

SkyBrink Employee Management (C# asp.net MVC, Entity Framework)

Features:

1. Dash board: Number of students department wise
2. Dashboard: Number of instructors department wise
3. nav bar: signup, log in, About this project, Technical Details

Signup:

1. Email is already used or not, validation of entry fields, password hashing

Login:

1. User authentication with database and redirect to the admin dashboard

Admin:

1. Dashboard: Number of staffs per Faculty
2. Dashboard: Revenue pie chart faculty wise for the year 2018
3. **Manage Staffs**
 1. Show the lists of all employees (jQuery table): add, edit and delete operation
4. **Manage Students**
 1. Show the list of all students (jQuery table): add, edit and delete operations
5. **Manage Instructors**
 1. Show the list of all faculty members (jQuery table): add, edit and delete operations

Home Page & Dashboard

Steps: Create an MVC web project, configure database, adding custom layout and stylesheet and JavaScript

Custom Layout: In the project's shared folder, create a MVC5 view page and then load your template code (default header, footer, etc.,) . Add css file as well and inside the new layout page identify it by typing:

```
<link rel="stylesheet" type="text/css"
href="@Url.Content("~/Content/MyTemplate/")css/pricing.css" />
```

Now create the index.html file for the controller. At the time of html file creation, select the layout file and add your desired template code inside the index.cshtml file

Database Design:

1. Student:

- ❖ First Name
- ❖ Last Name
- ❖ Department
- ❖ Email address
- ❖ Phone number

2. Teacher:

- ❖ First Name
- ❖ Last Name
- ❖ Department
- ❖ Email address
- ❖ Phone number

3. Employee:

- ❖ First Name
- ❖ Last Name
- ❖ Department
- ❖ Email address
- ❖ Phone number
- ❖ Designation

4. Revenue:

- ❖ Department
- ❖ Profit
- ❖ Year

5. User:

- ❖ First Name
- ❖ Last Name
- ❖ Department
- ❖ Email address
- ❖ Phone number

Database Creation: Create a database inside the App_Data folder

Now, it is time to create 5 database tables.

Entity Framework:

Right click on the Models folder, add ADO.net Entity Data Model

Give a name like: MyModel, Select EF Designer from Database, click next, Select the created database, double check the generated connection string, click next, choose entity framework 6, Select all the tables from the database and finally click on the finish button.

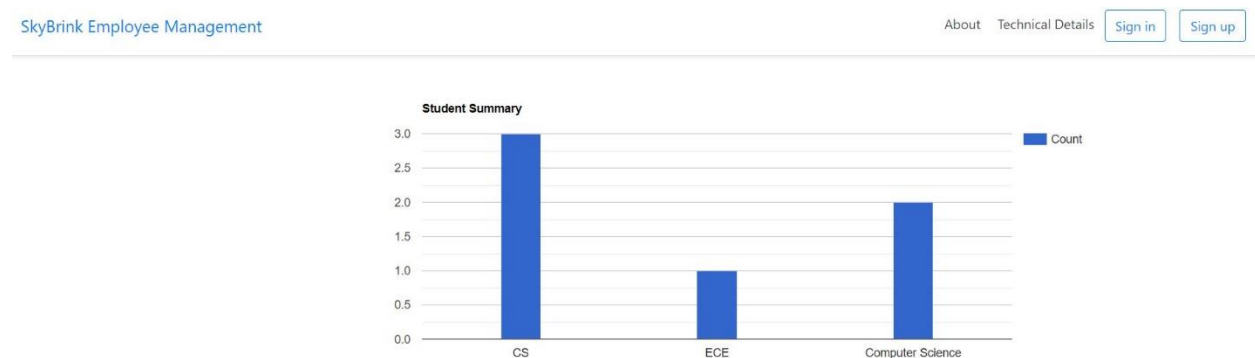
5 new classes are created in the Models folder. Now it is the time to do the coding for controllers and view part

Now our target is to load the index dashboard where it will show two bar charts with number of students by department wise and number of teachers department wise.

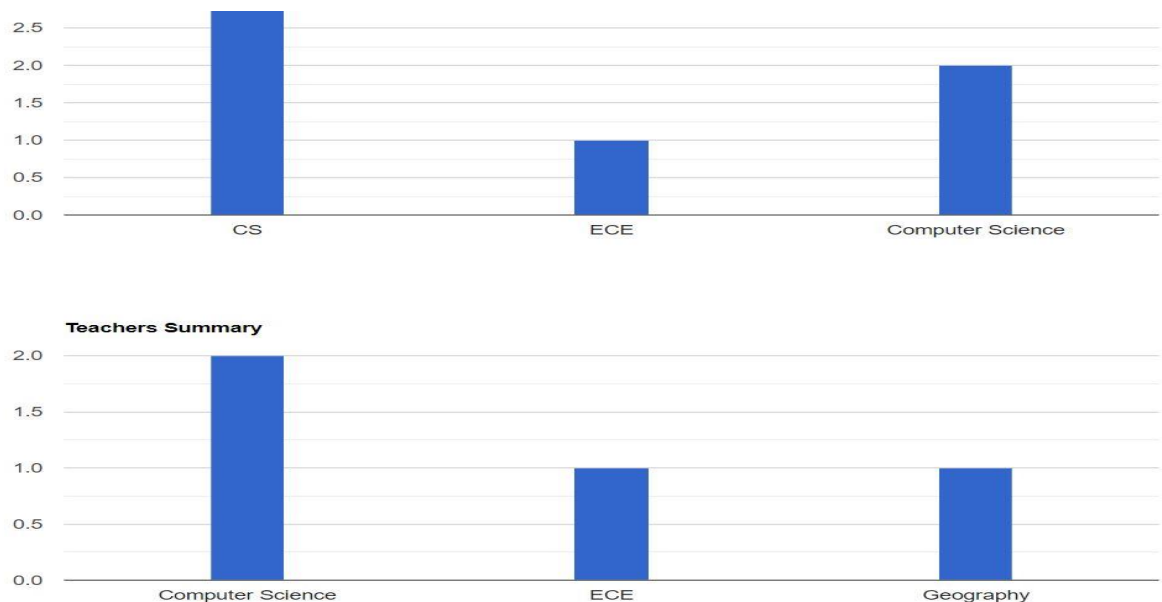
For doing that, I used rest API, AJAX and google chart. **Index.cshtml** has the code for ajax call and populate the charts for the dashboard. I created two additional classes **TeacherResult** and **StudentResult** for the ease of our work to format Json data. Two controllers were used: Home and Admin.

Some design specifications are as follows:

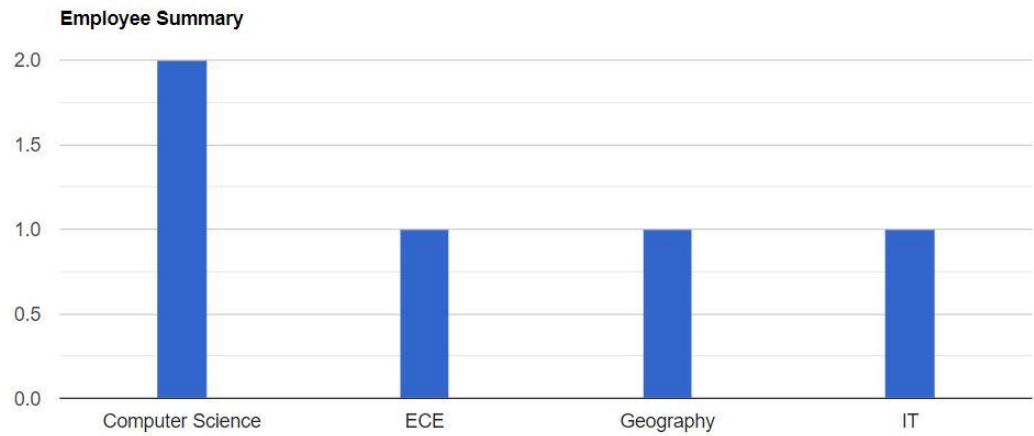
Dashboard 1(Public):



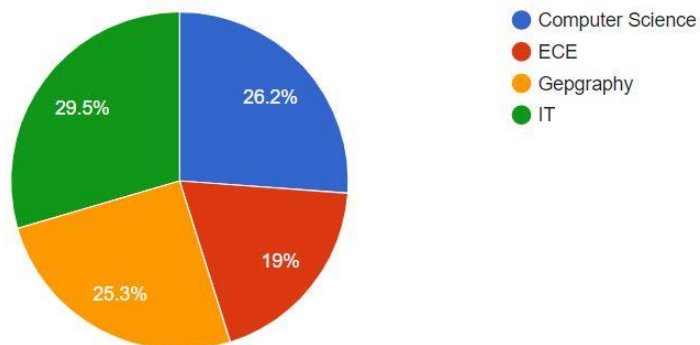
Dashboard1 (Public):



Dashboard 2(Admin):



Company Revenue



Employee Crud Operation:

1. Display all the employees:

SkyBrink Employee Management

[Dashboard](#) [Manage Students](#) [Manage Instructors](#) [Manage Employee](#) [Sign out](#)

[Add New Employee](#)

Show 10 entries

Search:

First Name	Last Name	Department	Email	Phone Number	Designation	Edit	Delete
Catherine	Cummins	Computer Science	cc@ucalgary.ca	2567896541	Staff	Edit	Delete
Ella	lock	ECE	el@ucalgary.ca	1478529632	Graduate Program Assistant	Edit	Delete
Jackie	Hunt	Computer Science	jh@ucalgary.ca	1234567898	Graduate Program Assistant	Edit	Delete
Jowl	Philip	Geography	jp@ucalgary.ca	2589874563	Staff	Edit	Delete
Waslur	Rahman	IT	wr@ucalgary.ca	1478529632	Software Developer	Edit	Delete

Showing 1 to 5 of 5 entries

Previous **1** Next

2. Add a new Employee:

SkyBrink Employee Management

[Dashboard](#) [Manage Students](#) [Manage Instructors](#) [Manage Employee](#) [Sign out](#)

[Add New Employee](#)

Show 10 entries

First Name	Last Name	Department
Catherine	Cummins	Computer Science
Ella	Lock	ECE
Jackie	Hunt	Computer Science
Jowi	Phillip	Geography
Waslur	Rahman	IT

Showing 1 to 5 of 5 entries

Popup Dialog

Save

First Name

Last Name

Email

Department

Phone Number

Designation

Search:

Position	Edit	Delete
Program Assistant	Edit	Delete
Program Assistant	Edit	Delete
Developer	Edit	Delete

Previous 1 Next

3. Edit an existing Employee:

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[Add New Employee](#)

Show 10 entries

First Name	Last Name	Department
Catherine	Cummins	Computer Science
Ella	Lock	ECE
Jackie	Hunt	Computer Science
Jowi	Phillip	Geography
Waslur	Rahman	IT

Showing 1 to 5 of 5 entries

Popup Dialog

Save

First Name

Catherine

Last Name

Cummins

Email

cc@ucalgary.ca

Department

Computer Science

Phone Number

2587896541

Designation

Staff

Search:

Position	Edit	Delete
Program Assistant	Edit	Delete
Program Assistant	Edit	Delete
Developer	Edit	Delete

Previous 1 Next

4. Delete an existing Employee:

SkyBrink Employee Management

[Dashboard](#) [Manage Students](#) [Manage Instructors](#) [Manage Employee](#) [Sign out](#)

[Add New Employee](#)

Show 10 entries

First Name	Last Name	Department
Catherine	Cummins	Computer Science
Ella	Lock	ECE
Jackie	Hunt	Computer Science
Jowi	Phillip	Geography
Waslur	Rahman	IT

Showing 1 to 5 of 5 entries

Popup Dialog

Delete Form

First Name:

Catherine

Last Name

Cummins

Email

cc@ucalgary.ca

Department

Computer Science

Phone Number

2587896541

Designation

Staff

Delete

Search:

Position	Edit	Delete
Program Assistant	Edit	Delete
Program Assistant	Edit	Delete
Developer	Edit	Delete

Previous 1 Next

5. Technical summary from the website:

Technical Details of this project

This is a basic management project with ASP.net MVC, Microsoft SQL Server and Entity framework.

Details of this project are as follows:

Database and Tables:

- **Database:** Only one database is used, name is "MyDatabase"
- **Tables:** 5 tables are used: User, Employee, Teacher, Student and Revenue

Entity Framework and Input validation:

- **Entity Framework:** Entity framework 6 is used.
- **Input Validation:** For each of the input forms, Input validation is checked.

Password Hashing and existence of email address check:

- **Password Hashing:** After giving input into the form, before writing to database, the password was encrypted using password hashing.
- **Email Address Check:** For signup, it also checks that the email address is already used or not.

Dashboard: 2 dashboards are used.

For all: Two column charts are shown with the current growth of Students and faculty members department wise. Values are loaded dynamically from database

Registered User: If you register with us, after successful login, you will see one column chart (Employee-department wise) and Pie chart (Company Revenue) for previous year.

Crud Operation: (This functionality is achieved by implementing restful API)

- **Employee:** All the employee details are shown using a jquery data table. You can add employees, edit information and delete as well.
- **Teacher:** All the teacher details are shown using a jquery data table. You can add teachers, edit information and delete as well.
- **Student:** All the student details are shown using a jquery data table. You can add students, edit information and delete as well.

View: Custom template is used for viewing purpose