A Report On

"Online Schooling Organizer with Job Portal"

Submitted to the

Department of Computer Applications

In partial fulfilment of the Course

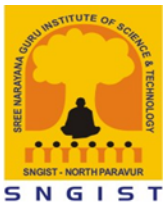
Master of Computer Applications

Under the guidance of

Ms. Reashma Raj P R

BY

Albin P M
(Reg no: SGI16MCA-I5)



DEPARTMENT OF COMPUTER APPLICATIONS

SNGIST GROUP OF INSTITUTIONS

North Paravur- 683520

2016-2021

SNGIST GROUP OF INSTITUTIONS

North Paravur- 683520

BONAFIDE CERTIFICATE

Certified that the Project Work entitled

"**Online Schooling Organizer with Job Portal**"

is a bonafide work done by

Albin P M

In partial fulfillment of the requirement for the Award of

MASTER OF COMPUTER APPLICATIONS

Degree From

APJ Abdul Kalam Technological University, Thiruvananthapuram

(2016-2021)

Ms. Kavitha C R
Head of Department

Ms. Reashma Raj P R
Guide Name

Submitted for the Viva-Voce Examination held on……

External Examiner1
(Name & Signature)

External Examiner2
(Name & Signature)

SNGIST GROUP OF INSTITUTIONS

North Paravur- 683520

CERTIFICATE

This is to certify that the project entitled **"Online Schooling Organizer with Job Portal"** has been successfully carried out by **Albin P M**(Reg no: SGI16MCA-I5) in partial fulfillment of the Course **Master of Computer Applications.**

Ms. Kavitha C R
Date: **HEAD OF DEPARTMENT**

SNGIST GROUP OF INSTITUTIONS

North Paravur- 683520

CERTIFICATE

This is to certify that the project entitled **"Online Schooling Organizer with Job Portal"** has been successfully carried out by **Albin P M** (Reg no: SGI16MCA-I5) in partial fulfillment of the course **Master of Computer Applications** under my guidance.

Date:

Ms. Reashma Raj P R

INTERNAL GUIDE

SNGIST GROUP OF INSTITUTIONS

North Paravur- 683520

DECLARATION

I, Albin P M, hereby declare that the project work entitled **"Online Schooling Organizer with Job Portal"** is an authenticated work carried out by me under the guidance of **Ms. Reashma Raj P R** for the partial fulfillment of the course **MASTER OF COMPUTER APPLICATIONS**. This work has not been submitted for similar purpose anywhere else except to **SNGIST GROUP OF INSTITUTIONS, North Paravur**, affiliated to **APJ ABDUL KALAM UNIVERSITY, THIRUVANANTHAPURAM.** I understand that detection of any such copying is liable to be punished in any way the school deems fit.

Date:

Place:

Albin P M
Student Name

ACKNOWLEDGEMENT

In the name of almighty **GOD,** I express my sincere thanks to him keeping me fit for successful completion of the project.

I am thankful to **Prof**. **Dr. C.P Sunil Kumar,** Principal **SNGIST GROUP OF INSTITUTIONS** for his kind support in all respect during our study.

I sincerely thank **Ms. Kavitha C.R, HOD, Department of Computer Applications, SNGIST GROUP OF INSTITUTIONS,** for her encouragement to carry out this project.

I especially thank to my Guide **Ms. Reashma Raj P R, Assistant Professor, Department of Computer Applications, SNGIST GROUP OF INSTITUTIONS,** in examining the draft of this seminar and for valuable suggestions.

I want to thank the Department of Computer Applications for giving me the permission to prepare the project on the topic" Online Schooling Organizer with Job Portal".

Albin P M

Student Name

1. Executive Summary

Online Schooling Organizer with Job Portal is an Organizer system to manage the schooling system with a job portal integrated to it. During these CORONA days we explored all the possibilities of online education – it's advantages, disadvantages, and difficulties, everything was explored. On those days we came to see a difficulty of students and teachers to update the links for the rooms where the classes are to be taken. Each morning the teachers has to update the links using different communication platforms like WhatsApp and if some students are not in the group where the links are updated, they couldn't follow up with the class time and order. And so, we came up with a solution to provide a platform where all this link is organized in a time table format. Here the students can login and access the classroom links very easily. Another problem that occurred due to the pandemic is the disturbance in the flow of income to most of the people. Due to this most of the students are searching for jobs to support their families. So, we thought of integrating a job portal to our platform where many companies can login and post jobs for the students that enables the students to earn while they are learning and won't cause any disturbance to their education.

2. Introduction

Online Schooling Organizer with Job Portal is an Organizer platform to manage the schooling system along with a job portal. The organizer platform is used to organize the available tools for the support of the online education to be useful for the targeted audience. The Job portal integrated to this platform enable the students to apply for job and work without disturbing their education.

2.1. Existing System

Today a lot of useful tools like google meet, google classroom, etc.. are available for the support of online education. Many of them are open and free of cost. But none of them is organized efficiently for the education system.

2.2. Problem definition

The existing system does not provide an organization for the different tools for their effective use in schooling system. And also, there is no job portal integrated to a schooling system.

2.3. Proposed System

In the system we are proposing we are providing the platform to integrate all the tools used in one place and also provide a job seeking opportunity while studying with the help of the job portal that we are proposing.

2.4. Objective of the Project

The objective of the project is to provide a web platform to organize the tools available for online education and also to provide a job portal for finding jobs while studying.

2.5. Scope of the Project

- Provide an organized platform
- Provides a job portal
- No need of external app to be downloaded
- Ease of use

3. Methodologies

3.1 Scrum

Scrum is an agile process most commonly used for product development, especially software development. Scrum is a project management framework that is applicable to any project with aggressive deadlines, complex requirements and a degree of uniqueness. In Scrum, projects move forward via a series of iterations called sprints. Each sprint is typically two to four weeks long.

3.2 Scrum Roles

Product Owner

MS. Soni P M, Senior Faculty, was the product owner for this project, and acted as spokesman for the customer and defines features of the product based on each Backlog item or each specific request of the customer. She should prioritize these features according to the market value, decide on a release date for the product, and is responsible for the profitability of the product. The product owner should also adjust the contents of the features and their priority after every Sprint, and decide if what has been produced is acceptable.

Scrum Master

Kavitha C.R, HOD MCA was the Scrum master for this project. The Scrum master is responsible for making sure a Scrum team lives by the values and practices of Scrum, and for removing any impediments to the progress of the team. As such, he should shield the team from external interferences, and ensure that the Scrum process is followed, including issuing invitations to the daily Scrum meetings.

Scrum Team

The Scrum team consists of a group of people developing the software product. In this project, the scrum team consists of MS. Soni P M, the product owner, Ms. Kavitha C.R, Scrum master, Ms. Reashma Raj P R, the project supervisor and Mr. Albin P M, Developer. There is no personal responsibility in Scrum, the whole team fails or succeeds as a single entity.

3.3 Sprint Planning Meeting

Most of the time our sprint planning meetings went as planned, though sometimes the product owner was unavailable. In these cases, the meeting simply needed to be scheduled one or two days later. These extra days would come in handy for cleaning up what we had produced the earlier sprint.

3.4 Daily Scrum Meeting

Our daily Scrums took place at 3 PM. People could arrive as early as 2.55 PM and work until then, but as long as they did arrive before the meeting started it did not matter. All meetings conducted through online mode using Google meet.

3.5 Sprint Review Meeting

Our review meetings were always held on Fridays. The product owner would visit the team project room along with any other interested parties, and the team would demonstrate new features on a live system, and answer any questions that might arise during the demo. Usually we would spend one or two days before the demo checking if everything was working, and run test demonstrations internally. Many suggestions and updations were given at each review meeting.

4. Development Tools

4.1. Introduction to Java

JavaScript (**JS**) is a lightweight, interpreted, or just-in-time compiled programming language with first-class functions. While it is most well-known as the scripting language for Web pages, many non-browser environments also use it, such as Node.js, Apache CouchDB and Adobe Acrobat. JavaScript is a prototype-based, multi-paradigm, single-

threaded, dynamic language, supporting object-oriented, imperative, and declarative (e.g. functional programming) styles.

4.2. Features of JavaScript

4.2.1. Validating User's Input

JavaScript is very useful while using forms. It has the capability to validate user input for errors and also saves time. If the user leaves a required field empty or the information is incorrect, JavaScript checks for them before sending the data over to the server.

4.2.2. Simple Client-side Calculations

Since JavaScript is a client-side technology, it can perform basic calculations on the browser. The browser does not need to ask server time for every task. This is especially helpful when a user needs to perform these calculations repeatedly. In these cases, connecting to the server would take a lot more time than performing the actual calculations.

4.2.3. Greater Control

JavaScript provides greater control to the browser rather than being completely dependent on the web servers. JavaScript provides various browsers with additional functionalities that help reduce server load and network traffic.

4.2.4. Platform Independent

Since browsers interpret JavaScript, it solves the problem of compilation and compatibility. Thus, it can run on Windows, Macintosh, and other Netscape-supported systems. Also, it is possible to embed them in any other script like HTML that keeps JavaScript into use.

4.2.5. Handling Dates and Time

Unlike other programming languages, JavaScript has built-in functions to determine the date and time. Thus it is very easy to code only by using methods like**, getDate().**

4.2.6. Generating HTML Content

JavaScript has very handy features to dynamically generate HTML content for the web. It allows us to add text, links, images, tables, etc after an event occurrence **(e.g. – mouse click).**

4.3. Npm

npm (originally short for **Node Package Manager**) is a package manager for the JavaScript programming language. npm, Inc. is a subsidiary of GitHub, an American multinational corporation that provides hosting for software development and version control with the usage of Git. It is the default package manager for the JavaScript runtime environment Node.js. It consists of a command line client, also called npm, and an online database of public and paid-for private packages, called the npm registry. The registry is accessed via the client, and the available packages can be browsed and searched via the npm website. The package manager and the registry are managed by npm, Inc.

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4.4. Visual Studio Code

Visual Studio Code is a free source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git. Users can change the theme, keyboard shortcuts, preferences, and install extensions that add additional functionality. Microsoft has released Visual Studio Code's source code on the **VS Code** repository of GitHub.com, under the permissive MIT License, while the compiled releases are freeware.

4.5. Browser

A web browser (commonly referred to as a browser) is a software application for retrieving, presenting, and traversing information resources on the World Wide Web (also known as the internet or the Net). The most popular web browsers are Google Chrome, Microsoft Edge (formerly Internet Explorer), Mozilla Firefox, and Apple’s Safari.

4.6. JavaScript

JavaScript ES6 brings new syntax and new awesome features to make your code more modern and more readable. It allows you to write less code and do more. ES6

introduces us to many great features like arrow functions, template strings, class destruction, Modules… and more.

ECMAScript 2015 or ES2015 is a significant update to JavaScript programming language. It is the first major update to the language since ES5 which was standardized in 2009. Therefore, ES2015 is often called ES6.

4.7. HTML

HTML (**H**yper**t**ext **M**arkup **L**anguage) is the code that is used to structure a web page and its content. For example, content could be structured within a set of paragraphs, a list of bulleted points, or using images and data tables.

HTML is not a programming language; it is a *markup language* that defines the structure of your content. HTML consists of a series of **elements**, which you use to enclose, or wrap, different parts of the content to make it appear a certain way, or act a certain way. The enclosing tags can make a word or image hyperlink to somewhere else, can italicize words, can make the font bigger or smaller, and so on.

4.8. CSS

CSS is the language for describing the presentation of Web pages, including colors, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. **CSS** is independent of HTML and can be used with any XML-based markup language.

5. Milestones

5.1. **Sprint 1**

Our first meeting was held on 23-10-2020 with the product owner (customer/senior faculty), it was taken about half an hour to collect the initial requirements needed for our project.

5.2. Sprint 2

During sprint 2 we started form designing and after that we developed.

5.3. Sprint 3

During sprint 3 we developed users windows.

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5.4. Sprint 4

In this sprint we started testing and validating the forms.

6. System Design

6.1. Module Description

6.1.1. Login Module

In this module the user can log into the system.

6.1.2. Register Module

In this module the user can register into the system.

6.1.3. Classroom Module

In this module student users can access the links submitted by the teacher user.

6.1.4. Jobs Module

In this module the student users can apply for the jobs that the company user posted.

6.1.5. Link post Module

In this module the teacher users can update the links to the classroom.

6.1.6. User authentication Module

In this module the admin users can approve or reject the users register.

6.1.7. Jobs authentication Module

In this module the admin users can approve or rejects the posts the company users have made.

6.1.8. Post Jobs Module

In this module the company users can post their job vacancies.

6.1.9. View applications Module

In this module the company users can see the applications gathered for their job posted.

6.1.10. Post Jobs status Module

In this module the company users can see who all has applied for the job they posted.

6.1.11. View company Module

In this module the student and admin user can see the details of the company user.

6.1.12. View student Module

In this module the company users can view the student users profile of students who applied for the job they posted.

7. DATABASE Design

7.1. User Table

NAME	TYPE	CONSTRAINT	DESCRIPTION
USER_ID	**Int**	**primary**	**Id of the user**
NAME	**Varchar(100)**	**Not null**	**Name of the user**
EMAIL	**Varchar(100)**	**Unique**	**Email of the user**
PHONE NO	**Int**	**Unique**	**Phone no of the user**
PASSWORD	**Varchar(100)**	**Not null**	**Password of the user**
USRTYP	**Varchar(100)**	**Not null**	**The user type**
STATUS	**Varchar(10)**	**Not null**	**Admins approved or rejected**

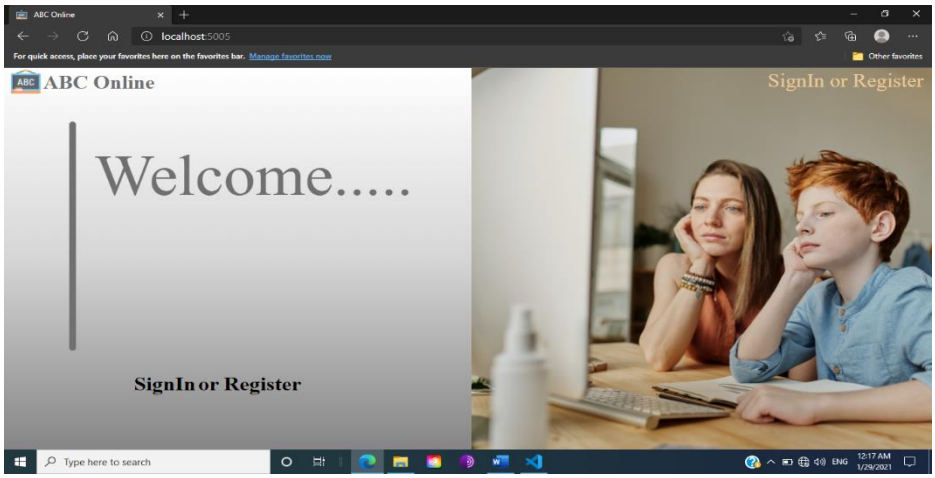
7.2. Jobs Table

NAME	TYPE	CONSTRAINT	DESCRIPTION
JOB_ID	**int**	**Primary**	**Id of the job post**
USER_ID	**Int**	**Unique**	**User applied for the job**
DESIGNATION	**Varchar(100)**	**Not null**	**Designation of the job post**
DESCRIPTION	**Varchar(100)**	**Not null**	**Description of the job post**
DURATION	**Varchar(100)**	**Not null**	**Duration of the job**
SALARY	**Int**	**Not null**	**Salary of the job**
STATUS	**Varchar(10)**	**Not null**	**Admin approved or rejected**

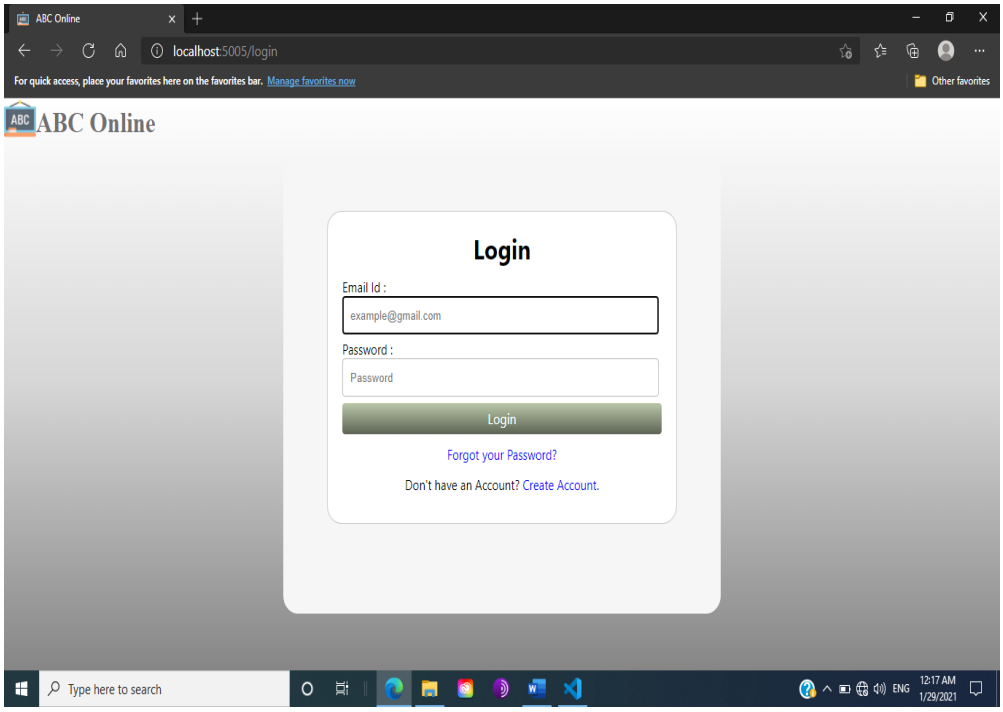
7.3. Links Table

NAME	TYPE	CONSTRAINT	DESCRIPTION
LINK_ID	**Int**	**Primary**	**Id of the link**
COLUMN_NO	**Int**	**Not null**	**Column no of the link**
ROW_NO	**Int**	**Not null**	**Row no of the link**
USER_ID	**Int**	**Unique**	**User who changed the values**

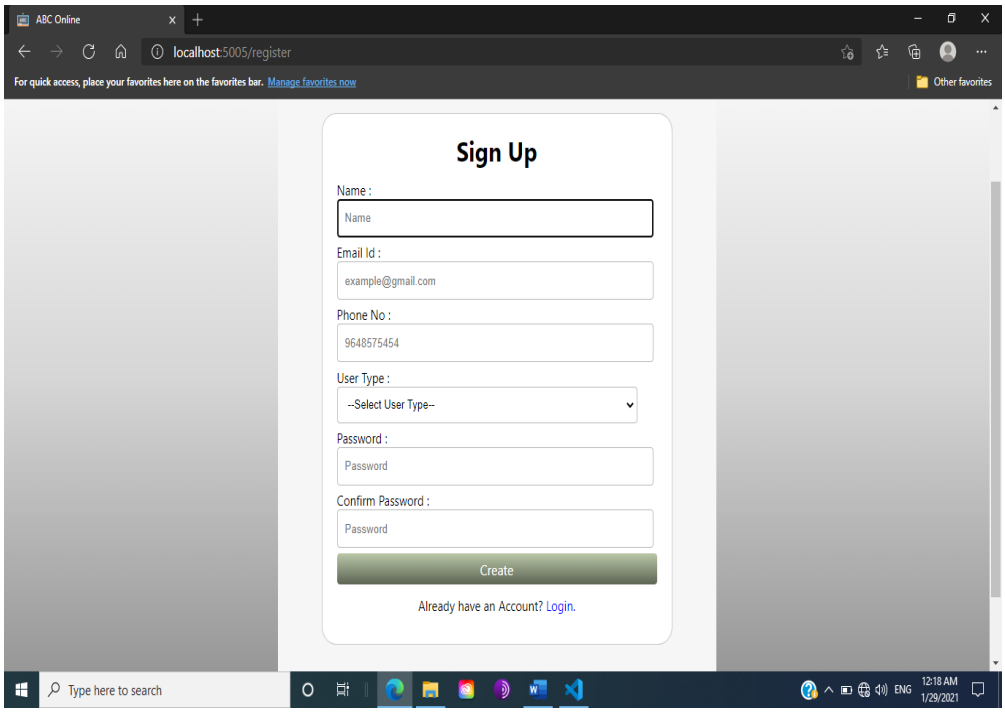
8. UI Design



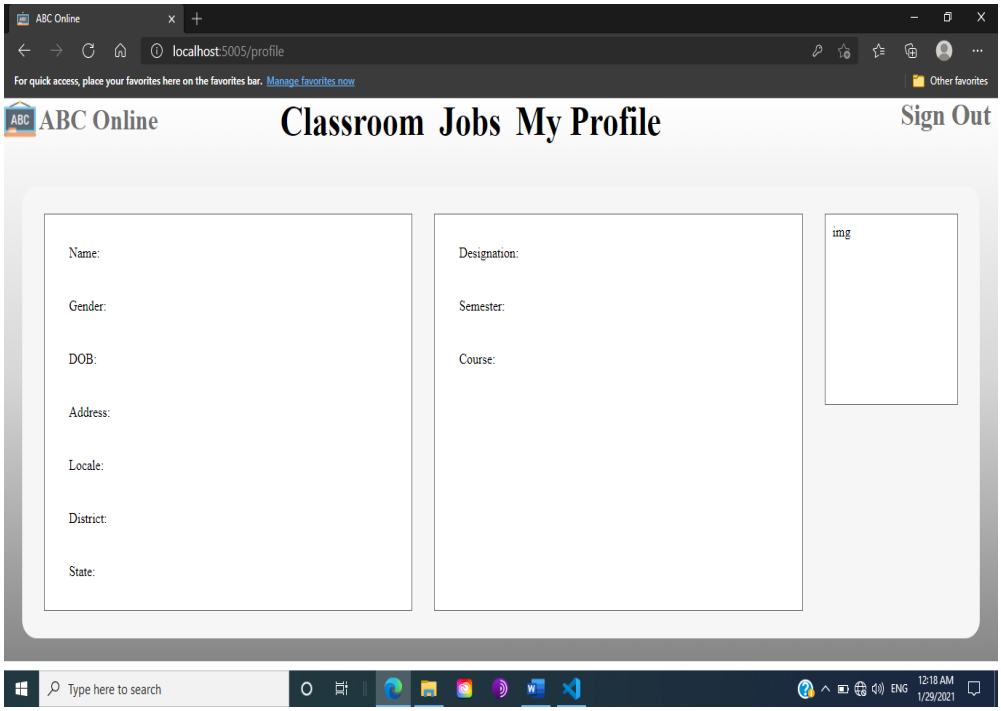
Landing page



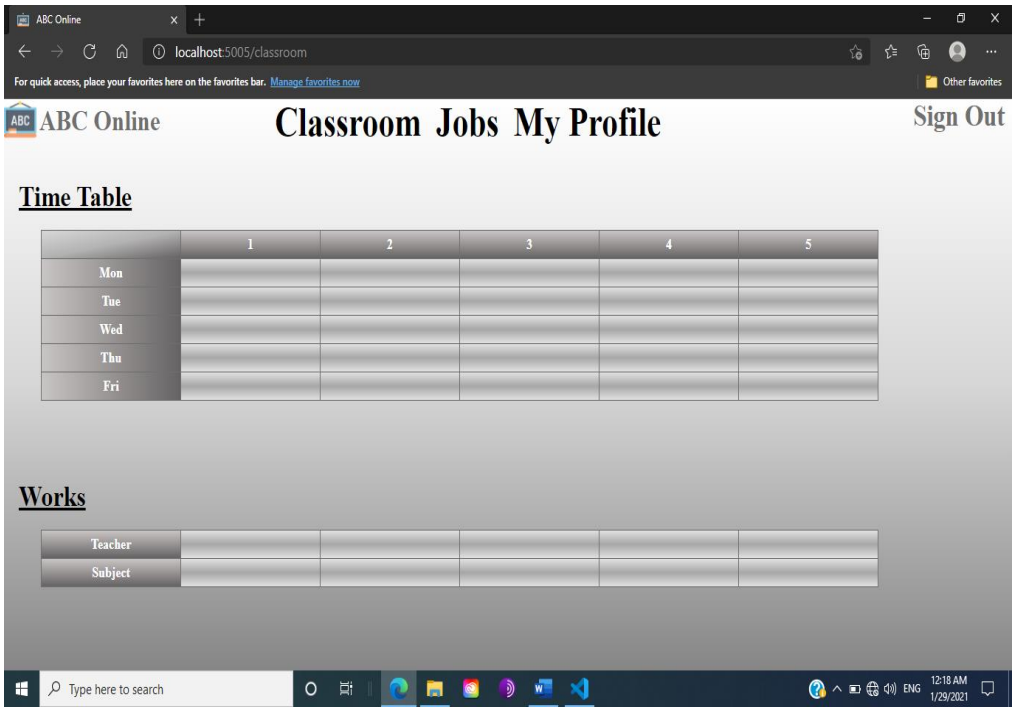
Login page



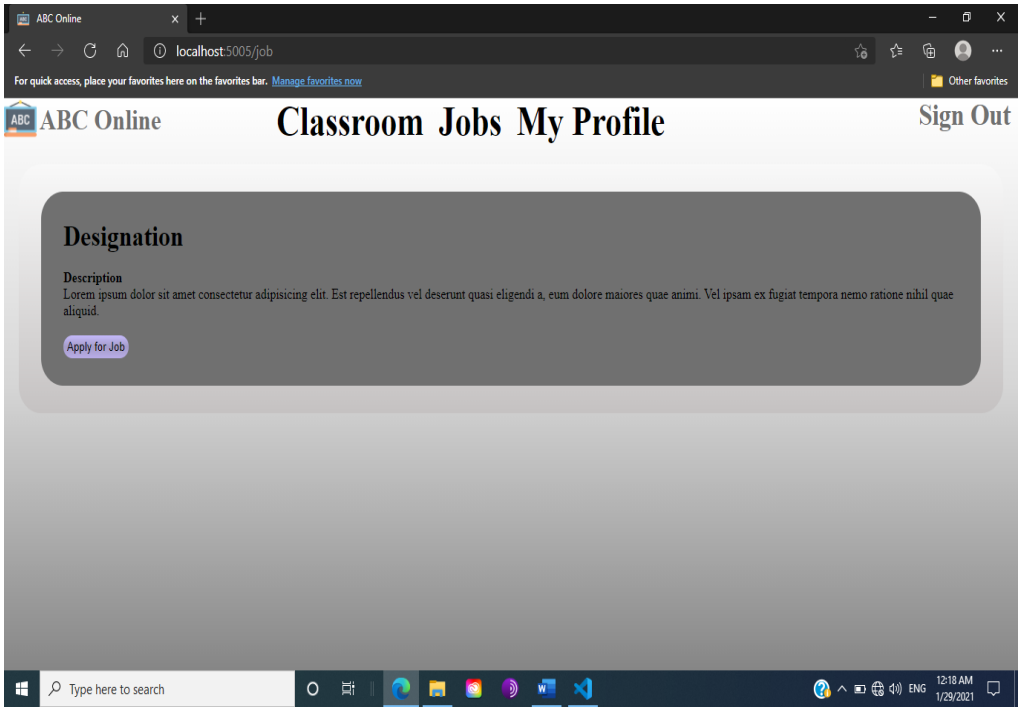
Register page



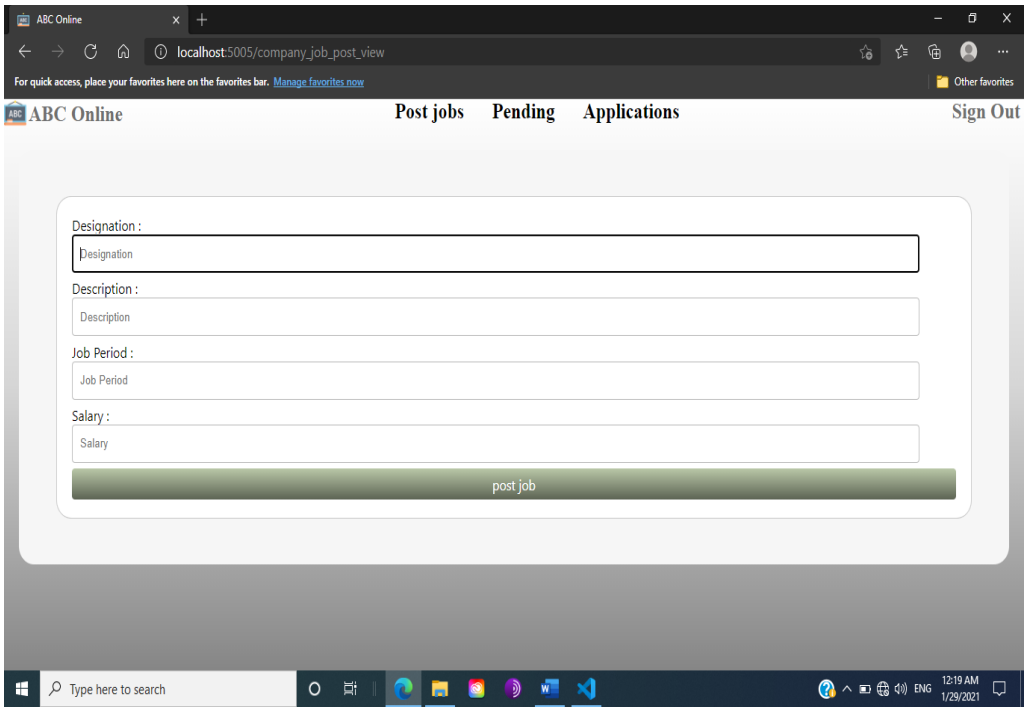
Profile page

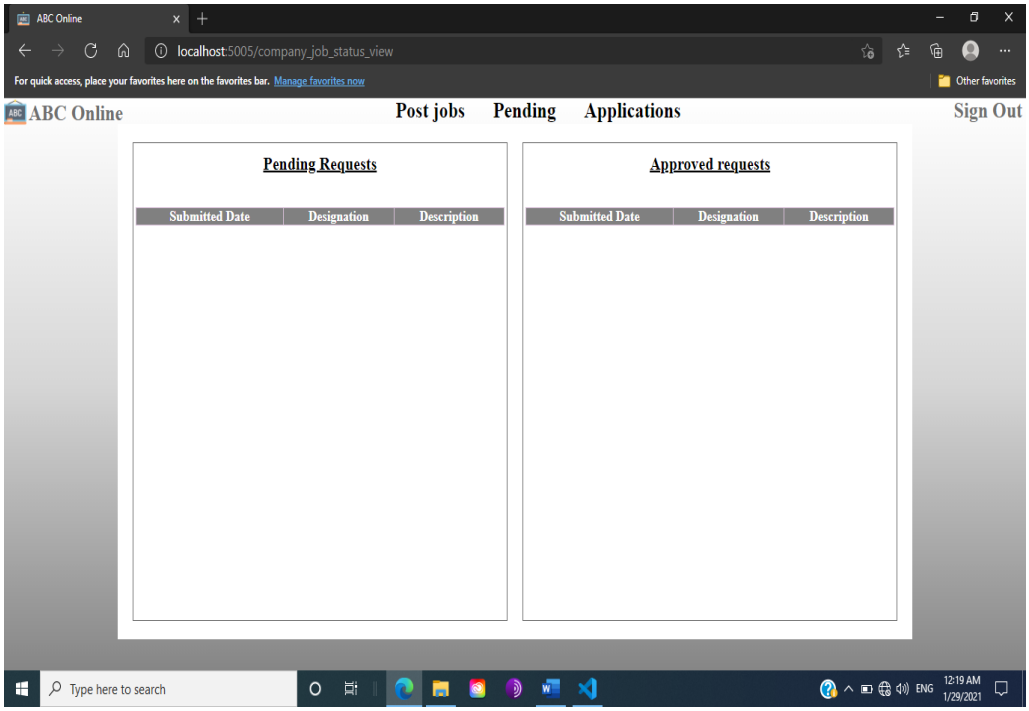


Classroom page


ABC Online
localhost:5005/job
For quick access, place your favorites here on the favorites bar. Manage favorites now
Other favorites
ABC Online
Classroom Jobs My Profile
Sign Out
Designation
Description
Lorem ipsum dolor sit amet consectetur adipisicing elit. Est repellendus vel deserunt quasi eligendi a, eum dolore maiores quae animi. Vel ipsam ex fugiat tempora nemo ratione nihil quae aliquid.
Apply for Job
Type here to search
ENG
12:18 AM
1/29/2021

Jobs page


ABC Online
localhost:5005/company_job_post_view
For quick access, place your favorites here on the favorites bar. Manage favorites now
Other favorites
ABC Online
Post jobs
Pending
Applications
Sign Out
Designation :
Designation
Description :
Description
Job Period :
Job Period
Salary :
Salary
post job
Type here to search
ENG
12:19 AM
1/29/2021


ABC Online
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For quick access, place your favorites here on the favorites bar. Manage favorites now
Other favorites
ABC Online
Post jobs
Pending
Applications
Sign Out
Pending Requests
Submitted Date
Designation
Description
Approved requests
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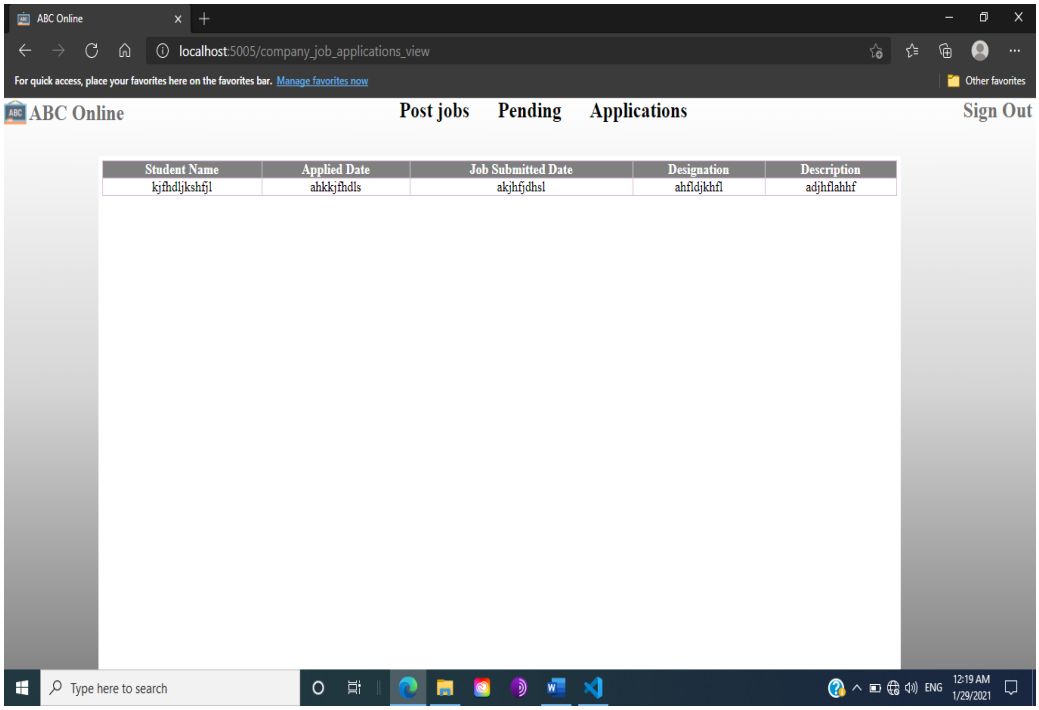
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For quick access, place your favorites here on the favorites bar. Manage favorites now
Other favorites
ABC Online
Post jobs
Pending
Applications
Sign Out
Student Name
Applied Date
Job Submitted Date
Designation
Description
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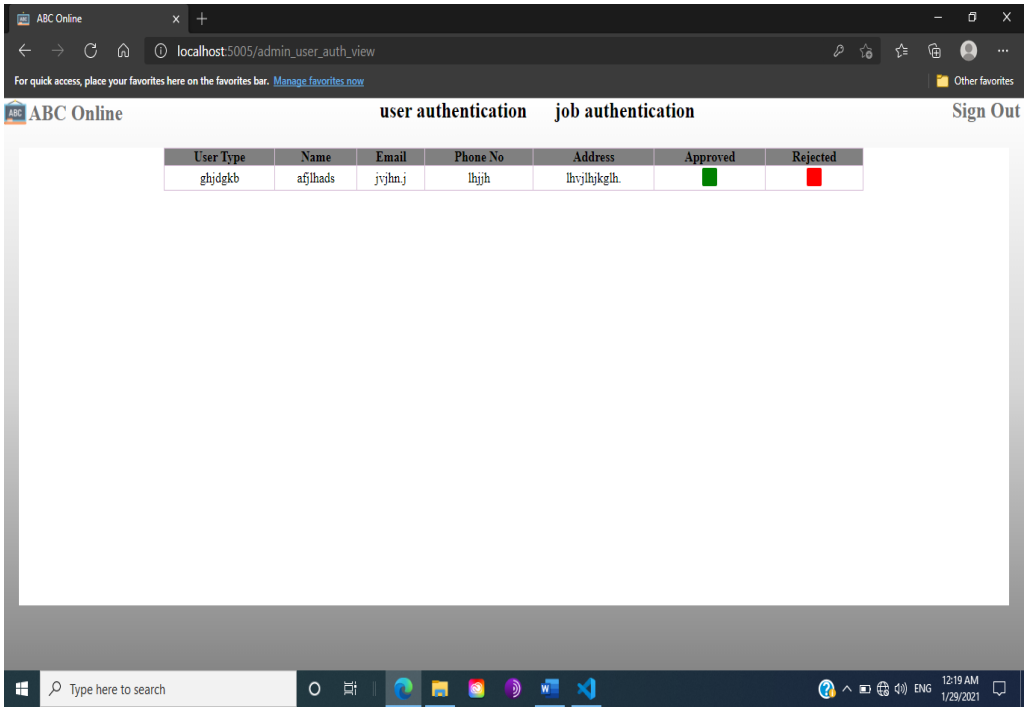
ABC Online
localhost:5005/admin_user_auth_view
For quick access, place your favorites here on the favorites bar. Manage favorites now
Other favorites
ABC Online
user authentication
job authentication
Sign Out
User Type
Name
Email
Phone No
Address
Approved
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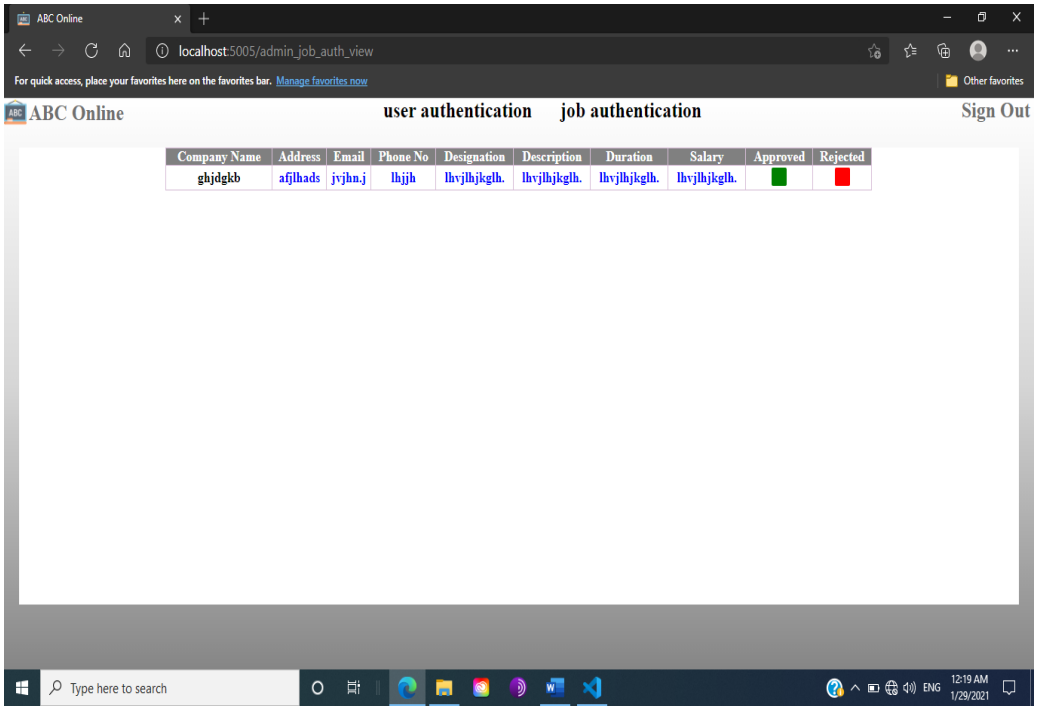
ABC Online
localhost:5005/admin_job_auth_view
For quick access, place your favorites here on the favorites bar. Manage favorites now
Other favorites
ABC Online
user authentication
job authentication
Sign Out
Company Name
Address
Email
Phone No
Designation
Description
Duration
Salary
Approved
Rejected
ghjdgkb
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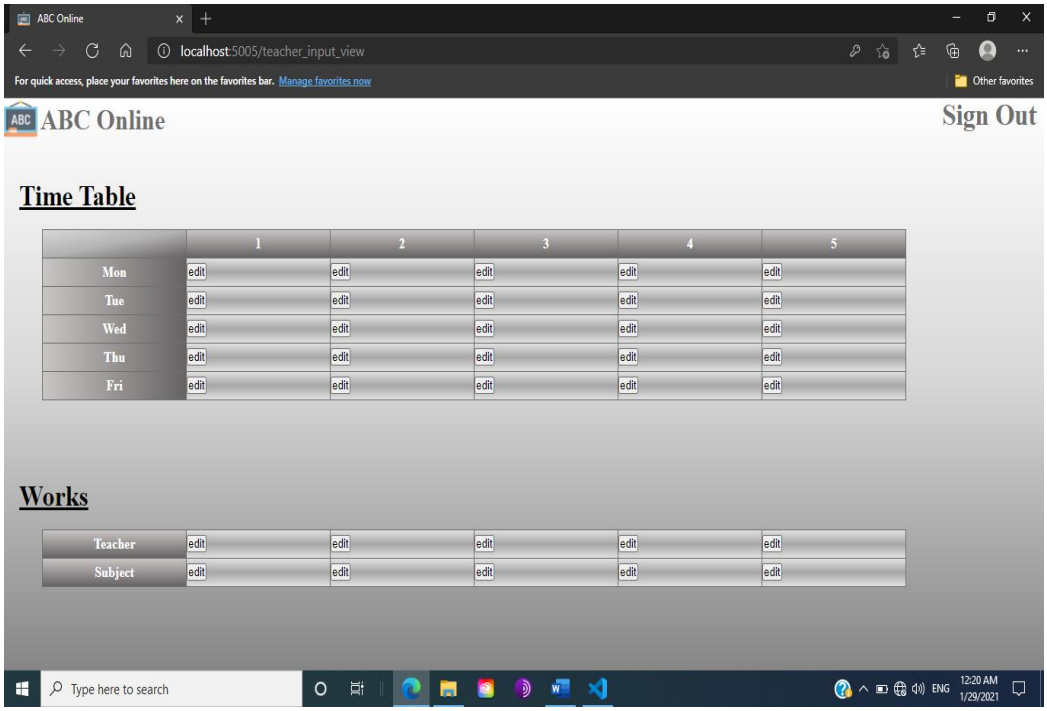
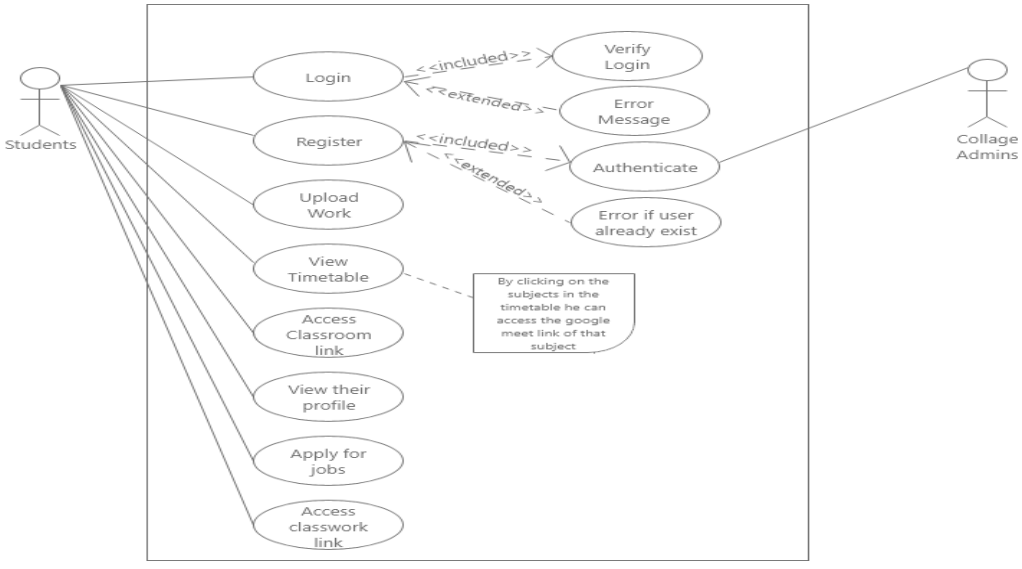
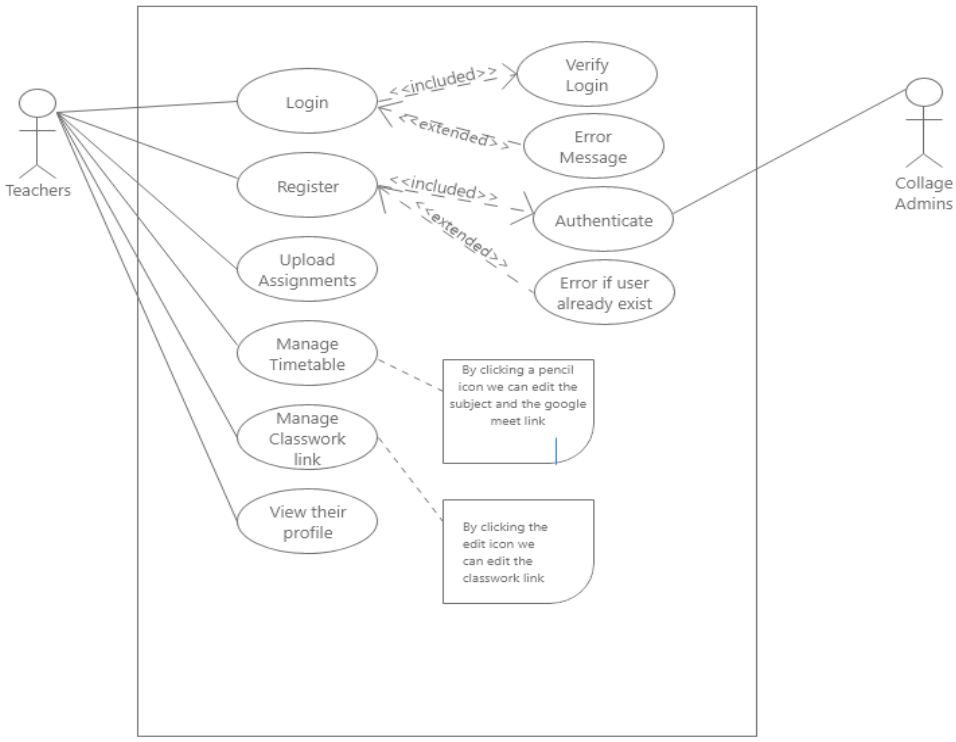


9. UML Diagrams

9.1. Use case Diagram




Teachers
Login
Register
Upload Assignments
Manage Timetable
Manage Classwork link
View their profile
<<included>>
<<extended>>
Verify Login
Error Message
Authenticate
Error if user already exist
By clicking a pencil icon we can edit the subject and the google meet link
By clicking the edit icon we can edit the classwork link
Collage Admins


Teachers
Login
Register
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View their profile
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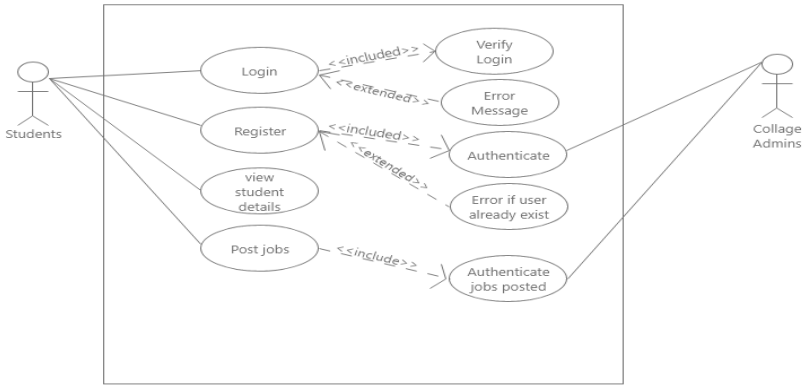
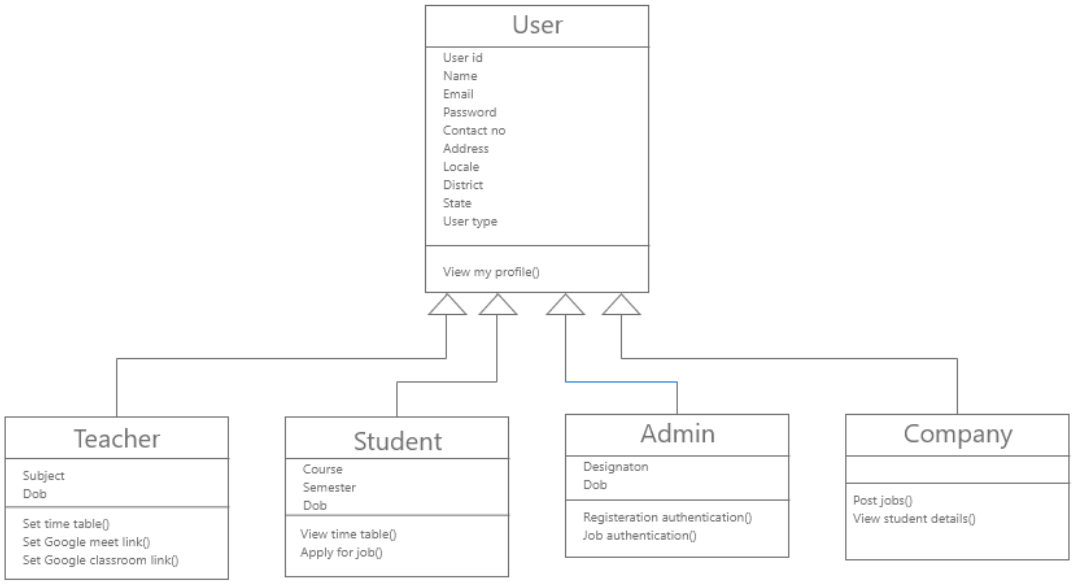


9.2. Class Diagram



10.Testing

System testing is an investigation conducted to provide stakeholders with information about the quality of the product or service under test. System testing can also provide an objective, independent view of the system to allow the business to appreciate and understand the risks of system implementation. Test techniques include the process of executing a program or application with the intent of finding system bugs

Testing can be stated as the process of validating and verifying that the product such as meets the requirements that guided its design and development, responds correctly to all kinds of inputs, performs its functions within an acceptable time

11.System Implementation

The following are the steps involved in the implementation plan

- Test system with sample data
- Detection and correction of errors
- Make the necessary changes in the system
- Check the existing system
- Installation of hardware and software utilities
- Training and involvement of user personals

12. Conclusion and Future Enhancement

This project on the topic “Online Schooling Organizer system with Job Portal” was intend to ease the schooling system for organizations which conducted the schooling offline and was forced to move online. The name for the product is “ABC Online”. As indented, the basic views and functionalities for “ABC Online” is implemented. “ABC Online” is just at its basic version and can be further developed to a full management system for more functionalities. At the present, the product’s real usefulness is limited to the student and

company users only. The Teacher and admin users are just to maintain the system. This can be further developed to fully fledged management system where every user can have the more roles to play and advantages to gain.

13. Appendix

13.1. Appendix A

13.1.1. Sample code - Index.hbs

```
<!DOCTYPE html>
<html lang="en">

<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <link rel="stylesheet" href="/style.css">
   <link rel="shortcut icon" href="/blackboard.png">
   <title>ABC Online</title>
</head>

<body>
   <div class="navbar">
      <div class="logo">
         <a href="/">
            <img src="/blackboard.png" alt="" id="logo-img">
            <h1 id="logo-title">ABC Online </h1>
         </a>
      </div>
      <div class="image" style="background-image: url(/landing\ page\ side\ img.jpg);"></div>
      <div class="nav-left">
         <a href="/login">SignIn</a> or <a href="/register">Register</a>
      </div>
   </div>
   <br>
   <br>
   <div class="container">
      <div class="line"></div>
      <div class="Welcome-txt">
         <p> Welcome.....</p>
      </div>
   </div>
   <br>
   <br>
   <div class="button">
      <h1><a href="/login"> SignIn</a></h1>
```

```
      <h1> or </h1>
      <h1><a href="/register"> Register </a></h1>
   </div>
</body>

</html>
```

13.1.2.Sample code - Register.hbs

```
<!DOCTYPE html>
<html lang="en">

<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <link rel="stylesheet" href="/login-register.css">
   <script src="/login-register.js"></script>
   <link rel="shortcut icon" href="/blackboard.png" type="image/x-icon">
   <title>ABC Online</title>
</head>

<body>

   <div class="navbar">
      <div class="logo">
         <a href="/">
            <img src="/blackboard.png" alt="" id="logo-img">
            <h1 id="logo-title"> ABC Online </h1>
         </a>
      </div>
   </div>

   <div class="container">

      <form action="/auth/register" class="form" id="register" method="POST">
         <div class="form-container">

            <h1 class="form-header">Sign Up</h1>
            <div class="form-msg form-msg-err"></div>

            <div class="form-group">
               <label for="register-Name">Name :</label>
               <br>
               <input class="form-input" id="reg-name-
id" type="text" autofocus placeholder="Name" name="reg_name" />
               <div class="form-input-err-msg"></div>
```

```
            </div>

            <div class="form-group">
               <label for="register-email">Email Id :</label>
               <br>
               <input class="form-input" id="reg-email-
id" type="email" autofocus placeholder="example@gmail.com" name="reg_email" />
               <div class="form-input-err-msg"></div>
            </div>

            <div class="form-group">
               <label for="register-phoneno">Phone No :</label>
               <br>
               <input class="form-input" id="reg-phoneNo-
id" type="text" autofocus placeholder="9648575454" name="reg_phoneno"/>
               <div class="form-input-err-msg"></div>
            </div>

            <div class="form-group">
               <label for="register-usertype">User Type :</label>
               <br>
               <select class="form-input" id="reg-usrTyp-id" autofocus placeholder="--
Select User Type--" name="reg_usertyp">
                  <option value="--Select User Type--">--Select User Type--</option>
                  <option value="Student">Student</option>
                  <option value="Teacher">Teacher</option>
                  <option value="Admin">Admin</option>
                  <option value="Employer">Employer</option>
               </select>
               <div class="form-input-err-msg"></div>
            </div>

            <div class="form-group">
               <label for="register-password">Password :</label>
               <br>
               <input class="form-input" id="reg-password-
id" type="password" autofocus placeholder="Password" name="reg_pswd" />
               <div class="form-input-err-msg"></div>
            </div>

            <div class="form-group">
               <label for="register-confirmpassword">Confirm Password :</label>
               <br>
               <input class="form-input" id="reg-confirmPassword-
id" type="password" autofocus placeholder="Password" name="reg_cpswd" />
               <div class="form-input-err-msg"></div>
```

```
            </div>

            <button type="submit" class="register-
button" name="registerbtn" value="regBtn">Create</button>

            <p class="login-form-link">Already have an Account?
               <a id="login-link" href="/login">Login.</a>
            </p>

            <div class="message" id="message">
               {{#if message}}
                  <h4 >{{message}}</h4>
               {{/if}}
            </div>

         </div>
      </form>

   </div>
</body>

</html>
```

13.1.3.Sample code - Login.hbs

```
<!DOCTYPE html>
<html lang="en">

<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <link rel="stylesheet" href="/login-register.css">
   <script src="/login-register.js"></script>
   <link rel="shortcut icon" href="/blackboard.png" type="image/x-icon">
   <title>ABC Online</title>
</head>

<body>

   <div class="navbar">
      <div class="logo">
         <a href="/">
            <img src="/blackboard.png" alt="" id="logo-img">
            <h1 id="logo-title"> ABC Online </h1>
         </a>
      </div>
```

```
    </div>

    <div class="container">
        <form action="/auth/login" class="form" id="login" method="POST">
            <div class="form-container">

                <h1 class="form-header">Login</h1>
                <div class="form-msg form-msg-err"></div>

                <div class="form-group">
                    <label for="login-email">Email Id :</label>
                    <br>
                    <input class="form-input" id="login-email-
id" type="email" autofocus placeholder="example@gmail.com" name="login_email" />
                    <div class="form-input-err-msg"></div>
                </div>

                <div class="form-group">
                    <label for="login-password">Password :</label>
                    <br>
                    <input class="form-input" id="login-password-
id" type="password" autofocus placeholder="Password" name="login_pswd"/>
                    <div class="form-input-err-msg"></div>
                </div>

                <div class="message"></div>

                <button type="submit" class="login-
button" name="loginbtn" value="loginBtn">Login</button>

                <p class="forgot-text">
                    <a href="#">Forgot your Password?</a>
                </p>

                <p class="register-form-link">Don't have an Account?
                    <a id="register-link" href="/register">Create Account.</a>
                </p>
                <div class="message" id="message">
                    {{#if message}}
                        <h4 >{{message}}</h4>
                    {{/if}}
                </div>

            </div>
        </form>
    </div>
```

```
</body>
</html>
```

13.1.4.Sample code - Styles.css

```
* {
   margin: 0;
   padding: 0;
   text-decoration: none;
}

body {
   height: 100vh;
   background-image: linear-gradient(white, #D6D6D6, #868686);
   background-repeat: no-repeat;
   background-size: 100%;
}

.navbar {
   position: relative;
   margin-left: 10px;
}

#logo-img {
   width: 7vh;
   height: 7vh;
   margin-right: 0;
}

#logo-title {
   position: relative;
   display: inline;
   font-size: 5vh;
   bottom: 1.5vh;
   color: #707070;
   margin: 0;
}

.nav-left {
   position: absolute;
   right: 2vh;
   bottom: 2vh;
   font-size: 5vh;
   color: #EECC99;
}
```

```
.nav-left a {
    color: #EECC99;
}

.container {
    position: relative;
    display: flex;
}

.line {
    position: relative;
    margin-left: 7%;
    background-color: #707070 !important;
    height: 60vh;
    width: 10px;
    font-size: 20px;
    border-radius: 50px;
}

p {
    position: absolute;
    font-size: 15vh;
    margin-left: 2%;
    margin-top: 2.5%;
    color: #707070;
}

.image {
    display: grid;
    position: absolute;
    right: 0;
    top: 0;
    width: 50%;
    height: 100vh;
    background-size: cover;
    background-repeat: no-repeat;
}

.button {
    display: block;
    margin-left: 14%;
}

.button h1 {
    display: inline;
}
```

```
.button h1 a {
    display: inline;
    color: black;
}
```

13.1.5.Sample code - Login-register.css

```
* {
    margin: 0;
    padding: 0;
    text-decoration: none;
}

body {
    --color-error: #cc3333;
    --color-success: #4de64d;
    /*  */
    display: flex;
    align-items: center;
    justify-content: center;
    background-image: linear-gradient(white, #D6D6D6, #868686);
    background-repeat: no-repeat;
    background-size: contain;
    min-height: 100vh;
    font-size: 15px;
}

.navbar {
    position: absolute;
    top: 0;
    left: 0;
    width: 100%;
}

#logo-img {
    width: 7vh;
    height: 7vh;
}

#logo-title {
    position: absolute;
    display: inline;
    font-size: 5vh;
    top: 1.5vh;
    color: #707070;
```

```
}

.container {
    min-width: 600px;
    background-color: #F6F6F6;
    margin: 9vh;
    font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
    min-height: 80vh;
    border-radius: 20px;
}

.container form {
    margin: 10%;
    height: 70%;
    padding: 20px;
    background: white;
    border-radius: 20px;
    box-shadow: 0 8px 16px rgb(0, 0, 0, o.3);
    border: 1px solid #afafaf9d;
}

.form-header {
    text-align: center;
    margin-bottom: 1vh;
}

.form-msg {
    text-align: center;
    margin: 1vh 0 2vh 0;
}

.form-msg-err {
    color: var(--color-error);
}

.form-msg-success {
    color: var(--color-success);
}

.form-group {
    margin-bottom: 1vh;
}

.form-input {
    display: block;
    width: 94%;
```

```
    height: 40px;
    background: white;
    border-radius: 4px;
    border: 1px solid silver;
    padding: 0 10px;
}

.form-input-err-msg {
    color: var(--color-error);
}

.form-input-err {
    color: var(--color-error);
    border-color: var(--color-error);
}

button {
    display: block;
    width: 100%;
    height: 34px;
    align-items: center;
    justify-items: center;
    border: none;
    outline: none;
    background-image: linear-gradient(#BAC8A8, #5D6454);
    cursor: pointer;
    font-size: 16px;
    font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
    color: #FFFFFF;
    border-radius: 4px;
    transition: .3s;
}

button:hover {
    opacity: .7;
}

button:active {
    transform: scale(.98);
}

.forgot-text,
.register-form-link,
.login-form-link {
    text-align: center;
    margin: 2vh 0;
```

```
}

p a {
    cursor: pointer;
    color: blue;
}

p a:hover {
    text-decoration: underline;
}

p a:active {
    color: black;
}

#message {
    color: var(--color-error);
    text-align: center;
}
```

13.1.6.Sample code - App.js

```
//importing modules for the project.
const express = require("express");
const path = require("path");
const mysql = require("mysql");
const dotenv = require("dotenv");
const cookieParser = require("cookie-parser");
const PORT = 5005;

dotenv.config({ path: './.env' });

const app = express();

//set value for database connection.
const db = mysql.createConnection({
    host: process.env.DATABASE_HOST, //references to our private/secret data to a .env file
    user: process.env.DATABASE_USER,
    password: process.env.DATABASE_PASSWORD,
    database: process.env.DATABASE
});

const publicDirectory = path.join(__dirname, './public');
app.use(express.static(publicDirectory));
app.set('view engine', 'hbs'); //setting a web template view engine

//parse  URL-encoded bodies (as sent by HTML forms)
app.use(express.urlencoded({ extended: false }));
```

```
//parse JASON bodies (as sent by API clients)
app.use(express.json());
app.use(cookieParser());

//setting database connection and showing error if any.
db.connect((error) => {
   if (error) {
      console.log(error);
   } else {
      console.log("MYSQL Connected....");
   }
});

//define routes
app.use("/", require("./routes/pages"));
app.use('/auth', require('./routes/auth'));

app.listen(PORT, () => {
   console.log('server started at port ' + PORT + '.');
});
```

13.1.7.Sample code - Pages.js

```
const express = require("express");
const router = express.Router();

router.get("/", (req, res) => {
   res.render("index");
});

router.get("/register", (req, res) => {
   res.render("register");
});

router.get("/login", (req, res) => {
   res.render("login");
});

router.get("/profile", (req, res) => {
   res.render("profile");
});

router.get("/classroom", (req, res) => {
   res.render("classroom");
});

router.get("/job", (req, res) => {
```

```
    res.render("job");
});

router.get("/index", (req, res) => {
    res.render("index");
});

router.get("/company_job_post_view", (req, res) => {
    res.render("company_job_post_view");
});

router.get("/company_job_status_view", (req, res) => {
    res.render("company_job_status_view");
});

router.get("/company_job_applications_view", (req, res) => {
    res.render("company_job_applications_view");
});

router.get("/company_job_student_view", (req, res) => {
    res.render("company_job_student_view");
});

router.get("/admin_user_auth_view", (req, res) => {
    res.render("admin_user_auth_view");
});

router.get("/admin_job_auth_view", (req, res) => {
    res.render("admin_job_auth_view");
});

router.get("/admin_user_view", (req, res) => {
    res.render("admin_user_view");
});

router.get("/teacher_input_view", (req, res) => {
    res.render("teacher_input_view");
});

router.get("/teacher_add_link_view", (req, res) => {
    res.render("teacher_add_link_view");
});

// router.get("/clearcookies", (req, res) => {
//     // res.post("login");
// });
```

```
module.exports = router;
```

13.1.8.Sample code - auth.js(routes)

```
const express = require("express");
const authController = require('../controller/auth');
const router = express.Router();

router.post("/register", authController.register);
router.post("/login", authController.login);
router.post("/profile", authController.profile);
router.post("/classroom", authController.classroom);
router.post("/job", authController.job);
router.post("/company_job_post_view", authController.postjob);
router.post("/company_job_status_view", authController.postjobstatus);
router.post("/company_job_applications_view", authController.postjobapplications);
router.post("/clearcookies", authController.clearcookies);
router.post("/add_link", authController.addlink);

module.exports = router;
```

13.1.9.Sample code - auth.js(controller)

```
const mysql = require("mysql");
const jwt = require("jsonwebtoken");
const bcrypt = require("bcryptjs");

const db = mysql.createConnection({
   host: process.env.DATABASE_HOST, //references to our private/secret data to a .env file
   user: process.env.DATABASE_USER,
   password: process.env.DATABASE_PASSWORD,
   database: process.env.DATABASE
});

exports.register = (req, res) => {
   console.log(req.body);

   const { reg_name, reg_email, reg_phoneno, reg_usertyp, reg_pswd, reg_cpswd } = req.body; /
/same as above commented codes

   db.query("SELECT email FROM users WHERE email = ?", [reg_email], async(error, results)
=> {
      if (error) {
         console.log(error);
      }
```

```
        if (results.length > 0) {
            return res.render('register', {
                message: 'The email is already in use....'
            });

        } else if (reg_pswd !== reg_cpswd) {
            return res.render('register', {
                message: 'Passwords do not match.....'
            });
        } else if (results.usrtyp == "--Select User Type--") {
            return res.render('register', {
                message: 'choose a valid user...'
            })
        }
        db.query("SELECT phoneNo FROM users WHERE phoneNo = ?", [reg_phoneno], async(e
rror, results) => {
            if (error) {
                console.log(error);
            }
            if (results.length > 0) {
                return res.render('register', {
                    message: 'The phone Number is already in use....'
                });
            } //else if (results[0].reg_phoneno == null) {
            //     return res.render('register', {
            //         message: 'blank phone input....'
            //     });
            // }
        });

        let hashedPassword = await bcrypt.hash(reg_pswd, 8)
        db.query('INSERT INTO users SET ?', { name: reg_name, email: reg_email, phoneno: reg_
phoneno, password: hashedPassword, usrtyp: reg_usertyp }, (error, results) => {
            if (error) {
                console.log(error);
            } else {
                return res.render('register', {
                    message: 'user registered.'
                });
            }
        });

    });
}
```

```
exports.login = async(req, res) => {
    try {
        const { login_email, login_pswd } = req.body;

        if (!login_email || !login_pswd) {
            return res.status(400).render('login', {
                message: 'Provide the details please...'
            });
        }
        db.query('SELECT * FROM users WHERE email = ?', [login_email], async(error, results)
=> {
            if (!results || !(await bcrypt.compare(login_pswd, results[0].password))) {
                res.status(401).render('login', {
                    message: 'the email or password entered is incorrect.....'
                })
            } else {

                const id = results[0].user_id;

                const token = jwt.sign({ id: id }, process.env.JWT_SECRET, {
                    expiresIn: process.env.JWT_EXPIRES_IN
                });
                console.log('the token is ' + token);

                const cookieOptions = {
                    expires: new Date(
                        Date.now() + process.env.JWT_COOKIE_EXPIRES * 24 * 60 * 60 * 1000
                    ),
                    httpOnly: true
                };
                res.cookie('jwt', token, cookieOptions);
                console.log(cookieOptions);
                switch (results[0].usrtyp) {
                    case "Student":
                        res.status(200).redirect("/profile");
                        break;
                    case "Employer":
                        res.status(200).redirect("/company_job_applications_view");
                        break;
                    case "Teacher":
                        res.status(200).redirect("/teacher_input_view");
                        break;
                    case "Admin":
```

```
                    res.status(200).redirect("/admin_user_auth_view");
                    break;
                }
            }
        });
    } catch (error) {
        console.log(error)
    }
}

exports.profile = async(req, res) => {

}

exports.classroom = async(req, res) => {

}

exports.job = async(req, res) => {

}
exports.clearcookies = async(req, res) => {
    console.log('cookies cleared')
}

exports.postjob = async(req, res) => {
    // const { user_id, designation, description, durarion, salary } = req.body; //same as above com
mented codes

    // db.query("SELECT email FROM jobs WHERE  = ?", [user_id], async(error, results) => {
    //     if (error) {
    //         console.log(error);
    //     }
    // });
}

exports.postjobstatus = async(req, res) => {

}
exports.postjobapplications = async(req, res) => {

}

exports.addlink = async(req, res) => {
    res.render('teacher_input_view')
}
```

13.2. Appendix C

13.2.1. Webliography

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