

Bangladesh Army University of Science and Technology, Saidpur



PROJECT REPORT
(Online Exam and Education System)

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Abstract

Online Class and Education System is a web based educational system. Our application features easy to manage modules and other features to ensure good results. The features are kept simple and easy to use. Everything is made according to basic needs to online education. Irrespective to the current pandemic our app is useful whether education is provided remotely or not. Students can use this app in any situation to make their semester easy.

This application is focused on individual institutes, meaning that every client can have their custom environment as per their requirements. This will ensure the necessity of our application.

Keywords: Online education, remote education, web-based application

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CHAPTER 1

1.0 Introduction

Though it may seem that online education had its beginnings in the late 1900s, the concept of distance learning first came into practice in the mid-19th century when the U.S. Postal Service was developed. As technology improves and online programs become respected, education experts predict that the distance education will continue to expand and complexify in the future. Considering the current situation education is highly affected by the COVID pandemic. So, the demand to provide education remotely has increased gradually.

Our goal is to fulfill the demand that can be done by using this application that we are developing. Supply always comes to the hills of demand. Today, a convergence of events is creating the perfect environment for significantly advanced education. With an appearance of widely available educational tools and resources, and with an increasingly connected community, transformative opportunities for education grow. Now, we see a large number of new initiatives with the potential to totally change the ecology and the economics of educational process. It means that different kinds of technology can be used to transfer the information to the educator in shortest time, least effort and maximum benefits.

The application provides two modules.

- Admin
- Student

The Admin module provides 4 essential functions:

- Online exam
- YouTube video sharing system
- Semester and subject creating
- Student management

The student module features 5 functionalities:

- Material View provided by the Admin
- Video watching
- Exam taking
- Instant merit list view
- Download PDF version of the question

The admin panel is very simple and easy to use. Anyone with least knowledge with technology can use our admin panel easily. Admin is given all the necessary features to provide online education smoothly.

The student panel is very dynamic. The key feature of the student panel is the ability to take an exam in a given time by the teacher. The student can take an exam and see his/her result instantly by the merit list feature of the module.

CHAPTER 2

2. Background

2.1 Current Status of Online Education

Rapid developments in technology have made distance education easy (McBrien et al., 2009). “Most of the terms (online learning, open learning, web-based learning, computer-mediated learning, blended learning, m-learning, for ex.) have in common the ability to use a computer connected to a network, that offers the possibility to learn from anywhere, anytime, in any rhythm, with any means” (Cojocariu et al., 2014). Online learning can be termed as a tool that can make the teaching–learning process more student-centered, more innovative, and even more flexible. Online learning is defined as “learning experiences in synchronous or asynchronous environments using different devices (e.g., mobile phones, laptops, etc.) with internet access. In these environments, students can be anywhere (independent) to learn and interact with instructors and other students” (Singh & Thurman, 2019). The synchronous learning environment is structured in the sense that students attend live lectures, there are real-time interactions between educators and learners, and there is a possibility of instant feedback, whereas asynchronous learning environments are not properly structured. In such a learning environment, learning content is not available in the form of live lectures or classes; it is available at different learning systems and forums. Instant feedback and immediate response are not possible under such an environment (Littlefield, 2018). Synchronous learning can provide a lot of opportunities for social interaction (McBrien et al., 2009). Amidst this deadly virus spread such online platforms are needed where (a) video conferencing with at least 40 to 50 students is possible, (b) discussions with students can be done to keep classes organic, (c) internet connections are good, (d) lectures are accessible in mobile phones also and not just laptops, (e) possibility of watching already recorded lectures, and (f) instant feedback from students can be achieved and assignments can be taken (Basilaia et al., 2020). Online Teaching Is No More an Option, It Is a Necessity The major part of the world is on quarantine due to the serious outbreak of this global pandemic Covid-19 and therefore many cities have turned into phantom cities and its effects can be seen in schools, colleges, and universities too. Betwixt all this online teaching and online learning can be termed as the panacea for the crisis. The Corona Virus has made institutions to go from offline mode to online mode of pedagogy. This crisis will make the institutions, which were earlier reluctant to change, to accept modern technology. This catastrophe will show us the lucrative side of online teaching and learning. With the help of online teaching modes, we can sermonize a large number of students at any time and in any part of the world. All institutions must scramble different options of online pedagogical approaches and try to use technology more aptly. Many universities around the world have fully digitalized their operations understanding the dire need of this current situation. Online learning is emerging as a victor ludorum amidst this chaos. Therefore, the quality enhancement of online teaching–learning is crucial at this stage. Online education in Chinese universities has increased exponentially after the Covid-19 outbreak. There was an overnight shift of normal classrooms into e-

classrooms, that is, educators have shifted their entire pedagogical approach to tackle new market conditions and adapt to the changing situations. During this tough time, the concern is not about whether online teaching–learning methods can provide quality education, it is rather how academic institutions will be able to adopt online learning in such a massive manner (Carey, 2020). Resistance to change will not help any educational unit across the world. They will be judged on their pace to adapt to the changes in such a short period and their ability to maintain the quality. The reputation of educational units is on stake and under scrutiny. How well they behave and how well they maintain their quality of education amidst this crisis shows their adapting capabilities. The shift from face-to-face lectures to online classes is the only possible solution. Indeed, academic institutions would not be able to transform all of their college curricula into an online resource overnight. Distance, scale, and personalized teaching and learning are the three biggest challenges for online teaching. Innovative solutions by institutions can only help us deal with this pandemic (Liguori & Winkler, 2020). There is a requirement of a quick shift to online learning mode; therefore, the products by Google can be really useful under such problematic situations; they are (a) Gmail, (b) Google Forms, (c) Calendars, (d) G-Drive, (e) Google Hangouts, (f) Google Jam board and Drawings, (g) Google Classroom, and (h) Open Board Software (not a Google product, helps in recording meetings in the form of files). These tools can successfully be used as an alternative for face-to-face classes (Basilaia et al., 2020).[1]

2.2 Problems Associated with Online Education

There are a number of technologies available for online education but sometimes they create a lot of difficulties. These difficulties and problems associated with modern technology range from downloading errors, issues with installation, login problems, problems with audio and video, and so on. Sometimes students find online teaching to be boring and unengaging. Online learning has so much of time and flexibility that students never find time to do it. Personal attention is also a huge issue facing online learning. Students want two-way interaction which sometimes gets difficult to implement. The learning process cannot reach its full potential until students practice what they learn. Sometimes, online content is all theoretical and does not let students practice and learn effectively. Mediocre course content is also a major issue. Students feel that lack of community, technical problems, and difficulties in understanding instructional goals are the major barriers for online learning (Song et al., 2004). In a study, students were found to be not sufficiently prepared for balancing their work, family, and social lives with their study lives in an online learning environment. Students were also found to be poorly prepared for several e-learning competencies and academic-type competencies. Also, there is a low-level preparedness among the students concerning the usage of Learning Management Systems (Parkes et al., 2014).[1]

CHAPTER 3

3. SPECIFICATION AND DESIGN

3.1 Purpose

The Online Class and Education system is designed for easy to use personalized web-based application that can be used by any institution.

3.2 Project Scope

The app has admin panel for the teacher and student panel for the students. The teacher can create semester, subjects, exams and study materials as videos, texts, pdfs that can be seen by students on the student panel view. Teachers can create exam and make questions that can be taken by students. All these records are then saved in the database from where it can be accessed anytime.

3.3 Project Features

The features of Online Class and Education System is shown as E-R model below

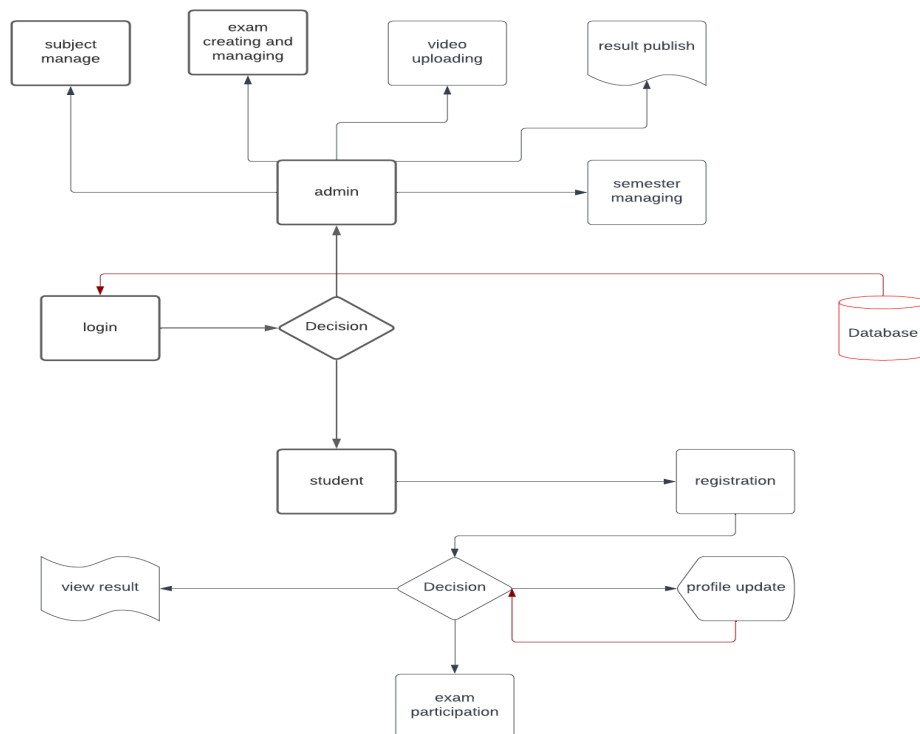


Figure 3.1: E-R Model

3.4 User Class and Characteristics

The Admin should be able to do the following functions:

- Log in
- Student Management
- Semester and subject creating corresponding to the semesters
- Video sharing corresponding to the semesters and subjects
- Exam creating
- Question writing corresponding to the exam created
- Log out

The student should have the following functionalities

- Register
- Login
- Admin Material View
- Video watching shared by the admin
- Taking exam and viewing merit list instantly

3.5 Operating Environment

Operating environment for the airline management system is as listed below.

- Distributed database
- Client/server system
- Operating system: Windows.
- Database: sql+ database
- Platform: Java/PHP

3.6 Design Pattern

3.6.1 UML Design

The Unified Modeling Language (UML) is a standard language for specifying, visualizing, constructing, and documenting the software system and its components. It is a graphical language, which provides a vocabulary and set of semantics and rules. The UML focuses on the conceptual and physical representation of the system. It captures the decisions and understandings about systems that must be constructed. It is used to understand, design, configure, maintain, and control information about the systems.

The UML is a language for:

- Visualizing
- Specifying
- Constructing
- Documenting

Visualizing

Through UML we see or visualize an existing system and ultimately we visualize how the system is going to be after implementation. Unless we think, we cannot implement. UML helps to visualize, how the components of the system communicate and interact with each other.

Specifying

Specifying means building, models that are precise, unambiguous and complete UML addresses the specification of all the important analysis design, implementation decisions that must be made in developing and deploying a software system. Constructing UML models can be directly connected to a variety of programming language through mapping a model from UML to a programming language like JAVA or C++ or VB. Forward Engineering and Reverse Engineering is possible through UML.

Constructing

UML models can be directly connected to a variety of programming language through mapping a model from UML to a programming language like JAVA or C++ or VB. Forward Engineering and Reverse Engineering is possible through UML.

Documenting

The Deliverables of a project apart from coding are some Artifacts, which are critical in controlling, measuring and communicating about a system during its developing requirements, architecture, design, source code, project plans, tests, prototypes releases, etc.

CHAPTER 4

4. Implementation

4.1 ADMIN FEATURES

4.1.1 LOG IN

HTML and PHP is used for all the logics and CSS and JS is used for design. Password and email are taken from the user and sent in chk.php to check if the user is valid and this done in post method.

The raw code is given below.

```

<!doctype html>
<html lang="en">

<head>
    # Gets assets from the asset folder mainly css and js functions
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
    <title>Admin Login</title>
    <link rel="stylesheet" href="assets/vendor/bootstrap/css/bootstrap.min.css">
    <link href="assets/vendor/fonts/circular-std/style.css" rel="stylesheet">
    <link rel="stylesheet" href="assets/libs/css/style.css">
    <link rel="stylesheet" href="assets/vendor/fonts/fontawesome/css/fontawesome-all.css">
    <style>
    html,
    body {
    |   height: 100%;
    | }

    body {
    |   display: -ms-flexbox;
    |   display: flex;
    |   -ms-flex-align: center;
    |   align-items: center;
    |   padding-top: 40px;
    |   padding-bottom: 40px;
    | }
    </style>
</head>

<body>
    #Gets email and password from Admin and checks authenticity
    <div class="splash-container">
        <div class="card">
            <div class="card-header text-center"><a href="index.php"></a>
            <span class="splash-description">
                <?php
                |   # If the info is incorcet, corresponding message is shown here
                |   if (isset($_GET['msg'])) {
                |   |   echo $_GET['msg'];
                |   }
                |   ?>
            </span>
        </div>
        <div class="card-body">
            <form action="chk.php" method="post">
                # Access chk.php in post method where password and email is authenticised
                # Input taken from user and sent by post method by this portion
                <div class="form-group">
                    <input name="email" class="form-control form-control-lg" id="username" type="text"
                    |   |   placeholder="Email" autocomplete="off" required>
                </div>
                <div class="form-group">
                    <input name="password" class="form-control form-control-lg" id="password" type="password"
                    |   |   placeholder="Password" required>
                </div>
                <button type="submit" class="btn btn-primary btn-lg btn-block">Sign in</button>
            </form>
        </div>
    </div>
</div>

    <script src="assets/vendor/jquery/jquery-3.3.1.min.js"></script>
    <script src="assets/vendor/bootstrap/js/bootstrap.bundle.js"></script>
</body>

```

```

#My SQL query is done here to get every user data from admin table
$query = mysqli_query($link, "select * from admin where email = '$email' AND pass = '$pass'"

while($data = mysqli_fetch_array($query))
{
    #Every attribute of the Admin table is initialized here
    $id = $data['id'];
    $n = $data['name'];
    $m = $data['mobile'];
    $e = $data['email'];
    $p = $data['pass'];
    $s = $data['status'];
}
#Email and password is checked here provided by the Admin
if (($e == $email && $p == $pass) && ($s != ""))
{
    #IF password and Email is correct then session is started
    session_start();
    $_SESSION['id'] = $id;
    $_SESSION['n'] = $n;
    $_SESSION['m'] = $m;
    $_SESSION['p'] = $p;
    $_SESSION['e'] = $e;
    $_SESSION['s'] = $s;

    echo "<script>";
    echo "self.location='dashboard.php';";
    echo "</script>";
}
#IF email and password is incorrect then error message is sent to the user
else {
    echo "<script>";
    echo "self.location='index.php?msg=<font color=red>User Name or Password is incorrect.</font>";
    echo "</script>";
}
?>
$?php
$link = mysqli_connect ("localhost", "root", "");
mysqli_select_db ($link, "onlineexam");
$link->set_charset("utf8");
?>

```

Figure 4.1: Login Implementation

4.1.2 DASHBOARD

After log in the user sent to the dashboard from where all the functionalities of the admin can be accessed.


```

<?php ...
?>
<!doctype html>
<html lang="en">
<head>
    #head.php for head view
    <?php include 'head.php'; ?>
</head>
<body>
    #All the include file are for the features of the dashboard
    <div class="dashboard-main-wrapper">
        <div class="dashboard-header">
            <?php include 'header.php'; ?>
        </div>
        <div class="nav-left-sidebar sidebar-dark">
            <?php include 'left_menu.php'; ?>
        </div>
        <div class="dashboard-wrapper">
            <div class="dashboard-ecommerce">
                <div class="container-fluid dashboard-content">
                    <div class="row">
                        <div class="col-xl-12 col-lg-12 col-md-12 col-sm-12 col-12">
                            <div class="page-header">
                                <h2 class="pageheader-title">Welcome to Admin Dashboard </h2>
                            </div>
                        </div>
                    </div>
                    <div class="ecommerce-widget">
                        <div class="row">
                            <div class="col-xl-3 col-lg-6 col-md-6 col-sm-12 col-12">
                                <div class="card">
                                    <div class="card-body">
                                        <h5 class="text-muted">Total Student</h5>
                                        <div class="metric-value d-inline-block">
                                            <h1 class="mb-1">12099</h1>
                                        </div>
                                    </div>
                                </div>
                            </div>
                            <div class="col-xl-3 col-lg-6 col-md-6 col-sm-12 col-12">
                                <div class="card">
                                    <div class="card-body">
                                        <h5 class="text-muted">Total Class</h5>
                                        <div class="metric-value d-inline-block">
                                            <h1 class="mb-1">12099</h1>
                                        </div>
                                    </div>
                                </div>
                            </div>
                            <div class="col-xl-3 col-lg-6 col-md-6 col-sm-12 col-12">
                                <div class="card">
                                    <div class="card-body">
                                        <h5 class="text-muted">Total Subject</h5>
                                        <div class="metric-value d-inline-block">
                                            <h1 class="mb-1">0.00</h1>
                                        </div>
                                    </div>
                                </div>
                            </div>
                            <div class="col-xl-3 col-lg-6 col-md-6 col-sm-12 col-12">
                                <div class="card">
                                    <div class="card-body">
                                        <h5 class="text-muted">Total Videos</h5>
                                        <div class="metric-value d-inline-block">
                                            <h1 class="mb-1">8000</h1>
                                        </div>
                                    </div>
                                </div>
                            </div>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>

```


4.1.3 SEMESTER LIST AND ADD

The admin is able to add or delete semesters.

 semester_list.php semester_list.php

```
<?php
| session_start();
| if ($_SESSION['p'] != "") {
?>
<!doctype html>
<html lang="en">

<head>
| <?php include 'head.php'; ?>
</head>

<body>

    <div class="dashboard-main-wrapper">

        <div class="dashboard-header">
            <?php include 'header.php'; ?>
        </div>

        <div class="nav-left-sidebar sidebar-dark">
            <?php include 'left_menu.php'; ?>
        </div>

        <div class="dashboard-wrapper">
            <div class="container-fluid dashboard-content">

                <div class="row">

                    <div class="col-xl-12 col-lg-12 col-md-12 col-sm-12 col-12">
                        <div class="card">

                            <h5 class="card-header">Semester List | <a href="semester_add.php" style="color:red;">Add New</a></h5>
                            <span style="padding-left:20px; padding-top:10px;">
                                <?php
                                    #Shows the status of new semester
                                    if (isset($_GET['msg'])) {
                                        echo $_GET['msg'];
                                    }
                                ?>
                                <?php
                                    #DATABASE query to delete a selected semester
                                    if (isset($_GET['name'])) {
                                        include 'db.php';
                                        $dlt = "DELETE FROM semester WHERE name = '$_GET[name]'";
                                        mysqli_query ($link, $dlt);
                                        echo "<font color='red'>Delete Success!</font>";
                                    }
                                ?>
                            </span>

                            <div class="card-body">
                                <div class="table-responsive">
                                    <table class="table table-striped table-bordered">
                                        <thead>
                                            <tr>
                                                <th>#</th>
                                                <th>Name</th>
                                                <th>Delete</th>
                                            </tr>
                                        </thead>
                                        <tbody>
                                            <?php
                                                include 'db.php';
                                                $sl = 0;
                                                # This query shows the list of the semesters
                                                $query = mysqli_query($link, "select * from semester where status = '1'");
                                                while($data = mysqli_fetch_array($query)) {
```

```

<?php
    include 'db.php';
    $sl = 0;
    # This query shows the list of the semesters
    $query = mysqli_query($link, "select * from semester where status = '1'");
    while($data = mysqli_fetch_array($query)) {
        ?>
        <tr>
            <td><?php echo ++$sl; ?></td>
            <td><?php echo $data['name']; ?></td>
            <td><a href="?name=<?php echo $data['name']; ?>" onclick="return confirm('Delete Cor
        </tr>
    <?php } ?>
</tbody>
</table>
</div>
</div>
</div>
</div>
</div>
</div>

<!-- Optional JavaScript -->
<script src="assets/vendor/jquery/jquery-3.3.1.min.js"></script>
<script src="assets/vendor/bootstrap/js/bootstrap.bundle.js"></script>
<script src="assets/vendor/slimscroll/jquery.slimscroll.js"></script>
<script src="assets/vendor/multi-select/js/jquery.multi-select.js"></script>
<script src="assets/libs/js/main.js"></script>
<script src="https://cdn.datatables.net/1.10.19/js/jquery.dataTables.min.js"></script>
<script src="assets/vendor/datatables/js/dataTables.bootstrap4.min.js"></script>
<script src="https://cdn.datatables.net/buttons/1.5.2/js/dataTables.buttons.min.js"></script>
<script src="assets/vendor/datatables/js/buttons.bootstrap4.min.js"></script>
<script src="assets/vendor/datatables/js/dataTables.js"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/jszip/3.1.3/jszip.min.js"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/pdfmake/0.1.36/pdfmake.min.js"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/pdfmake/0.1.36/vfs_fonts.js"></script>
<script src="https://cdn.datatables.net/buttons/1.5.2/js/buttons.html5.min.js"></script>
<script src="https://cdn.datatables.net/buttons/1.5.2/js/buttons.print.min.js"></script>
<script src="https://cdn.datatables.net/buttons/1.5.2/js/buttons.colVis.min.js"></script>
<script src="https://cdn.datatables.net/rowgroup/1.0.4/js/dataTables.rowGroup.min.js"></script>
<script src="https://cdn.datatables.net/select/1.2.7/js/dataTables.select.min.js"></script>
<script src="https://cdn.datatables.net/fixedheader/3.1.5/js/dataTables.fixedHeader.min.js"></script>

</body>

</html>

<?php
} else {
    # Executed if the session fails
    echo "<script>";
    echo "self.location='index.php?msg=<font color=red>Please Login First.</font>';";
    echo "</script>";
}
?>

```

```

<?php
    #Session check
    session_start();
    if ($_SESSION['p'] != "") {
?>
<!doctype html>
<html lang="en">

<head>
|   <?php include 'head.php'; ?>
</head>

<body>

    <div class="dashboard-main-wrapper">

        <div class="dashboard-header">
            <?php include 'header.php'; ?>
        </div>

        <div class="nav-left-sidebar sidebar-dark">
            <?php include 'left_menu.php'; ?>
        </div>

        <?php
            include 'db.php';
            if (isset($_POST['save'])) {
                if ($_POST['name'] != "") {
                    #Inserts new semester into the database
                    $name = $_POST['name'];
                    $ins = "INSERT INTO semester (name, status) VALUES ('$name', '1');";

                    # MSG is sent if a new semester is inserted to the DATABASE successfully
                    if (mysqli_query ($link, $ins)) {
                        echo "<script>";
                        echo "self.location='semester_list.php?msg=<font color=green>Semester Added Success!</font>';";
                        echo "</script>";
                    }
                }
            }
        ?>

        <div class="dashboard-wrapper">
            <div class="container-fluid dashboard-content">

                <div class="row">
                    <div class="col-xl-4 col-lg-4 col-md-4 col-sm-12 col-12">
                        <div class="card">

                            <h5 class="card-header">Add New Semester </h5>

                            <div class="card-body">
                                <form action="#" method="post">
                                    <div class="form-group">
                                        <input name="name" class="form-control form-control-lg" type="text" placeholder="Semester Name" />
                                    </div>
                                    <button type="submit" name="save" class="btn btn-primary btn-lg btn-block">Add Confirm</button>
                                </form>
                            </div>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>

```

```

        </div>
    </div>
</div>
</div>

<!-- Optional JavaScript -->
<script src="assets/vendor/jquery/jquery-3.3.1.min.js"></script>
<script src="assets/vendor/bootstrap/js/bootstrap.bundle.js"></script>
<script src="assets/vendor/slimscroll/jquery.slimscroll.js"></script>
<script src="assets/vendor/multi-select/js/jquery.multi-select.js"></script>
<script src="assets/libs/js/main.js"></script>
<script src="https://cdn.datatables.net/1.10.19/js/jquery.dataTables.min.js"></script>
<script src="assets/vendor/datatables/js/dataTables.bootstrap4.min.js"></script>
<script src="https://cdn.datatables.net/buttons/1.5.2/js/dataTables.buttons.min.js"></script>
<script src="assets/vendor/datatables/js/buttons.bootstrap4.min.js"></script>
<script src="assets/vendor/datatables/js/dataTables.js"></script>
<script src="https://cdn.jsdelivr.net/npm/jszip/3.1.3/jszip.min.js"></script>
<script src="https://cdn.jsdelivr.net/npm/pdfmake/0.1.36/pdfmake.min.js"></script>
<script src="https://cdn.jsdelivr.net/npm/pdfmake/0.1.36/vfs_fonts.js"></script>
<script src="https://cdn.datatables.net/buttons/1.5.2/js/buttons.html5.min.js"></script>
<script src="https://cdn.datatables.net/buttons/1.5.2/js/buttons.print.min.js"></script>
<script src="https://cdn.datatables.net/buttons/1.5.2/js/buttons.colVis.min.js"></script>
<script src="https://cdn.datatables.net/rowgroup/1.0.4/js/dataTables.rowGroup.min.js"></script>
<script src="https://cdn.datatables.net/select/1.2.7/js/dataTables.select.min.js"></script>
<script src="https://cdn.datatables.net/fixedheader/3.1.5/js/dataTables.fixedHeader.min.js"></script>

</body>

</html>

<?php
} else {
    # Checks id the session is valid
    echo "<script>";
    echo "self.location='index.php?msg=<font color=red>Please Login First.</font>';";
    echo "</script>";
}
?>

```

Figure 4.3: Semester List and Add Implementation

4.1.4 SUBJECT LIST AND ADD

Similarly as 4.3.1 ; admin can view subject list that he created and also insert or delete subjects.

4.1.5 VIDEO SHARING

Admin can share video though youtube's video sharing system. The students on the other panel can then watch these shared videos.

```

<?php
    session_start();
    if ($_SESSION['p'] != "") {
    }
    <!doctype html>
    <html lang="en">

    <head>
    | <?php include 'head.php'; ?>
    </head>

    <body>

        <div class="dashboard-main-wrapper">

            <div class="dashboard-header">
                <?php include 'header.php'; ?>
            </div>

            <div class="nav-left-sidebar sidebar-dark">
                <?php include 'left_menu.php'; ?>
            </div>

            <div class="dashboard-wrapper">
                <div class="container-fluid dashboard-content">

                    <div class="row">

                        <div class="col-xl-12 col-lg-12 col-md-12 col-sm-12 col-12">
                            <div class="card">
                                # Video adding and deleting feature
                                <h5 class="card-header">Video List | <a href="vdo_add.php" style="color:red;">Add New</a></h5>
                                <span style="padding-left:20px; padding-top:10px;">
                                    <?php
                                        if (isset($_GET['msg'])) {
                                            echo $_GET['msg'];
                                        }
                                    ?>
                                    <?php
                                        if (isset($_GET['id'])) {
                                            include 'db.php';
                                            $dlt = "DELETE FROM vdo WHERE id = '$_GET[id]'";
                                            mysqli_query($link, $dlt);
                                            echo "<font color='red'>Delete Success!</font>";
                                        }
                                    ?>
                                </span>
                            </div>

                            <div class="row">
                                <?php
                                    include 'db.php';
                                    # Gets the list of videos from the DATABASE
                                    $query = mysqli_query($link, "select * from vdo where status = '1'");
                                    while($data = mysqli_fetch_array($query)) {
                                ?>

                                <div class="col-md-4">
                                    # Framed by youtube's video sharing system
                                    <iframe src="https://www.youtube.com/embed/<?= $data['url'] ?>" frameborder="0" style="width:100%; height:300px;" allowfullscreen></iframe>
                                </div>
                                <?php } ?>
                            </div>
                        </div>
                    </div>
                </div>
            </div>
        </div>
    </div>

```

```

<?php
    session_start();
    if ($_SESSION['p'] != "") {
}
<doctype html>
<html lang="en">

<head>
| <?php include 'head.php'; ?>
</head>

<body>
    <div class="dashboard-main-wrapper">
        <div class="dashboard-header">
            <?php include 'header.php'; ?>
        </div>

        <div class="nav-left-sidebar sidebar-dark">
            <?php include 'left_menu.php'; ?>
        </div>

        <div class="dashboard-wrapper">
            <div class="container-fluid dashboard-content">
                <div class="row">
                    <div class="col-xl-6 col-lg-6 col-md-6 col-sm-12 col-12">
                        <div class="card">
                            <?php
                                include 'db.php';
                                if (isset($_POST['save'])) {
                                    if ($_POST['title'] != "") {
                                        # Gets title and video link from the admin
                                        $title = $_POST['title'];
                                        $url = $_POST['url'];
                                        $semester_id = $_POST['semester_id'];
                                        $subject_id = $_POST['subject_id'];
                                        # Inserts the link in the DATABASE
                                        $ins = "INSERT INTO vdo (semester_id, subject_id, title, url, status) VALUES ('$semester_id', '$subject_id', '$title', '$url', '1');";

                                        # If video inserted in the database, msg is sent to the admin
                                        if (mysqli_query($link, $ins)) {
                                            echo "<script>";
                                            echo "self.location='vdo_list.php?msg=<font color=green>Added Success!</font>';";
                                            echo "</script>";
                                        } else {
                                            echo "no ins";
                                        }
                                    } else {
                                        echo "no title";
                                    }
                                } else {
                                    echo "not save";
                                }
                            ?>

                            <h5 class="card-header">Add New Video </h5>

                            <div class="card-body">
                                <form action="#" method="post">
                                    <div class="form-group">
                                        <select name="semester_id" class="form-control" required>
                                            <option value="" selected disabled>Select Semester</option>

```



```

<?php
    session_start();
    if ($_SESSION['p'] != "") {
?>
<!doctype html>
<html lang="en">

<head>
| <?php include 'head.php'; ?>
</head>

<body>

    <div class="dashboard-main-wrapper">

        <div class="dashboard-header">
            <?php include 'header.php'; ?>
        </div>

        <div class="nav-left-sidebar sidebar-dark">
            <?php include 'left_menu.php'; ?>
        </div>

        <div class="dashboard-wrapper">
            <div class="container-fluid dashboard-content">

                <div class="row">

                    <div class="col-xl-12 col-lg-12 col-md-12 col-sm-12 col-12">
                        <div class="card">

                            <h5 class="card-header">Exam List | <a href="exam_add.php" style="color:red;">Add New</a></h5>
                            <span style="padding-left:20px; padding-top:10px;">
                                <?php
                                    if (isset($_GET['msg'])) {
                                        echo $_GET['msg'];
                                    }
                                ?>
                                <?php
                                    if (isset($_GET['id'])) {
                                        include 'db.php';
                                        $dlt = "DELETE FROM exam WHERE id = '$_GET[id]'";
                                        mysqli_query ($link, $dlt);
                                        echo "<font color='red'>Delete Success!</font>";
                                    }
                                ?>
                            </span>

                            <div class="card-body">
                                <div class="table-responsive">
                                    <table class="table table-striped table-bordered">
                                        <thead>
                                            <tr>
                                                <th>#</th>
                                                <th>Name</th>
                                                <th>Semester</th>
                                                <th>Subject</th>
                                                <th>Add Question</th>
                                                <th>Delete</th>
                                                <th>Download</th>
                                            </tr>
                                        </thead>
                                        <tbody>
                                            <?php
                                                include 'db.php';
                                                $sl = 0;
                                                $query = mysqli_query($link, "select * from exam where status = '1'");

```



```

<?php
    session_start();
    if ($_SESSION['p'] != "") {
?>
<!doctype html>
<html lang="en">

<head>
|   <?php include 'head.php'; ?>
</head>

<body>
|   <div class="dashboard-main-wrapper">
|       <div class="dashboard-header">
|           <?php include 'header.php'; ?>
|       </div>
|
|       <div class="nav-left-sidebar sidebar-dark">
|           <?php include 'left_menu.php'; ?>
|       </div>
|
|       <?php
|           include 'db.php';
|           if (isset($_POST['save'])) {
|               if ($_POST['name'] != "") {
|
|                   $name = $_POST['name'];
|                   $semester_id = $_POST['semester_id'];
|                   $subject_id = $_POST['subject_id'];
|                   $ins = "INSERT INTO exam (semester_id, subject_id, name, status) VALUES ('$semester_id', '$subject_id', '$name', '1')";
|
|                   if (mysqli_query($link, $ins)) {
|                       echo "<script>";
|                       echo "self.location='exam_list.php?msg=<font color=green>Subject Added Success!</font>';";
|                       echo "</script>";
|                   }
|               }
|           }
|       ?>
|
|       <div class="dashboard-wrapper">
|           <div class="container-fluid dashboard-content">
|
|               <div class="row">
|                   <div class="col-xl-4 col-lg-4 col-md-4 col-sm-12 col-12">
|                       <div class="card">
|
|                           <h5 class="card-header">Add New Subject </h5>
|
|                           <div class="card-body">
|                               <form action="#" method="post">
|                                   <div class="form-group">
|
|                                       <select name="semester_id" class="form-control" required>
|                                           <option value="" selected disabled>Select Semester</option>
|                                           <?php
|                                               include 'db.php';
|                                               $query = mysqli_query($link, "select * from semester where status = '1'");
|                                               while($data = mysqli_fetch_array($query)) {
|                                                   echo "<option value='".$data[id]'">$data[name]</option>";
|                                               }
|                                           ?>
|                                       </select>

```



```

<?php
    session_start();
    if ($_SESSION['p'] != "") {
?>
<!doctype html>
<html lang="en">

<head>
|   <?php include 'head.php'; ?>
</head>

<body>

    <div class="dashboard-main-wrapper">

        <div class="dashboard-header">
            <?php include 'header.php'; ?>
        </div>

        <div class="nav-left-sidebar sidebar-dark">
            <?php include 'left_menu.php'; ?>
        </div>

        <?php
            include 'db.php';
            if (isset($_POST['save'])) {
                if ($_POST['des'] != "") {

                    $exam_id = $_GET['exam_id'];
                    $des      = $_POST['des'];
                    $op1      = $_POST['op1'];
                    $op2      = $_POST['op2'];
                    $op3      = $_POST['op3'];
                    $op4      = $_POST['op4'];
                    $ans       = $_POST['ans'];

                    $ins = "INSERT INTO question (exam_id, des, op1, op2, op3, op4, ans, status)
                        | VALUES ('$exam_id', '$des', '$op1', '$op2', '$op3', '$op4', '$ans', '1');";

                    if (mysqli_query($link, $ins)) {
                        $msg = "<font color='green'>Added</font>";
                    }
                }
            }
        ?>

        <div class="dashboard-wrapper">
            <div class="container-fluid dashboard-content">

                <div class="row">
                    <div class="col-xl-12 col-lg-12 col-md-12 col-sm-12 col-12">

                        <?php if (isset($msg)) { echo $msg; } ?>
                        <h5>Upload Question </h5>

                        <h5>
                            Exam Name :
                            <?php
                                include 'db.php';
                                $query = mysqli_query($link, "select * from exam where id = '$_GET[exam_id]'");
                                while($data = mysqli_fetch_array($query)) {
                                    | echo $data['name'];
                                }
                            ?>
                        </h5>
                    </div>
                </div>
            </div>
        </div>
    </div>

```

```

<form action="#" method="post">
  <div class="row">
    <div class="col-md-12">
      Question : <input type="text" name="des" class="form-control" required>
    </div>
    <div class="col-md-12">&nbsp;</div>
    <div class="col-md-6">
      Option a : <input type="text" name="op1" class="form-control" required>
    </div>
    <div class="col-md-6">
      Option b : <input type="text" name="op2" class="form-control" required>
    </div>
    <div class="col-md-12">&nbsp;</div>
    <div class="col-md-6">
      Option c : <input type="text" name="op3" class="form-control" required>
    </div>
    <div class="col-md-6">
      Option d : <input type="text" name="op4" class="form-control" required>
    </div>
    <div class="col-md-12">&nbsp;</div>
    <div class="col-md-4">
      Ans :
      <select class="form-control" name="ans">
        <option value="" selected disabled>Select Ans</option>
        <option value="a">a</option>
        <option value="b">b</option>
        <option value="c">c</option>
        <option value="d">d</option>
      </select>
    </div>
    <div class="col-md-12">&nbsp;</div>
    <button type="submit" name="save" class="btn btn-primary btn-lg btn-block">Upload Confirm</button>
  </div>
</form>
</div>
</div>
<div class="row">
  <div class="col-md-12">
    <br><br>
  </div>
  <div class="col-md-12">
    <h5>View Questions</h5>
  </div>
  <div>
    <?php
    $sl=0;
    $query = mysqli_query($link, "select * from question where exam_id = '$_GET[exam_id]'");
    while($data = mysqli_fetch_array($query)) {
      echo ++$sl." ";
      echo $data['des'];
      echo "<br>";
      echo "a. ".$data['op1'];
      echo "<br>";
      echo "b. ".$data['op2'];
      echo "<br>";
      echo "c. ".$data['op3'];
      echo "<br>";
      echo "d. ".$data['op4'];
      echo "<br>";
      echo "Ans : ".$data['ans'];
      echo "<br>";
      echo "<hr>";
    }
  </div>
</div>

```

Figure 4.5: Exam Feature Implementation

4.2 STUDENT PANEL FEATURES

4.2.1 STUDENT LOGIN

Similar as admin login student login uses a different table for login and after the user authentication the student can gain access contents in the student panel.

4.2.2 STUDENT REGISTRATION

New students can register from the register feature. The information provided in the registration form gets added in the student table for later login.

4.2.3 STUDENT DASHBOARD

The student dashboard features the name of the admins. Clicking in the name, the function takes the user to the material view.

4.2.4 STUDENT VIDEO VIEW

In this section, the videos that were shared by the admin can be watched by the help of YouTubes video sharing system.

4.2.5 STUDENT EXAM

Student can sit for exam that was provided by the admin. After taking the exam, the student gets a merit list instantly based on the performance of the exam.

4.2.6 STUDENT PDF DOWNLOAD

The PDF version of the question can be downloaded from this part of the feature.

CHAPTER 5

5. RESULTS AND EVALUATION

The resulting application has all the functionalities as described above. There are some changes here and there but the overall work outcome is acceptable.

5.1 ADMIN PANEL

5.1.1 ADMIN LOGIN

The Admin can login by providing email and password on the right place. The inserted content are then checked on the database and if everything is correct then the admin can gain access.

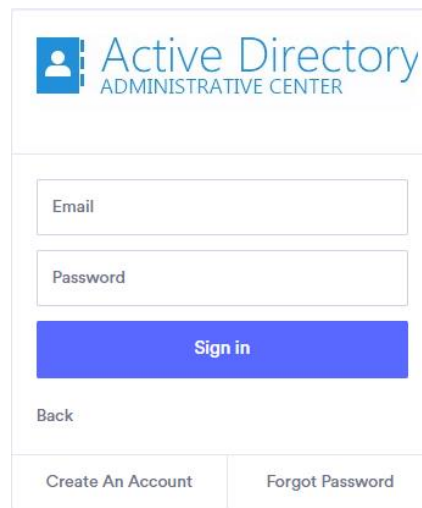
The image shows a web interface for the 'Active Directory ADMINISTRATIVE CENTER'. At the top, there is a header with a blue icon of a person and the text 'Active Directory ADMINISTRATIVE CENTER'. Below the header, there are two input fields: 'Email' and 'Password'. A prominent blue button labeled 'Sign in' is positioned below the password field. Underneath the 'Sign in' button is a link labeled 'Back'. At the bottom of the form, there are two links: 'Create An Account' and 'Forgot Password'.

Figure 5.1: Admin Login

5.1.2 ADMIN DASHBOARD

After login in the admin then directed to the dashboard where all the admin features available.

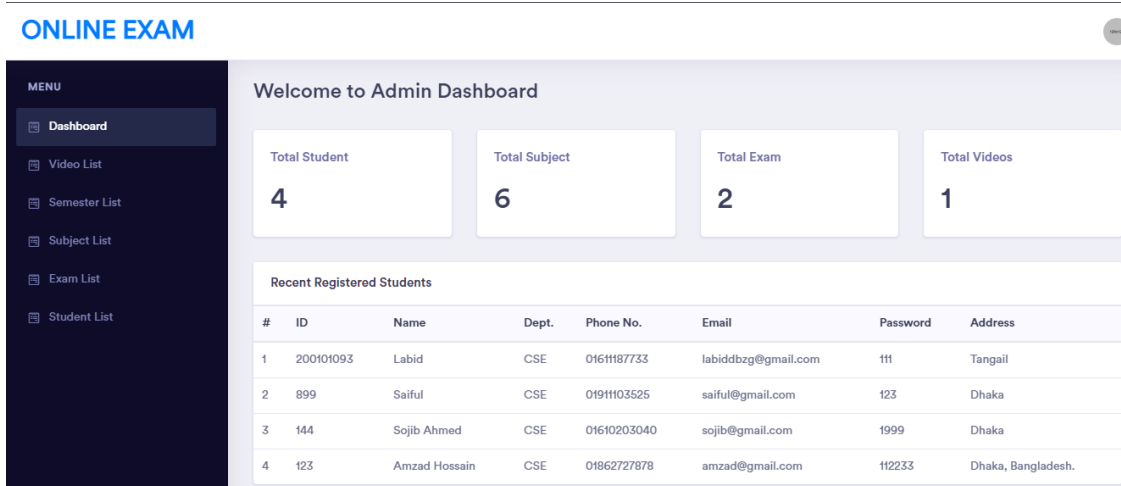


Figure 5.2: Admin Dashboard

5.1.3 VIDEO LIST AND VIDEO ADD

As per the title, the admin can see and add video from this page.

ONLINE EXAM

MENU

- Dashboard
- Video List
- Semester List
- Subject List
- Exam List
- Student List

Video List | Add New

Engineering Predictions for 2021 and Beyond

Add New Video

Select Semester

Select Subject

Select Exam

Video Title

Video URL

Add Confirm

Figure 5.3: Video list and Add

5.1.4 EXAM LIST AND CREATE EXAM

Admin can create an exam from the existing semester and subject and provide questions regarding that.

Exam List | [Add New](#)

#	Name	Semester	Subject	Add Question	Delete
1	MID 2022	2-2	Data Structures and Algorithms	Add Question	Delete
2	class test 1	2-2	compiler	Add Question	Delete

Add New Subject

Select Semester

Select Subject

Exam Name

Add Confirm

Figure 5.4: Exam list and create exam

5.1.5 STUDENT LIST

Admin can see the registered students, their information and ban then if necessary.

Student List | [Add New](#)

#	ID	Name	Dept.	Phone No.	Email	Password	Delete
1	123	Amzad Hossain	CSE	01862727878	amzad@gmail.com	112233	Delete
2	144	Sojib Ahmed	CSE	01610203040	sojib@gmail.com	1999	Delete
3	899	Saiful	CSE	01911103525	saiful@gmail.com	123	Delete
4	200101093	Labid	CSE	01611187733	labidbzb@gmail.com	111	Delete

Figure 5.5 Student list

5.2 STUDENT PANEL

5.2.1 STUDENT LOGIN

Works and views are as same as ADMIN LOGIN part.

5.2.2 STUDENT DASHBOARD

Students can see all the admin's names from this page.

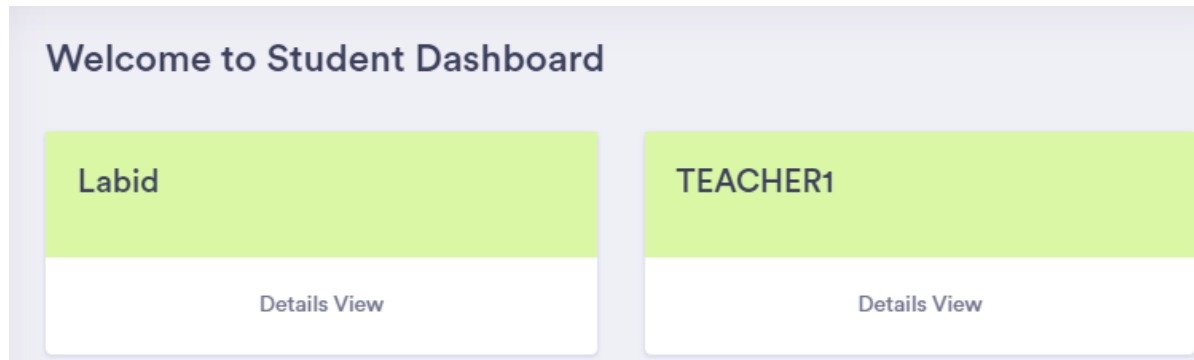


Figure 5.6: Student dashboard

5.2.2 ADMIN MATERIALS VIEW

Clicking on the details view button, one can see videos, download pdf of the exam and sit for the exam.

5.7

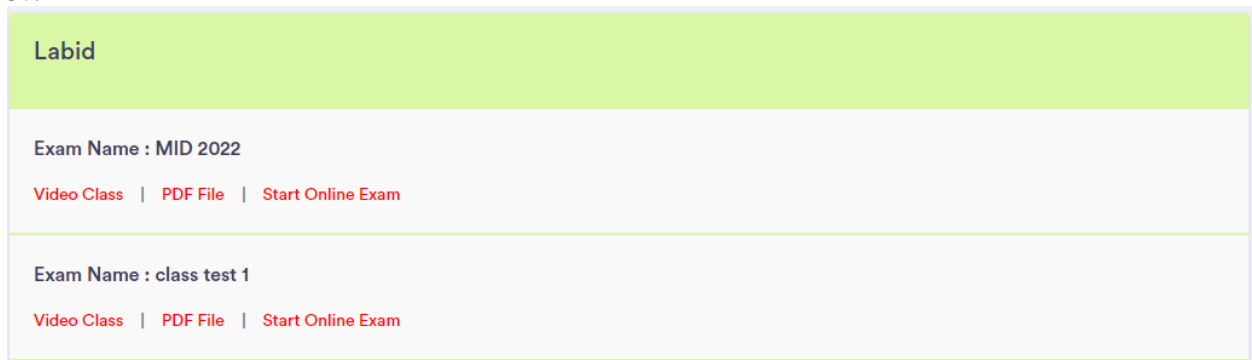


Figure 5.7: Admin materials view

5.2.3 VIDEO VIEW

In the video class section, the student can watch the corresponding video shared by the admin.

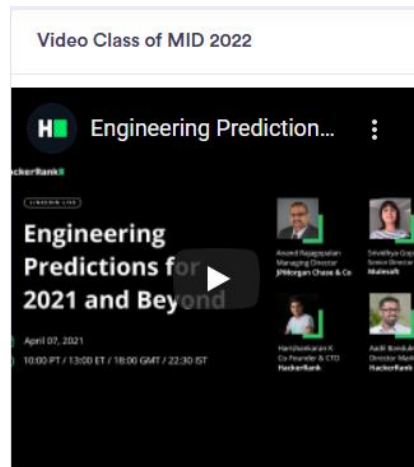


Figure 5.8: Video View

5.3.3 ONLINE EXAM

In this section, the exam that was created and the question that was submitted is viewed. The student then can take the exam and see his/her position on the merit list instantly.

Exam Name : MID 2022

Question 1 of 3.

what is capital of Bangladesh ?

A. Dhaka

B. Rajshahi

C. Khulna

D. Barishal

Ans. ▼

Next Question

Exam Name : MID 2022

Your Exam Completed.

View Results

Figure 5.9: Online exam

CHAPTER 6

6. FUTURE WORK

There's always room for improvement. The future of this application is promising. We can provide custom web-based application if any client wants. We'll look forward to make this application mobile based. The languages and database works that we learnt from this project will help us make this application more secure and designer in the future.

We can definitely improve the design of the application to make it more appealing to the clients. Animations and more color correction can be done on the designer side. As we're not graphics designers, this can be expected.

The database can be improved also.

In future as the user increases, we'll increase our database to provide them continuous service.

CHAPTER 7

7. Conclusions

The purpose of our project is to build an organized online education system by using our knowledge of software development.

We tried to be able to fulfill our targets.

At the end we're able to offer an easy to use, well maintained and simple online education system software that is helpful in daily student life.

REFERENCES

- [1] “Current status of the online education system” by *Shivangi Dhavan*.
Department of Commerce, SGTB Khalsa College, University of Delhi, Delhi, India
Department of Commerce, Delhi School of Economics, University of Delhi, Delhi, India