox"/>	
	email	varchar(50)	<input type="checkbox"/>	
	address	varchar(50)	<input type="checkbox"/>	
	password	varchar(50)	<input type="checkbox"/>	

Design | T-SQL

```

1 CREATE TABLE [dbo].[Teacher] (
2     [Id] INT IDENTITY (1, 1) NOT NULL,
3     [firstname] VARCHAR (50) NOT NULL,
4     [lastname] VARCHAR (50) NOT NULL,
5     [email] VARCHAR (50) NOT NULL,
6     [address] VARCHAR (50) NOT NULL,
7     [password] VARCHAR (50) NOT NULL,
8     PRIMARY KEY CLUSTERED ([Id] ASC)
9 );

```

• Student table:

Server Explorer SQL Server Object Explorer

files_12.aspx ▢

dbo.Stu [Design] ▢ ×

dbo.Material [Design] Addst

Update | Script File: dbo.Stu.sql ▾

	Name	Data Type	Allow Nulls	Default
PK	Id	int	<input type="checkbox"/>	
	Firstname	nvarchar(MAX)	<input type="checkbox"/>	
	Lastname	nvarchar(MAX)	<input type="checkbox"/>	
	std	nvarchar(MAX)	<input type="checkbox"/>	
	Rollno	nvarchar(MAX)	<input type="checkbox"/>	
	email	nvarchar(50)	<input type="checkbox"/>	
	address	nvarchar(MAX)	<input type="checkbox"/>	
	image	varchar(MAX)	<input type="checkbox"/>	
	phone	nvarchar(MAX)	<input type="checkbox"/>	
	dob	nvarchar(MAX)	<input type="checkbox"/>	
	password	nvarchar(MAX)	<input type="checkbox"/>	

Design | T-SQL

```

1 CREATE TABLE [dbo].[Stu] (
2     [Id] INT IDENTITY (1, 1) NOT NULL,
3     [Firstname] NVARCHAR (MAX) NOT NULL,
4     [Lastname] NVARCHAR (MAX) NOT NULL,
5     [std] NVARCHAR (MAX) NOT NULL,
6     [Rollno] NVARCHAR (MAX) NOT NULL,
7     [email] NVARCHAR (50) NOT NULL,
8     [address] NVARCHAR (MAX) NOT NULL,
9     [image] VARCHAR (MAX) NOT NULL,
10    [phone] NVARCHAR (MAX) NOT NULL,
11    [dob] NVARCHAR (MAX) NOT NULL,
12    [password] NVARCHAR (MAX) NOT NULL,
13    PRIMARY KEY CLUSTERED ([Id] ASC)
14 );


```

Material table:

Server Explorer SQL Server Object Explorer

files_12.aspx **dbo.Material [Design]** Addstudent.aspx.cs

Update Script File: **dbo.Material.sql**

	Name	Data Type	Allow Nulls	Default	
	Id	int	<input type="checkbox"/>		
	std	varchar(50)	<input type="checkbox"/>		
	file	varchar(50)	<input type="checkbox"/>		
			<input type="checkbox"/>		

Design T-SQL

```
1 CREATE TABLE [dbo].[Material] (  
2     [Id] INT IDENTITY (1, 1) NOT NULL,  
3     [std] VARCHAR (50) NOT NULL,  
4     [file] VARCHAR (50) NOT NULL,  
5     PRIMARY KEY CLUSTERED ([Id] ASC)  
6 );  
7  
8
```

6. Implementation Details

- The system consists of 3 basic modules namely
 - Authentication
 - Manage Student
 - Manage Teacher
 - Manage Materials

1. Authentication Module

Users are able to login themselves. System logs user in, then and only then user can use other functionalities of system.

2. Manage Student Module

In Manage student modules admins have access students. Admin are able to add, edit, delete students. Students can see their details after login.

3. Manage teacher Module

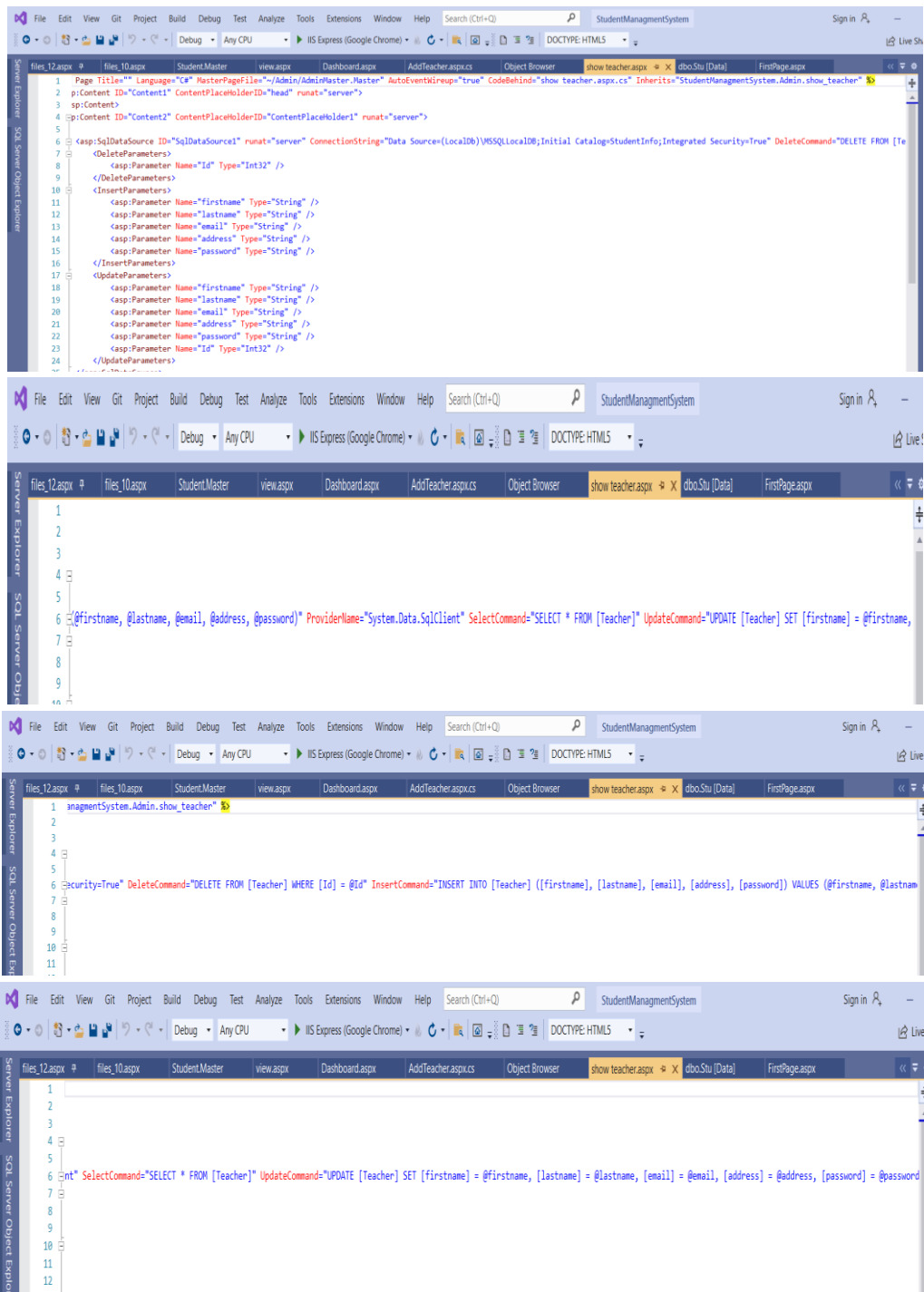
Manage teacher modules appear in the admin side. Admin have all access teachers. And can perform crud operations (add, update, delete) on teacher details also. Teachers can see their details after login.

4. Manage Materials Module

Manage teacher modules appear in the teacher side. Teacher can add, delete, view and download materials. Students can only view and download material after login.

- **Function prototypes:**

Add Teacher & mail containing login credentials sent to teacher



Delete & Update & show teacher's detail


```

1
2
3
4
5 UpdateCommand="UPDATE [Stu] SET [Firstname] = @Firstname, [Lastname] = @Lastname, [Std] = @Std, [No1No] = @No1No, [Email] = @Email, [Address] = @Address, [Image] = @Image, [Phone] = @Phone, [Dob] = @Dob, [Password] = @Password WHERE [Id] = @Id"
6
7
8

```

Update student's info

```

20
21
22 0 references
23 protected void Button1_Click(object sender, EventArgs e)
24 {
25     if (uploadresume() == true)
26     {
27         String query = "insert into Material(Id,std,file) values(" + Id + "," + TextBox1.Text + "," + resumelink + ")";
28
29         SqlConnection con = new SqlConnection(@"Data Source=(LocalDb)\MSSQLLocalDB;Initial Catalog=StudentInfo;Integrated Security=True");
30         con.Open();
31         SqlCommand cmd = new SqlCommand();
32         cmd.CommandText = query;
33         cmd.Connection = con;
34         cmd.ExecuteNonQuery();
35
36         TextBox1.Text = "";
37     }
38 }
39
40 1 reference
41 private Boolean uploadresume()
42 {
43     Boolean resumesaved = false;
44     if (FileUpload1.HasFile == true)
45     {
46         String contenttype = FileUpload1.PostedFile.ContentType;
47
48         if (contenttype == "application/pdf")
49         {
50             int filesize;
51             filesize = FileUpload1.PostedFile.ContentLength;
52
53             getapplicationid();
54             FileUpload1.SaveAs(Server.MapPath("~/ UploadedFile/") + Id + ".pdf");
55
56             resumelink = "UploadedFile/" + Id + ".pdf";
57             resumesaved = true;
58             Label1.Text = "";
59 }

```

Upload material

```

4
5
6
7
8
9
10
11 LocalDB;Initial Catalog=StudentInfo;Integrated Security=True" DeleteCommand="DELETE FROM [Material] WHERE [Id] = @Id" I
12
13
14
15
16
17
18

```

Delete Material

```

<Columns>
    <asp:CommandField ShowDeleteButton="True" />
    <asp:BoundField DataField="Id" HeaderText="Id" InsertVisible="False" ReadOnly="True" SortExpression="Id" />
    <asp:BoundField DataField="std" HeaderText="std" SortExpression="std" />
    <asp:HyperLinkField DataNavigateUrlFields="file" HeaderText="File" Text="View and Download" />
</Columns>

```

View & Download Material

7. Testing

Testing method : manual testing

All test cases executed by us manually according to enduser's prespective . our motto to test project is that it ensures matching with requirment document or not.

Sr. No.	Test Scenario	Expected Result	Actual Result	Status
TC_1 (Admin + student+Teacher)	Login with incorrect credentials	User should not able to log in.	User is given error message. And redirected to login page.	Pass
TC_2 (Admin + student+Teacher)	Login with correct credentials	User should be able to log in.	User is logged in and shown the dashboard according to input credentials.	Pass
TC_3 (Admin)	Add student + teacher	Admin able to add student's and teacher's record	Admin can see cofirmatio n message & record added into db	Pass
TC_4 (Admin)	Delete Student and Teacher (if exists)	matching record of Student or teacher removed	Record is deleted And record are not in db.	Pass
TC_5	Update	Matchin	record	Pass

(Admin)	student & Teacher(if exists)	g Student & Teacher record updated into db.	updated & updated into db	
TC_6 (Teacher)	Add Materials	Teacher able to add materials	Material added & Material added into db	Pass
TC_7 (Teacher)	Delete Material(i fexists)	matching material removed	Material is deleted And Material are not in db.	Pass
TC_8 (Teacher+student)	View and Download materials	Teacher & student able to view & download materials	Material viewed & download	Pass

8. Screen-shots



Home page

Login

Username

Please Enter Username

Password

Please Enter Password

Login

Login

Username

Password

Login

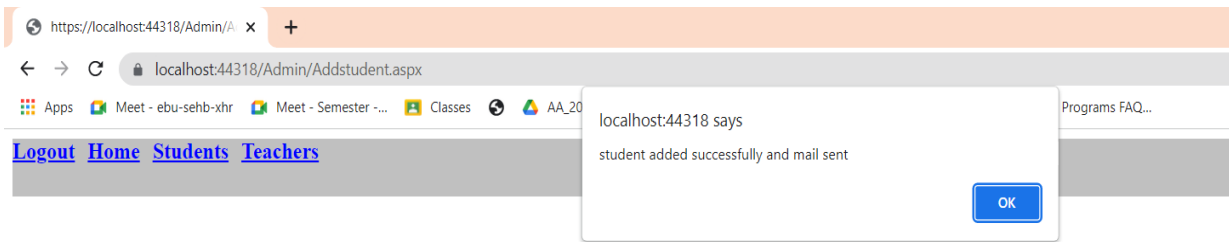
Invalid Username or Password

Validations

[Logout](#) [Home](#) [Students](#) [Teachers](#)

Total Students 7

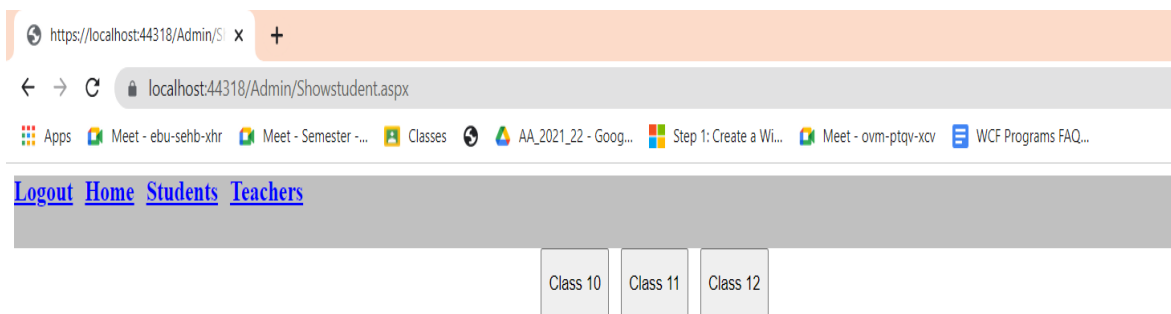
Admin dashboard



ADD NEW STUDENT

First Name	<input type="text" value="Rushi"/>
Last Name	<input type="text" value="jain"/>
Standard	<input type="text" value="class10"/>
Roll no.	<input type="text" value="c011"/>
Email	<input type="text" value="kanalchoksi2002@gmail.co"/>
Address	<input type="text" value="surat"/>
Student image	<input type="button" value="Choose File"/> <input type="text" value="4.png"/>
phone	<input type="text" value="9428657317"/>
Date of birth	<input type="text" value="2/8/2006"/>
Password	<input type="text" value="c011rushi"/>
	<input type="button" value="Add"/>





Add student's info



Filtering students according their class

https://localhost:44318/Admin/class.aspx




Logout Home Students Teachers

	Id	Firstname	Lastname	std	Rollno	email	address	image	phone	dob	password
Edit Delete	1	het	shah	class10	c01	kanalchoksi2002@gmail.com	anand		9428657317	2/8/2012	c1het
Edit Delete	4	Jay	Soni	class10	c04	pinalsoni9999@gmail.com	Anand		9429654020	21/3/2002	c4jay
Edit Delete	9	kanan	shah	class10	c010	kanalchoksi2002@gmail.com	nadiad		9428657317	2/8/2012	c010kanan
Edit Delete	11	Rushi	jain	class10	c011	kanalchoksi2002@gmail.com	surat		9428657317	2/8/2006	c011rushi

Show specific class's students

https://localhost:44318/Admin/class.aspx

Logout Home Students Teachers




	Id	Firstname	Lastname	std	Rollno	email	address	image	phone	do
Edit Delete	1	het	shah	class10	c01	kanalchoksi2002@gmail.com	anand		9428657317	2/8/2012
Edit Delete	4	Jay	Soni	class10	c04	pinalsoni9999@gmail.com	Anand		9429654020	21/3/2002
Edit Delete	9	kanan	shah	class10	c010	kanalchoksi2002@gmail.com	nadiad		9428657317	2/8/2012
Update Cancel	11	Rushi	jain	class10	c011	kanalchoksi2002@gmail.com	Anand	~/image/4.png	9428657317	2/8/2006

javascript:doPostBack('ctl00\$ContentPlaceHolder1\$GridView1\$ctl05\$ctl00','')

Update info of student

https://localhost:44318/Admin/class10.aspx

Logout Home Students Teachers

	Id	Firstname	Lastname	std	Rollno	email	address	image	phone	dob	password
Edit Delete	1	het	shah	class10	c01	kanalchoksi2002@gmail.com	anand		9428657317	2/8/2012	c1het
Edit Delete	4	Jay	Soni	class10	c04	pinalsoni9999@gmail.com	Anand		9429654020	21/3/2002	c4jay
Edit Delete	9	kanan	shah	class10	c010	kanalchoksi2002@gmail.com	nadiad		9428657317	2/8/2012	c010kanan

javascript:__doPostBack('ctl00\$ContentPlaceHolder1\$GridView1','Delete\$0')

Delete student's record

https://localhost:44318/Admin/AddTeacher.aspx

localhost:44318 says
teacher added successfully and mail sent

OK

ADD NEW TEACHER

First Name

Last Name

Email

Address

Password

Add teacher and mail sent to teacher

https://localhost:44318/Admin/si x +

localhost:44318/Admin/show%20teacher.aspx

Apps Meet - ebu-sehb-xhr Meet - Semester -... Classes AA_2021_22 - Goog... Step 1: Create a Wi... Meet - ovm-ptqv-xcv WCF Programs FAQ...

[Logout](#) [Home](#) [Students](#) [Teachers](#)

	Id	firstname	lastname	email	address	password
Edit Delete	1	Milan	Soni	kanalchoksi2002@gmail.com	Nadiad	milan@123
Edit Delete	2	suresh	Patel	pinalsoni9999@gmail.com	anand	suresh@123
Edit Delete	5	Dipak	Patel	kanalchoksi2002@gmail.com	kheda	dipak@123
Edit Delete	8	Mukesh	shah	kanalchoksi2002@gmail.com	kheda	mukesh@123

Show ,edit ,delete teacher's info.

https://localhost:44318/Teacher/ x +

localhost:44318/Teacher/Dashboard.aspx

Apps Meet - ebu-sehb-xhr Meet - Semester -... Classes AA_2021_22 - Goog... Step 1: Create a Wi... Meet - ovm-ptqv-xcv WCF Programs FAQ...

[Materials](#) [Logout](#) [Home](#)

	Id	firstname	lastname	email	address	password
	8	Mukesh	shah	kanalchoksi2002@gmail.com	kheda	mukesh@123

After login teacher view his/her profile

Materials Logout Home

Standard	class10
File	Choose File Kanal_Resume1.pdf
Add	

Show Materials

Teacher can add materials

Materials Logout Home

	Id	std	File
Delete	7	class10	View and Download
Delete	9	class10	View and Download


Teacher can see specific class's material and delete it.

https://localhost:44318/Student/ x +

localhost:44318/Student/Dashboard.aspx

Apps Meet - ebu-sehb-xhr Meet - Semester - ... Classes AA_2021_22 - Goog... Step 1: Create a Wi... Meet - ovm-ptqy-xcv WCF Programs FAQ...

[Logout](#) [Materials](#) [Home](#)

Id	Firstname	Lastname	std	Rollno	email	address	image	phone	dob	password
1	het	shah	class10	c01	kanalchoksi2002@gmail.com	anand		9428657317	2/8/2012	c1het

After login student view his/her profile

https://localhost:44318/Student/ x +

localhost:44318/Student/view.aspx

Apps Meet - ebu-sehb-xhr Meet - Semester - ... Classes AA_2021_22 - Goog... Step 1: Create a Wi... Meet - ovm-ptqy-xcv WCF Programs FAQ...

[Logout](#) [Materials](#) [Home](#)

std	File
class10	View and Download
class10	View and Download

student can view & download his/her class's uploaded material

9. Conclusion

We have successfully implemented the Admin-side & Student-side & teacher-side functionality. Admin will add the new student & edit student details. Admin can show all the students according to their class and can also delete students' record. Admin can also add, delete, update teacher details. Teacher can see their details after login and can upload, view & download, delete materials. Student who login from student login page he/she can also see his/her details and view and download Materials which are uploaded.

10. Limitation and Future Extension

- **Limitations :**

Here students and teacher can not reset password if they forget it. Teacher can not see student's information only admin can see all student's information.

- **Future extensions :**

As a beginners we tried to implement admin , student ,teacher side pannel . In Future we can implement attendance taking module and result generation module.

12. Bibliography

References/resources used for developing project:

- <https://docs.microsoft.com/en-us/aspnet/overview>
- www.google.com
- www.stackoverflow.com
- www.wikipedia.com

