INTRODUCTION

1.1 ABSTRACT

This application is developed to reduce the work of the faculty members of the MCA department. It aims at storing CIE results of the students safely and permanently which avoids the confusions and mess that can possibly be created. Entire CIE data of any student can be fetched whenever required without facing any obstacles. A printable report can also be generated and exported in various formats. Hence this application is used for the convenience of both, the faculty members as well as the students.

1.2 INTRODUCTION

This project deals with students' CIE results studying in MCA department of Sharnbasva University, Kalaburagi. It consists of course-wise Continuous Internal Evaluation (CIE) marks scored by the students and their average, which is a combination of their CIE marks and assignment marks allotted. This is a stand-alone application which also displays the entire report of the students currently studying.

The admin (Dean of the department) has to login first with their credentials. The admin has the authority to register all the faculty members by choosing their roles as a user. In addition to this, the application also has a number of other tabs. The most important part is the feature rich home page which contains links and tabs to navigate to the main stream features of the page.

1.3 PROBLEM STATEMENT

The problems/reasons due to which this project is being carried out is that the Dean and the faculty members of MCA department of Sharnbasva University must always be dependent on an automated system which is accessed by all the departments.

1.4 OBJECTIVES

- To develop an application that is specifically used by the department of MCA.
- To store the marks scored by the students safely.
- To individually display the CIE marks of all the students scored in a particular course.
- To generate a printable report for the convenience of the faculty members of MCA department.

1.5 LIMITATIONS

- This project is a stand-alone application and not a web-based application
- Since it is not web-based, there is no option of providing an authentication factor (OTP).

SYSTEM ANALYSIS

2.1 EXISTING SYSTEM

The existing system is also an automated system that is accessed by all the departments of Sharnbasva University in common.

DISADVANTAGES OF EXISTING SYSTEM

- i. This system does not choose the "best of two" CIE marks. The selection of two best CIE marks and its average is calculated manually.
- ii. It accepts the marks out of 15 i.e. the average marks of two CIEs.
- iii. Faculty-wise data entry is not possible.
- iv. There is no user and admin login. A unique login is maintained.
- v. The report is generated only in the PDF format.

2.2 PROPOSED SYSTEM

The proposed system is an automated system developed specifically for Faculty of Computer Applications, MCA Department of Sharnbasva University. It can be accessed by both, the Dean (as admin) and the faculty members (as users) of the department. This application selects the two best CIE marks scored out of three CIEs, divides it by 2 and sums up with the assignment marks scored by a student out of 35. So, the maximum count is, 15+35=50.

ADVANTAGES OF PROPOSED SYSTEM

- i. The CIE results of all the students are safe and secure.
- ii. It consumes less time, since data entry and the calculations are automated.
- iii. It fulfills the privacy factor, since each faculty is provided with separate login credentials by the admin.
- iv. Avoids confusion among the students regarding their marks, as the system provides accurate results.
- v. All the three CIE marks can be uploaded and stored individually in the system.
- vi. It generates the CIE report which can be exported even in the formats other than PDF.

2.3 FEASIBILITY STUDY

This phase includes evaluating the project's viability and presenting a business proposal, along with a very basic design process and some cost projections.

2.3.1 ECONOMIC FEASIBILITY

The project is developed on a low-priced, it was based on the reality that almost every utilized technology is open source and no additional software and special hardware are used. Hence the project is economically feasible.

2.3.2 TECHNICAL FEASIBILITY

Designed solution is cost-effective and does not require any additional hardware or software. Hence the project is technically feasible.

2.3.3 OPERATIONAL FEASIBILITY

The system is simple to operate. The user will get familiar with the system easily. The GUI is easy and convenient even for a new user. Hence the project is operationally feasible.

2.4 HTML, CSS and JAVASCRIPT

HTML - describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by tags, written using angle brackets. Tags such as and <input /> directly introduce content into the page. Other tags such as surround and provide information about document text and may include other tags as subelements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

Cascading Style Sheets (CSS) - is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and repetition in the structural content as well as enabling the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

CSS is capable of making all sorts of shapes. Squares and rectangles are easy, as they are the natural shapes of the web. Add a width and height and you have the exact size rectangle you need. Add border-radius and you can round that shape, and enough of it you can turn those rectangles into circles and ovals.

JavaScript - is a lightweight, cross-platform and interpreted scripting language. It is well-known for the development of web-pages, many non-browser environments also use it. JavaScript can be used for Client-side developments as well as Server-side developments. JavaScript contains a standard library of objects, like Array, Date, and Math, and a core set of language elements like operators, control structures, and statements.

Client-side: It supplies objects to control a browser and its Document Object Model (DOM). Like if client-side extensions allow an application to place elements on an HTML form and respond to user events such as mouse clicks, form input, and page navigation. Useful libraries for the client-side are AngularJS, ReactJS, VueJS and so many others.

Server-side: It supplies objects relevant to running JavaScript on a server. Like if the server-side extensions allow an application to communicate with a database, and provide continuity of information from one invocation to another of the application, or perform file manipulations on a server. The useful framework which is the most famous these days is node.js.

Ajax (also AJAX; short for "Asynchronous JavaScript and XML") is a set of web development techniques that uses various web technologies on the client-side to create asynchronous web applications. With Ajax, web applications can send and retrieve data from a server asynchronously (in the background) without interfering with the display and behavior of the existing page. By decoupling the data interchange layer from the presentation layer, Ajax allows web pages and, by extension, web applications, to change content dynamically without the need to reload the entire page. In practice, modern implementations commonly utilize JSON instead of XML

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.

2.5 MYSQLi and PHP

The MySQLi Extension (MySQL Improved) is a relational database driver used in the PHP scripting language to provide an interface with MySQL databases. There are three main API options when considering connecting to a MySQL database server:

- > PHP's MySQL Extension
- > PHP's MySQLi Extension
- > PHP Data Object (PDO)

The PHP code consists of a core, with optional extensions to the core functionality. PHP's MySQL-related extensions, such as the MySQLi extension, and the MySQL extension, are implemented using the PHP extension framework. An extension typically exposes an API to the PHP developer, to allow its facilities to be used programmatically. However, some extensions which use the PHP extension framework do not expose an API to the PHP developer.

The PDO MySQL driver extension, for example, does not expose an API to the PHP developer, but provides an interface to the PDO layer above it. MySQLi is an improved version of the older PHP MySQL driver, offering various benefits.

The authors of the PHP scripting language recommend using MySQLi when dealing with MySQL server versions 4.1.3 and newer (takes advantage of new functionality).

PHP - is a general-purpose scripting language especially suited to web development. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1994. The PHP reference implementation is now produced by The PHP Group. PHP originally stood for Personal Home Page, but it now stands for the recursive initialism PHP: Hypertext Preprocessor.

PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code – which may be any type of data, such as generated HTML or binary image data – would form the whole or part of an HTTP response. Various web template systems, web content management systems, and web frameworks exist which can be employed to orchestrate or facilitate the generation of that response. Additionally, PHP can be used for many programming tasks outside of the web context, such as standalone graphical applications and robotic drone control. Arbitrary PHP code can also be interpreted and executed via command-line interface (CLI).

SYSTEM ENVIRONMENT

3.1 HARDWARE REQUIREMENTS

➤ Processor used : Intel i3 7th generation

➤ Hard Disk➤ RAM: 128 GB or more: 4 GB and above

3.2 SOFTWARE REQUIREMENTS

➤ Operating system : Windows 10 or more

Front end : HTML, CSS, JavaScript

➤ Back end : MySQLi, PHP

MODULES

4.1 HOME:

This module displays a dashboard containing student details, course details and the user details. The home page also consists of a link at the bottom that redirects to the official website of Sharnbasva University.

4.2 COURSES:

This module contains two sub modules:

- Add course: This sub module can only be accessed by the admin (dean). This
 means the new course like semester, course code, course title and faculty
 allotted for that course can be added only by the admin.
- View courses: This sub module can be accessed by the admin and as well as
 the user. The courses added by the admin are viewed. The courses can be
 edited exclusively by the admin.

4.3 BATCH:

This module consists of two sub modules:

- Add batch: This sub module allows only the admin to add a new batch.
- View batch: Batch details are viewed both by the admin as well as the user but can be edited only by the admin.

4.4 STUDENT:

This module contains two sub modules:

- Add student: In this sub module, the admin must add the new student details like student USN, batch and student name.
- View students: Student details of the chosen batch are displayed to both admin and user. Only the admin has the authority to edit and delete student details.

4.5 FACULTY:

This module consists of two sub modules:

- Add faculty: In this sub module, new faculty can be added by the admin.
- View faculty: Faculty details can be viewed both by the admin and the user but only the admin can edit and delete the faculty details.

4.6 MARKS ENTRY:

This module contains two sub modules:

- CIE and Assignment: This sub module lets the admin and user to upload the three CIE and assignment marks.
- Final Marks: The final marks out of 50 are calculated by choosing the best of two CIE marks, calculating their average and adding it with the assignment marks.

4.7 REPORT:

- Generate Report: This sub module helps the admin and user to view the Final Report which cannot be altered.
- Export Report: This sub module helps the admin and user to convert the CIE report to PDF, Excel, CSV or copy report to clipboard.

4.8 ACCOUNT:

- Users: Only the admin has the privilege to view the users, edit and delete them.
- User Registration: The admin can create new users by giving the user role and
 user password. They are also provided with a hint question at the time of
 registration. In case the user forgets their password, the user should enter their hint
 answer to verify their account. Once the user's account is verified, they can reset
 their password.
- Logout: This helps the admin and the users to log out from the application.

SYSTEM DESIGN

5.1 USE CASE DIAGRAM

The lively behavior of a system is represented by a use case diagram. It integrates use cases, actors, and their communications to summarize the functionality of the system. It simulates the duties, facilities, and operations needed by a system or application subsystem. It shows a system's complex functionality and also describes how a user cooperates with a system.

The goals of the use case diagram are as follows:

- 1. The needs of the system are gathered.
- 2. It shows how the system seems from the outside.
- 3. It acknowledges both internal and external influences on the system.
- 4. It depicts how the performers interact with one another.

The following guidelines must be adhered to while developing a use case diagram:

- 1. The actor or use case of a system should be given a relevant and meaningful name.
- 2. An actor's communication with a use case must be defined in a clear manner.
- 3. Specific notations that should be utilized as needed.
- 4. Among the numerous interactions between the use case and actors, the most important ones should be depicted.

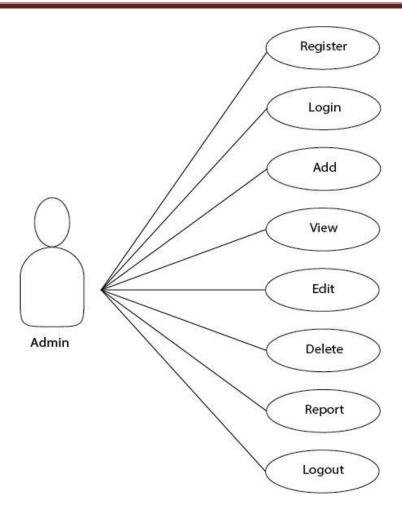


FIG 5.1.1 USE CASE FOR ADMIN

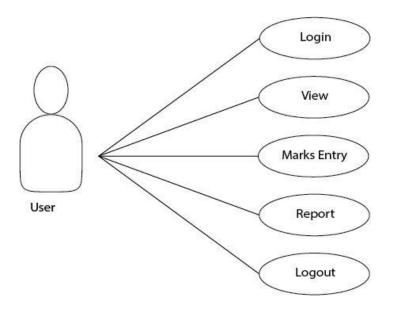


FIG 5.1.2 USE CASE FOR USER

5.2 ENTITY RELATIONSHIP DIAGRAM

"Entity-Relationship Diagram", ER Diagram in short, is a figure that shows the relationships among entity groups that are kept in a database.

Rectangles are used to signify entities in ER Diagrams, ovals are used to specify attributes, and diamond shapes are used to denote relationships.

The primary elements and their symbols are:

- Rectangles: These object kinds are depicted in this entity relationship diagram symbol.
- Ellipses Symbols for qualities.
- Diamonds are a representation of various forms of relationships.
- Lines: It joins entity types with other connection types and attributes to object types
- The emphasized properties are the primary key
- Double ellipses: Symbolize properties with multiple values

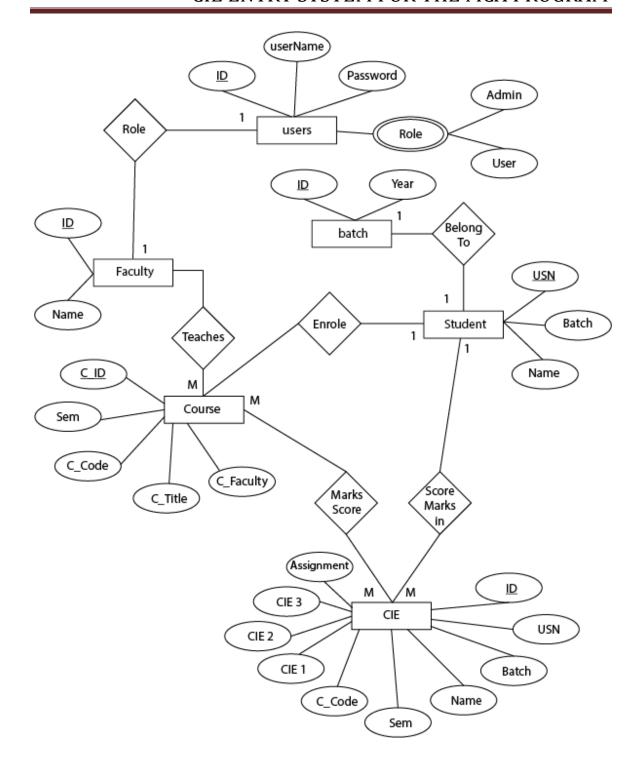


FIG 5.2 ER DIAGRAM

5.3 SEQUENCE DIAGRAM

The "sequence diagram", which is similarly recognized as an event diagram, shows how messages move over the organization. It aids in creating a variety of active settings. It shows communication among any two links as a chronologically well-ordered series of activities, implying that these links were active at the instant of communication. The message movement is signified by a perpendicular spotted line that crosses the bottommost of the sheet in UML, while the link is signified by a perpendicular bar. Both branches besides iterations are included.

Purpose of sequence illustration:

- 1. To simulate complex interaction between system's active elements.
- 2. To simulate how objects interact inside a team that is working to realize a use case.
- 3. Either general interactions or specific examples of interactions are modeled.

Benefits of sequence diagram:

- 1. The real-time application is examined.
- 2. It shows how messages go among the numerous objects.
- 3. It is simple to preserve.
- 4. It is modest to produce.
- 5. Together frontward and reverse engineering must be used.
- 6. It is simple to keep informed in accordance with system variations.

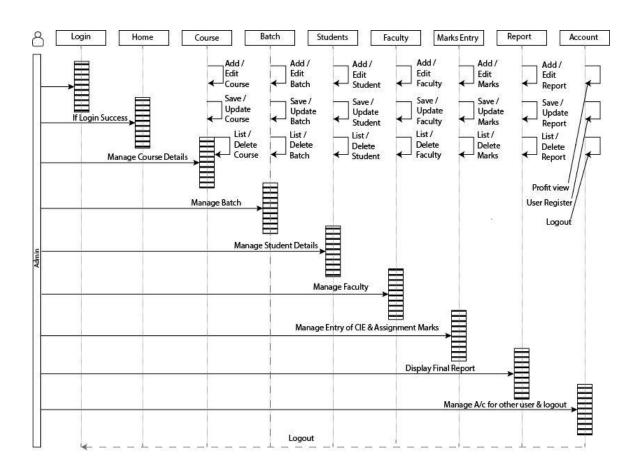


FIG 5.3.1 ADMIN SEQUENCE DIAGRAM

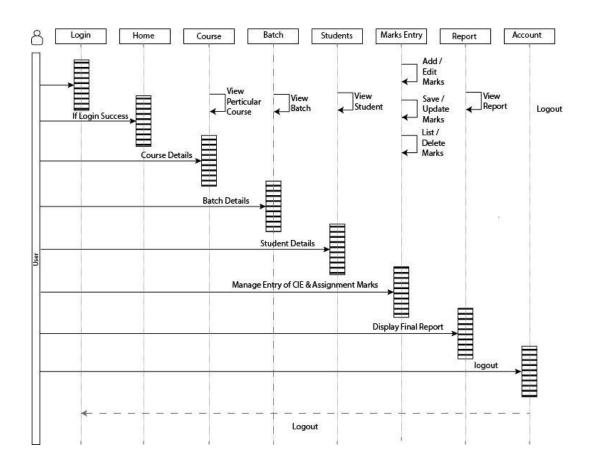


FIG 5.3.1 USER SEQUENCE DIAGRAM

5.4 DATAFLOW DIAGRAM

The acronym for a "data flow diagram" is DFD. DFD describes the flow of a scheme or procedure. It also sheds light on each object's input, outputs, and the process itself. There are no repetitions, decision rules, or control patterns in DFD. A flowchart can describe specific operations depending on the type of data. Because they make it easier to understand the key actions and data involved in software-system processes, data flow diagrams are highly common. Below are the DFD's component parts.

There are four parts to the data flow diagram:

Process: Process function in a system origins input to output conversion. Process signs container be circular, oval, four-sided, or rectangular with curved corners. The procedure is given a name that encapsulates its essence in a few words or a phrase.

Data Flow: The movement of information among various system components is mentioned to as "data flow". The projectile icon signifies data flow. To identify the data being moved, the movement should be given a term that makes sense. Along with information, data flow also symbolizes moving materials. Systems that are more than just informative model material shifts. A specific flow must only transmit.

Warehouse: The warehouse stores the information for further use. The store's logo is represented by two parallel lines. The warehouse need not only be a information file; it might also remain a folder comprising documents, an visual disc, or a filing cupboard. It is possible to inspect the data warehouse independently of how it was implemented. Data movement into the warehouse is denoted as data entry once it comes from the warehouse, and vice versa.

Terminator: The Terminator is a stranger who cooperates with the organization while residing outside of it. For example, it could be external objects like banks, customer groups, or numerous departments of the same company that are not a portion of the model system.

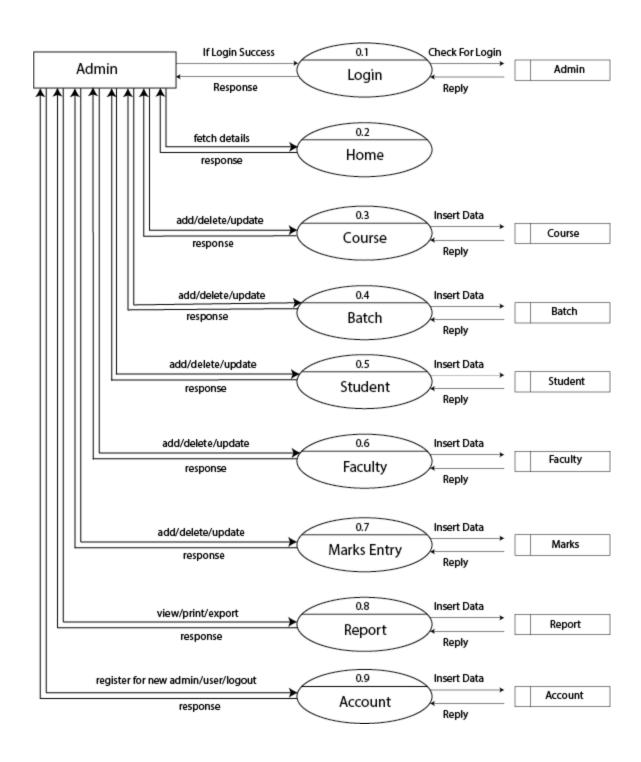


FIG 5.4 DATA FLOW DIAGRAM

5.5 DATABASE DESIGN

Table 5.5.1 BATCH

NAME	TYPE
B_Id	int (11)
Batch	varchar (9)
Created_On	timestamp
Updated_On	timestamp

Table 5.5.2 CIE

NAME	TYPE
ID	int (11)
Batch	varchar (9)
USN	varchar (15)
Name	varchar (25)
Semester	varchar (5)
SubCode	varchar (15)
CIE1	int (2)
CIE2	int (2)
CIE3	int (2)
Assignment	int (2)
Created_On	timestamp
Updated_On	timestamp

CIE ENTRY SYSTEM FOR THE MCA PROGRAM

Table 5.5.3 COURSE

NAME	TYPE
C_Id	int (11)
C_Sem	varchar (4)
C_Code	varchar (10)
C_Name	varchar (50)
C_Fal	varchar (5)
Created_On	timestamp
Updated_On	timestamp

Table 5.5.4 FACULTY

NAME	ТҮРЕ
F_Id	varchar (5)
F_Name	varchar (30)
Created_On	timestamp
Updated_On	timestamp

CIE ENTRY SYSTEM FOR THE MCA PROGRAM

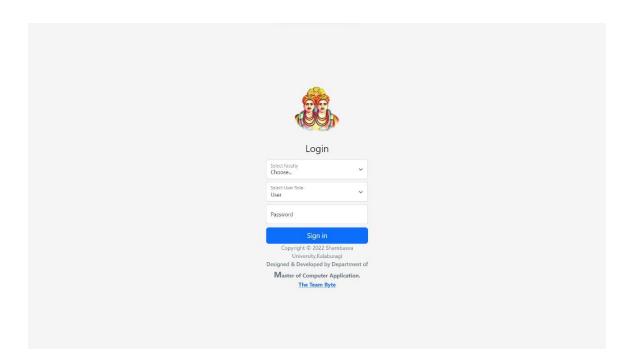
Table 5.5.5 STUDENT

NAME	ТҮРЕ
S_USN	varchar (10)
S_Batch	varchar (10)
S_Name	varchar (25)
Created_On	timestamp
Updated_On	timestamp

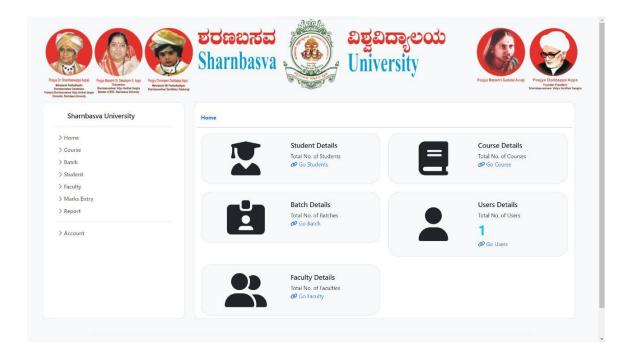
Table 5.5.6 USERS

NAME	ТҮРЕ
Id	int (11)
Username	varchar (50)
Role	varchar (10)
Password	varchar (50)
Created_On	datetime
Updated_On	timestamp

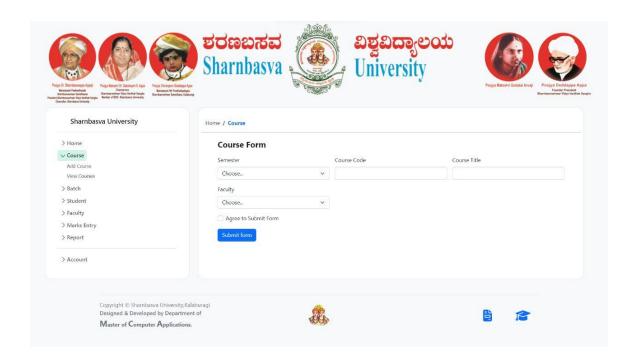
5.6 FORM DESIGNS



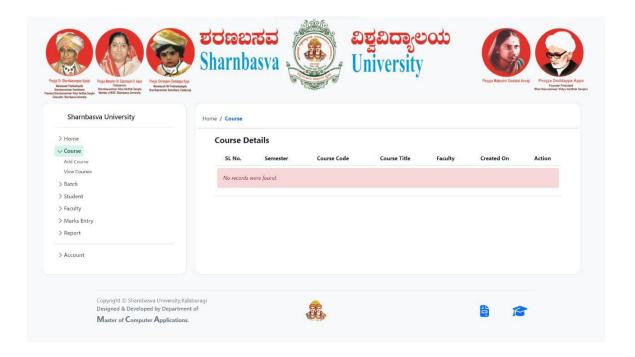
Admin login form



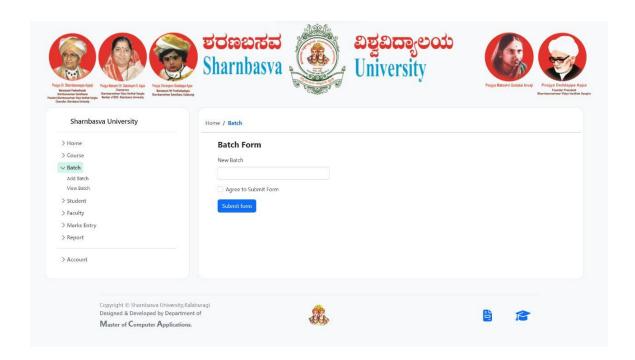
Admin Home form



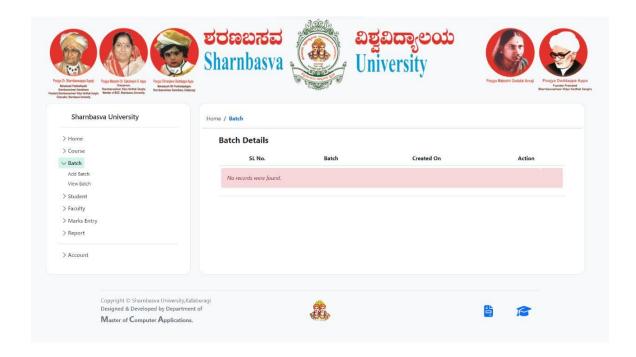
Add Course form



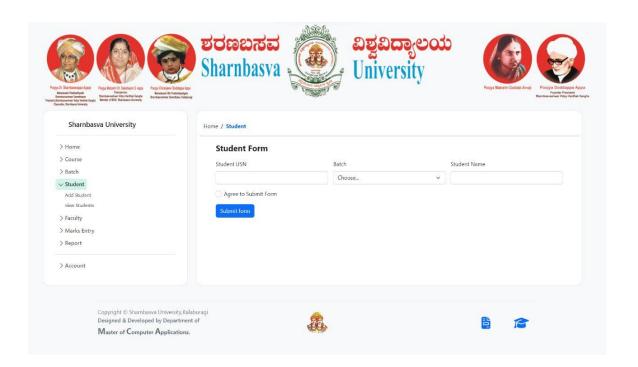
View Course form



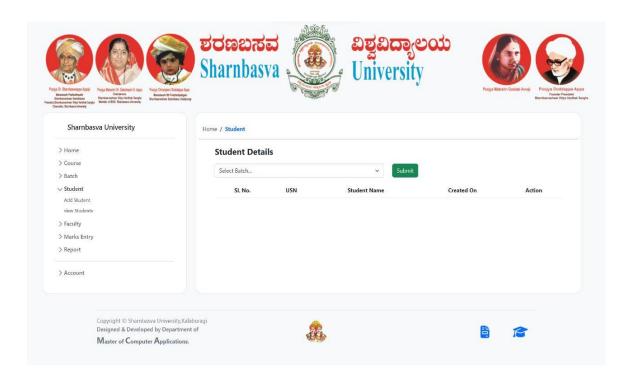
Add Batch form



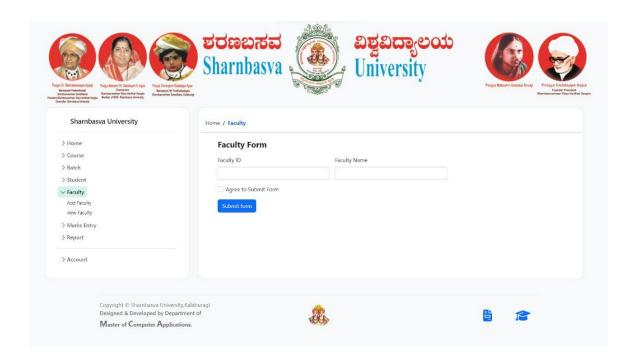
View Batch form



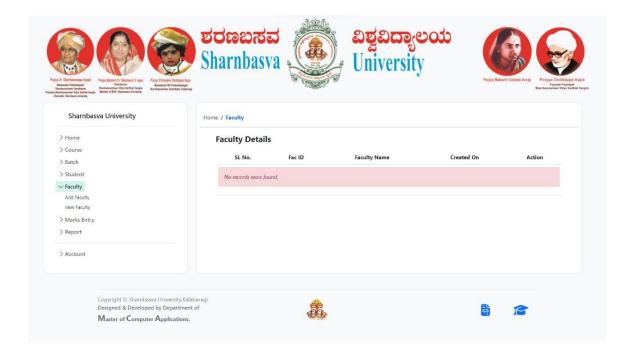
Add Student form



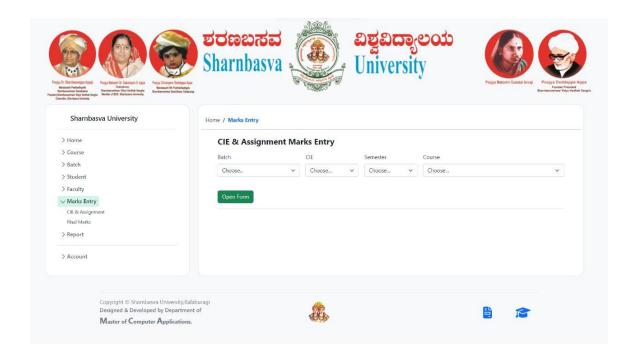
View Student form



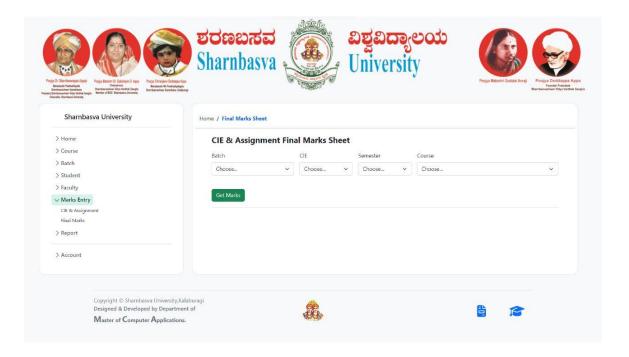
Add Faculty form



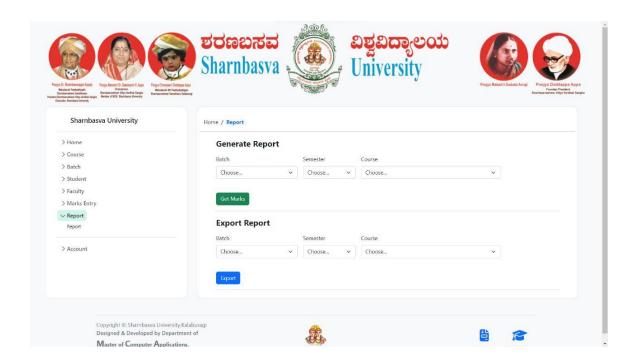
View Faculty form



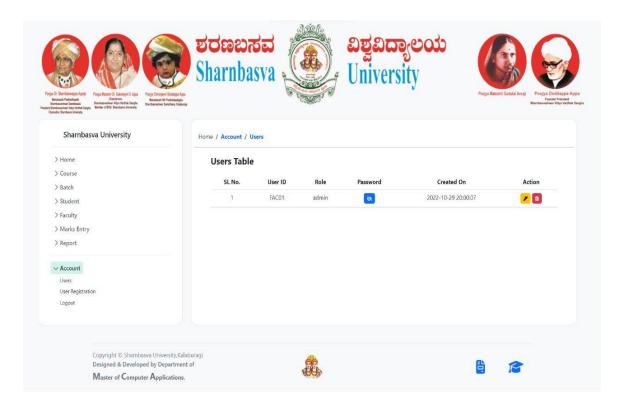
CIE & Assignment Marks Entry form



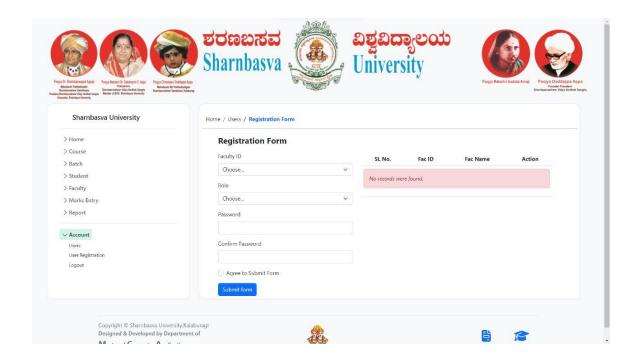
CIE & Assignment Final Marks form



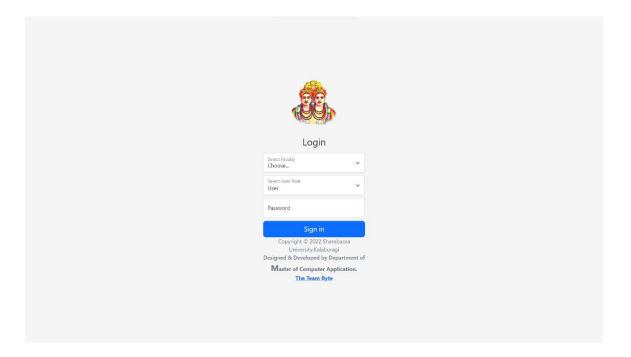
Generate Report/Export Report form



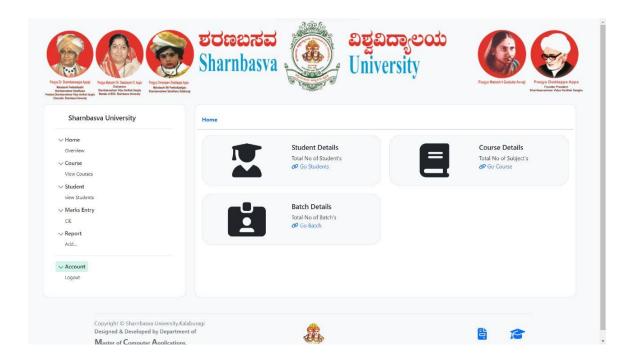
User Details form



User Registration form



User Login form



User Home form

SYSTEM IMPLEMENTATION

6.1 SOURCE CODE

```
<?php
include 'header.php';
require_once "./Query/db_conn.php";
<div class="container">
  <div class="row mt-4">
    <div class="col">
      <nav aria-label="breadcrumb">
        Home
                 class="breadcrumb-item
                                          fw-bold
                                                      text-primary"
                                                                      aria-
current="page">Marks Entry
        </nav>
    </div>
  </div>
  <div class="row">
    <hr class="hr">
    <div class="col px-5">
      CIE & Assignment Marks Entry
      <div class="">
      </div>
      <div class="">
                                          class="row
                                                      g-3 needs-validation"
        <form
               action=""
                          method="POST"
novalidate>
          <div class="col-md-3">
            <label for="studentBatch" class="form-label">Batch</label>
            <select class="form-select" id="studentBatch" name="studentBatch"</pre>
required>
              <option selected disabled value="">Choose...</option>
              <?php
                $sql_bat = "SELECT * FROM `batch`";
                if($result_bat = mysqli_query($conn, $sql_bat)){
                  if(mysqli_num_rows(sresult_bat) > 0)
                    while($row = mysqli_fetch_array($result_bat)){
```

```
echo "<option value=". htmlspecialchars($row['Batch']) .">".
htmlspecialchars($row['Batch']) ."</option>";
                       mysqli_free_result($result_bat);
                     } else{
                       echo '<div class="alert alert-danger"><em>No records were
found.</em></div>';
                  } else{
                     echo "Oops! Something went wrong. Please try again later.";
                ?>
              </select>
              <div class="invalid-feedback">
                Please select a Batch.
              </div>
           </div>
           <div class="col-md-3">
              <label for="Semester" class="form-label">Semester</label>
              <select
                         class="form-select"
                                                 id="Semester"
                                                                   name="Semester"
onchange="mySubject(this.value)"
                required>
                <option selected disabled value="">Choose...</option>
                <option value="SEM1">SEM1</option>
                <option value="SEM2">SEM2</option>
                <option value="SEM3">SEM3</option>
                <option value="SEM4">SEM4</option>
              </select>
              <div class="invalid-feedback">
                Please select a valid Semester.
              </div>
           </div>
           <div class="col-md-5">
              <label for="Course" class="form-label">Course</label>
              <select class="form-select" id="Course" name="Course" required>
                <option selected disabled value="">Choose...</option>
                <?php
                $sql_bat = "SELECT * FROM `course` WHERE `C_Emp` = '$user'";
                if($result_bat = mysqli_query($conn, $sql_bat)){
                  if(mysqli_num_rows($result_bat) > 0){
                     while($row = mysqli_fetch_array($result_bat)){
```

```
echo "<option value=". htmlspecialchars($row['C_Code']) .">".
htmlspecialchars($row['C_Name']) ."</option>";
                     mysqli_free_result($result_bat);
                   } else{
                     echo '<div class="alert alert-danger"><em>No records were
found.</em></div>';
                } else{
                  echo "Oops! Something went wrong. Please try again later.";
                }
              ?>
              </select>
              <div class="invalid-feedback">
                Please select a Course.
              </div>
           </div>
           <div class="col-md-12">
                         class="btn
              <button
                                                                type="submit">Open
                                       btn-success
                                                       mt-4"
Form</button>
           </div>
         </form>
       </div>
       <hr class="hr">
       <div class="">
         <?php
         if
               (isset($_POST['studentBatch'])
                                                 &&
                                                         isset($_POST['cie'])
                                                                                 &&
isset($_POST['Semester']) && isset($_POST['Course'])) {
           function test_input($data) {
              $data = trim($data);
              $data = stripslashes($data);
              $data = htmlspecialchars($data);
             return $data;
           }
           $Get_Bat = test_input($_POST['studentBatch']);
           $Get_cie = test_input($_POST['cie']);
           $Get_sem = test_input($_POST['Semester']);
           $Get_cou = test_input($_POST['Course']);
           $check = "SELECT * FROM `cie` WHERE Batch = '$Get_Bat' AND
SubCode = '$Get_cou'";
           if($result_Student = mysqli_query($conn, $check)){
              if(mysqli_num_rows($result_Student) > 0){
                counter = 0;
```

```
?>
   <form
                action="./Query/U_cie_update.php?batch=<?=
htmlspecialchars($Get_Bat) ?>" method="post" class="needs-validation" novalidate>
    Batch :
      <?= $Get Bat ?>
      Semester :
      <?= $Get sem ?>
      Marks Type :
      <?= $Get_cie ?>
      Course Code :
      <?= $Get_cou ?>
      <div class="table-responsive">
     <thead>
       SL No.
        Batch
        USN
        Name
        Semester
        SubCode
        CIE1
        CIE2
        CIE3
        Assignment
       </thead>
      <?php
       while($row = mysqli_fetch_array($result_Student)){
```

\$counter++;

```
?>
                <input type="text" name="" id="" value="<?php echo
$counter; ?>" class="form-control text-center" disabled>
                  <input type="text" name="batc<?php echo $counter;
?>" id="" value="<?php echo htmlspecialchars($row['Batch']); ?>" class="form-control
text-center">
                  <input type="text" name="usn_<?php echo $counter; ?>"
id="usn" value="<?php echo htmlspecialchars($row['USN']); ?>" class="form-control
text-center">
                  <input type="text" name="name<?php echo $counter;
?>" id="name" value="<?php echo htmlspecialchars($row['Name']); ?>" class="form-
control text-center">
                  <input type="text" name="seme<?php echo $counter;
?>" id="" value="<?php echo htmlspecialchars($row['Semester']); ?>" class="form-
control text-center">
                  <input type="text" name="cour<?php echo $counter;
?>" id="" value="<?php echo htmlspecialchars($row['SubCode']); ?>" class="form-
control text-center">
                  <input type="number" name="cief<?php echo $counter; ?>"
id="cief" value="<?php echo htmlspecialchars($row['CIE1']); ?>" class="form-control
text-center">
                  <input type="number" name="cies<?php echo $counter; ?>"
id="cies" value="<?php echo htmlspecialchars($row['CIE2']); ?>" class="form-control
text-center">
                  <input type="number" name="ciet<?php echo $counter; ?>"
id="ciet" value="<?php echo htmlspecialchars($row['CIE3']); ?>" class="form-control"
text-center">
                  <input type="number" name="assi<?php echo $counter; ?>"
id="assi" value="<?php echo htmlspecialchars($row['Assignment']); ?>" class="form-
control text-center">
                <?php
                  }
                ?>
              </div>
          <div class="col-12">
            <div class="form-check">
                       class="form-check-input"
              <input
                                                 type="checkbox"
                                                                    value=""
id="cieUpdate" required>
```

<label class="form-check-label" for="cieUpdate">

```
Agree to Save Marks
           </label>
           <div class="invalid-feedback">
            You must agree before submitting.
           </div>
         </div>
       </div>
       <input type="submit" value="submit" name="submit" class="btn btn-
warning mt-2">
      </form>
      <?php
          while($row = mysqli_fetch_array($result_Student)){
            $counter++;
           mysqli_free_result($result_Student);
         } else{
           ?>
      <form action="./Query/U_cie_add.php?batch=<?= htmlspecialchars($Get_Bat)
?>" method="post">
       Batch :
           <?= htmlspecialchars($Get_Bat) ?>
           Semester :
           <?= htmlspecialchars($Get_sem) ?>
           Marks Type :
           <?= htmlspecialchars($Get_cie) ?>
           Course Code :
           <?= htmlspecialchars($Get_cou) ?>
           <div class="table-responsive">
         <thead>
```

```
SL No.
               Batch
               USN
               Name
               Semester
               SubCode
               CIE1
               CIE2
               CIE3
               Assignment
             </thead>
            <?php
             $sql_Student = "SELECT * FROM `student` WHERE S_Batch =
'$Get_Bat'";
             if($result_Student = mysqli_query($conn, $sql_Student)){
               if(mysqli_num_rows($result_Student) > 0){
                 counter = 0;
                 while($row = mysqli_fetch_array($result_Student)){
                   $counter++;
              ?>
              <input type="text" name="" id="" value="<?php echo
$counter; ?>" class="form-control text-center" disabled>
               <input type="text" name="batc<?php echo $counter;
?>" id="" value="<?php echo htmlspecialchars($row['S_Batch']); ?>" class="form-
control text-center">
               <input type="text" name="usn_<?php echo $counter; ?>"
id="usn" value="<?php echo htmlspecialchars($row['S_USN']); ?>" class="form-control
text-center">
               <input type="text" name="name<?php echo $counter;
?>" id="name" value="<?php echo htmlspecialchars($row['S_Name']); ?>" class="form-
control text-center">
               <input type="text" name="seme<?php echo $counter;
?>" id="" value="<?php echo htmlspecialchars($Get_sem); ?>" class="form-control text-
center">
               <input type="text" name="cour<?php echo $counter;
?>" id="" value="<?php echo htmlspecialchars($Get_cou); ?>" class="form-control text-
center">
               <input type="number" name="cief<?php echo $counter; ?>"
id="cief" value="" class="form-control text-center">
```

```
<input type="number" name="cies<?php echo $counter; ?>"
id="cies" value="" class="form-control text-center">
                    <input type="number" name="ciet<?php echo $counter; ?>"
id="ciet" value="" class="form-control text-center">
                    <input type="number" name="assi<?php echo $counter; ?>"
id="assi" value="" class="form-control text-center">
                  <?php
                      }
                      mysqli_free_result($result_Student);
                    } else{
                      echo "
                      <div class='alert alert-danger' role='alert'>
                      <b>No Result Found...!!!</b> Please Try Another Option.
                      </div>
                      ۳,
                    }
                  } else{
                    echo "ERROR: Could not able to execute $sql Student.".
mysqli_error($conn);
                  ?>
               </div>
           <div class="col-12">
             <div class="form-check">
                                                                         value=""
                         class="form-check-input"
                                                     type="checkbox"
               <input
id="cieUpdate" required>
               <label class="form-check-label" for="cieUpdate">
                  Agree to Save Marks
               </label>
               <div class="invalid-feedback">
                  You must agree before submitting.
               </div>
             </div>
           </div>
           <input type="submit" value="submit" name="submit" class="btn btn-success"</pre>
mt-2">
         </form>
         <?php
                    }
                  }
```

```
}
               ?>
      </div>
    </div>
  </div>
</div>
<?php include 'footer.php'; ?>
<style>
  /* Chrome, Safari, Edge, Opera */
input::-webkit-outer-spin-button,
input::-webkit-inner-spin-button {
 -webkit-appearance: none;
 margin: 0;
}
/* Firefox */
input[type=number] {
 -moz-appearance: textfield;
</style>
<script src="./Asset/js/CIE.js"></script>
<?php
  // Close connection
  mysqli_close($conn);
?>
-- phpMyAdmin SQL Dump
-- version 5.2.0
-- https://www.phpmyadmin.net/
-- Host: 127.0.0.1
-- Generation Time: Oct 29, 2022 at 05:15 PM
-- Server version: 10.4.24-MariaDB
-- PHP Version: 8.1.6
SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
START TRANSACTION;
SET time_zone = "+00:00";
/*!40101
                                                                          SET
@OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101
                                                                          SET
@OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS*/;
/*!40101
                                                                          SET
@OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
```

```
/*!40101 SET NAMES utf8mb4 */;
-- Database: `cie`
-- Table structure for table `batch`
CREATE TABLE `batch` (
 `B_Id` int(11) NOT NULL,
 `Batch` varchar(9) NOT NULL,
 `Created_On` timestamp NOT NULL DEFAULT current_timestamp(),
 `Updated_On` timestamp NOT NULL DEFAULT current_timestamp() ON UPDATE
current_timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `batch`
INSERT INTO 'batch' ('B_Id', 'Batch', 'Created_On', 'Updated_On') VALUES
(1, '2021-2022', '2022-10-06 15:57:34', '2022-10-06 15:57:34');
-- Table structure for table `cie`
CREATE TABLE `cie` (
 `ID` int(11) NOT NULL,
 `Batch` varchar(9) NOT NULL,
 `USN` varchar(15) NOT NULL,
 'Name' varchar(100) NOT NULL,
 `Semester` varchar(5) NOT NULL,
 `SubCode` varchar(15) NOT NULL,
 `CIE1` int(2) NOT NULL DEFAULT 0,
 `CIE2` int(2) NOT NULL DEFAULT 0,
 `CIE3` int(2) NOT NULL DEFAULT 0,
```

```
`Assignment` int(2) NOT NULL DEFAULT 0,
```

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

-- ------

--

-- Table structure for table `course`

--

CREATE TABLE `course` (

- `C Id` int(11) NOT NULL,
- `C_Sem` varchar(4) NOT NULL,
- `C_Code` varchar(10) NOT NULL,
- `C_Name` varchar(255) NOT NULL,
- `C_Emp` varchar(5) NOT NULL,
- `Created_On` timestamp NOT NULL DEFAULT current_timestamp(),
- `Updated_On` timestamp NOT NULL DEFAULT current_timestamp() ON UPDATE current_timestamp()
-) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--

-- Dumping data for table `course`

__

- INSERT INTO `course` (`C_Id`, `C_Sem`, `C_Code`, `C_Name`, `C_Emp`, `Created_On`, `Updated_On`) VALUES
- (1, 'SEM1', '20MCA11', 'DATA STRUCTURES USING C++', 'FAC06', '2022-10-06 10:16:32', '2022-10-14 10:11:30'),
- (2, 'SEM1', '20MCA12', 'OPERATING SYSTEM AND UNIX', 'FAC04', '2022-10-06 10:16:59', '2022-10-12 09:18:43'),
- (3, 'SEM1', '20MCA13', 'ADVANCED DATABASE MANAGEMENT SYSTEM', 'FAC07', '2022-10-06 10:18:10', '2022-10-06 10:39:20'),
- (4, 'SEM1', '20MCA14', 'SOFTWARE ENGINEERING', 'FAC02', '2022-10-06 10:18:42', '2022-10-12 09:19:04'),
- (5, 'SEM1', '20MCA151', 'PROBABILITY AND STATISTICS', 'FAC01', '2022-10-06 10:19:11', '2022-10-12 09:19:14'),
- (6, 'SEM1', '20MCA16', 'DATA STRUCTURE USING C++ LAB', 'FAC06', '2022-10-06 10:20:23', '2022-10-06 10:41:38'),
- (7, 'SEM1', '20MCA17', 'OPERATING SYSTEM AND UNIX LAB', 'FAC03', '2022-10-06 10:20:53', '2022-10-06 10:41:57'),
- (8, 'SEM1', '20MCA18', 'ADVANCED DATABASE MANAGEMENT SYSTEM LAB', 'FAC07', '2022-10-06 10:21:21', '2022-10-06 10:42:30'),

[`]Created_On` timestamp NOT NULL DEFAULT current_timestamp(),

[`]Updated_On` timestamp NOT NULL DEFAULT current_timestamp() ON UPDATE current_timestamp()

```
(9, 'SEM1', '20MCA19', 'PROJECT-1', 'FAC03', '2022-10-06 10:21:50', '2022-10-12
09:19:41'),
-- Table structure for table `employee`
CREATE TABLE `employee` (
 `E_Id` varchar(5) NOT NULL,
 `E_Name` varchar(255) NOT NULL,
 `Created_On` timestamp NOT NULL DEFAULT current_timestamp(),
 `Updated_On` timestamp NOT NULL DEFAULT current_timestamp() ON UPDATE
current_timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table 'employee'
INSERT INTO 'employee' ('E Id', 'E Name', 'Created On', 'Updated On') VALUES
('FAC01', 'Prof. Shrikant Patil', '2022-10-06 16:10:46', '2022-10-06 16:10:46'),
('FAC02', 'Prof. R M Shirwal', '2022-10-06 16:04:12', '2022-10-06 16:04:12'),
('FAC03', 'Prof. Rambhat', '2022-10-06 16:03:01', '2022-10-06 16:03:01'),
('FAC04', 'Prof. Prasanna', '2022-10-06 16:03:24', '2022-10-06 16:03:24'),
('FAC05', 'Prof. Laxmikant', '2022-10-06 16:03:47', '2022-10-06 16:03:47'),
('FAC06', 'Prof. Sudhir', '2022-10-29 13:59:53', '2022-10-29 14:00:08'),
('FAC07', 'Prof. Sidramappa B', '2022-10-29 14:00:54', '2022-10-29 14:00:54');
-- Table structure for table `student`
CREATE TABLE `student` (
 `S_USN` varchar(10) NOT NULL,
`S Batch` varchar(10) NOT NULL,
 `S_Name` varchar(255) NOT NULL,
 `Created_On` timestamp NOT NULL DEFAULT current_timestamp(),
 `Updated_On` timestamp NOT NULL DEFAULT current_timestamp() ON UPDATE
current timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `student`
INSERT INTO 'student' ('S_USN', 'S_Batch', 'S_Name', 'Created_On', 'Updated_On')
VALUES
('SG21MCA001', '2021-2022', 'Aadesh Elmalkar', '2022-10-06 15:59:51', '2022-10-06
15:59:51'),
```

```
('SG21MCA002', '2021-2022', 'Abishek Datta Jagtap', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),
```

('SG21MCA003', '2021-2022', 'Ahamadi Aiman Maniyar', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA004', '2021-2022', 'Aishwarya', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA005', '2021-2022', 'Aishwarya Veerabhadrayya', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA006', '2021-2022', 'Amar Somshekhar Pattan', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA007', '2021-2022', 'Anushree Veerabhadrayya Hiremath', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA008', '2021-2022', 'Apoorva', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA009', '2021-2022', 'Ashwini Madivalappa', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA010', '2021-2022', 'Ashwini Patil', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA011', '2021-2022', 'Avinash', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA012', '2021-2022', 'Ayesha Fatima', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA013', '2021-2022', 'Bhavani J Devani', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA014', '2021-2022', 'Bhavani Rachappa', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

('SG21MCA015', '2021-2022', 'Bushra Haji Mohammed Abdul kareem', '2022-10-06 15:59:51', '2022-10-06 15:59:51'),

--

-- Table structure for table `users`

__

CREATE TABLE `users` (

'id' int(11) NOT NULL,

'Username' varchar(50) NOT NULL,

`Role` varchar(10) NOT NULL,

'Password' varchar(255) NOT NULL,

`Created_On` datetime DEFAULT current_timestamp(),

`Updated_On` timestamp NOT NULL DEFAULT current_timestamp() ON UPDATE current_timestamp()

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--

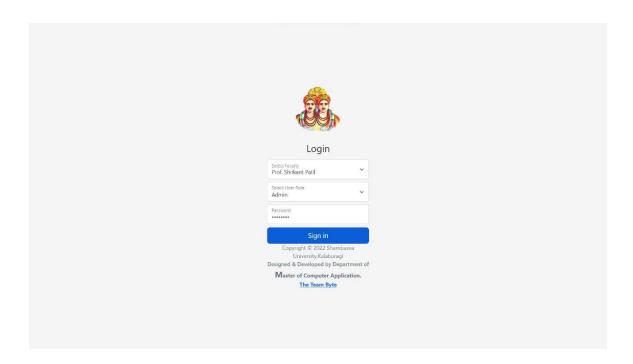
-- Dumping data for table `users`

--

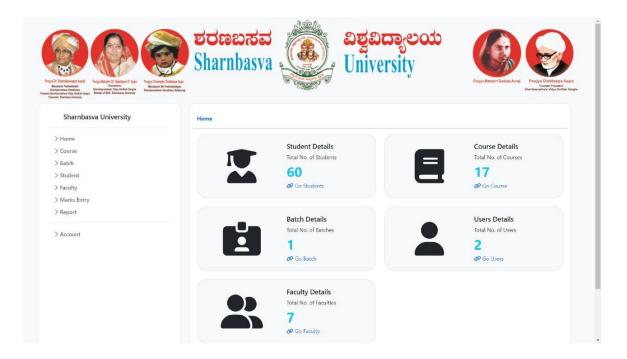
```
('id', 'Username', 'Role', 'Password', 'Created_On',
INSERT INTO `users`
`Updated_On`) VALUES
(1,'FAC01','admin','$2y$10$Sj8bA63WU5Stmrvyz97G2uPa4av7.ENoBEkQ1LKqNoN4u
qy3YiXHq', '2022-10-04 19:29:31', '2022-10-29 14:30:07'),
(8, 'FAC07', 'user', '$2y$10$.uogzoDdVxTbZsc9rHEJKOFs1zCGIj2GqMtRzfufrBa8OYCh
Ax5iS', '2022-10-29 19:58:07', '2022-10-29 14:28:07');
-- Indexes for dumped tables
-- Indexes for table `batch`
ALTER TABLE 'batch'
 ADD PRIMARY KEY (`B_Id`);
-- Indexes for table `cie`
ALTER TABLE `cie`
 ADD PRIMARY KEY (`ID`);
-- Indexes for table `course`
ALTER TABLE `course`
 ADD PRIMARY KEY (`C_Id`);
-- Indexes for table `employee`
ALTER TABLE 'employee'
 ADD UNIQUE KEY `E_Id` (`E_Id`);
-- Indexes for table `student`
ALTER TABLE `student`
 ADD UNIQUE KEY `S_USN` (`S_USN`);
-- Indexes for table `users`
ALTER TABLE `users`
 ADD PRIMARY KEY ('id'),
ADD UNIQUE KEY `username` (`Username`);
-- AUTO_INCREMENT for dumped tables
```

```
-- AUTO_INCREMENT for table `batch`
ALTER TABLE 'batch'
MODIFY 'B Id' int(11) NOT NULL AUTO INCREMENT, AUTO INCREMENT=4;
-- AUTO_INCREMENT for table `cie`
ALTER TABLE `cie`
MODIFY `ID` int(11) NOT NULL AUTO_INCREMENT;
-- AUTO INCREMENT for table `course`
ALTER TABLE `course`
 MODIFY
            C_Id
                      int(11)
                                NOT
                                        NULL
                                                  AUTO_INCREMENT,
AUTO INCREMENT=22;
-- AUTO INCREMENT for table `users`
ALTER TABLE 'users'
 MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=9;
COMMIT;
/*!40101 SET CHARACTER SET CLIENT=@OLD CHARACTER SET CLIENT */;
/*!40101
SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION
*/;
```

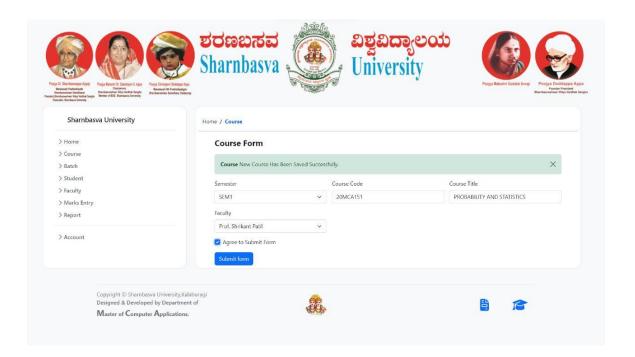
6.2 RUNTIME FORMS



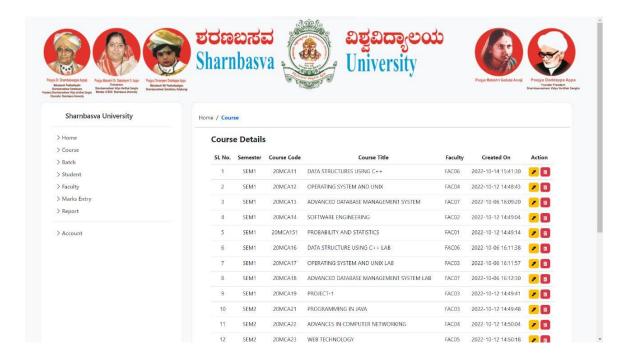
Admin login page



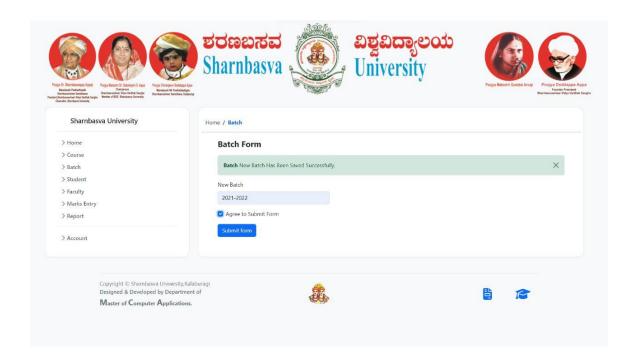
Admin Home page



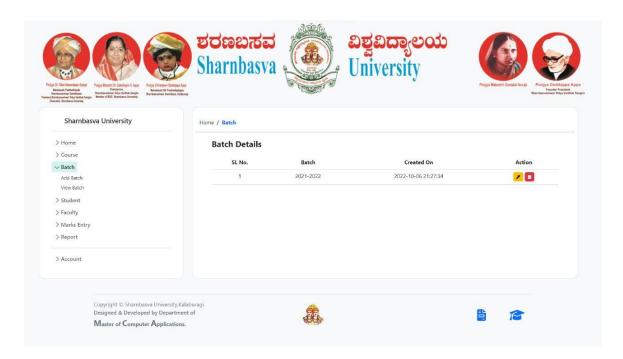
Add Course page



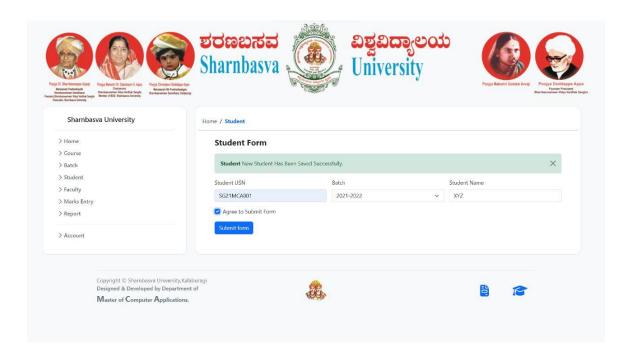
View Course page



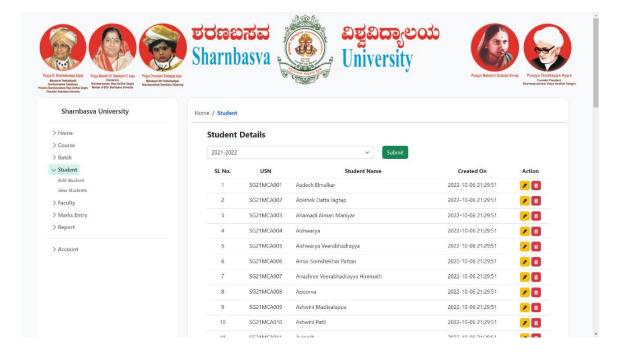
Add Batch page



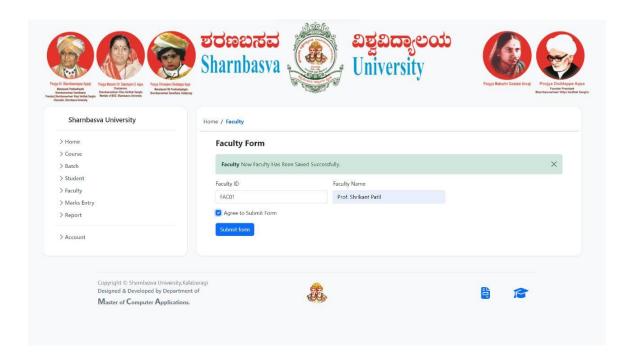
View Batch page



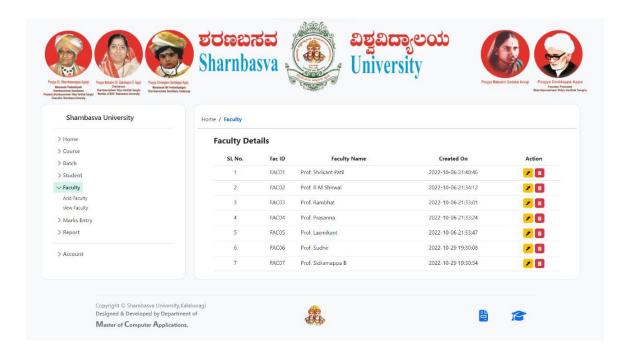
Add Student page



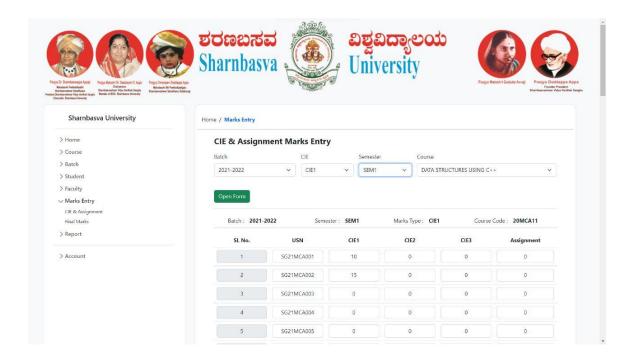
View Students page



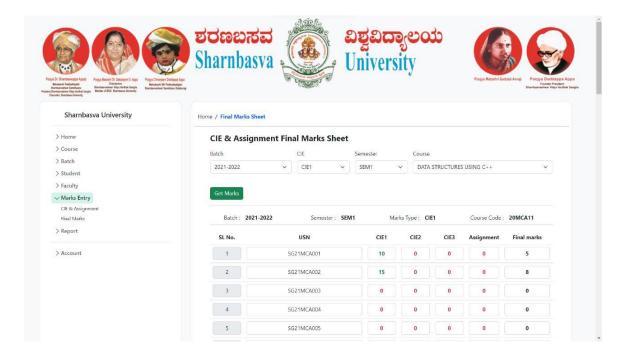
Add Faculty page



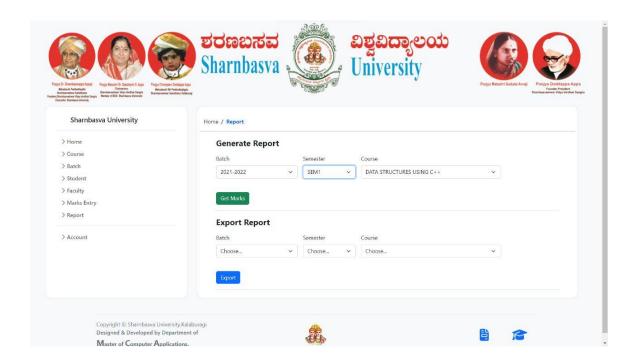
View Faculty page



CIE & Assignment Marks Entry page



CIE & Assignment Final Marks page



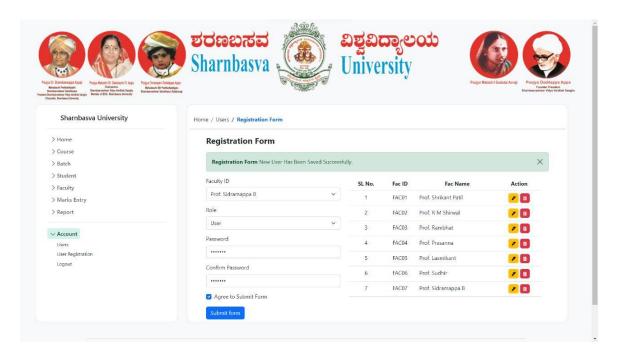
Generate Report/Export Report page



Report Generated page



Report Exported page



User Registration page

CHAPTER 7

SYSTEM TESTING

7.1 UNIT TESTING

Unit testing is a technique of testing separate software units to see whether they are suitable for use, including groupings of computer program modules, usage methods, and operating procedures. This testing method involves the developer testing each individual module to see if there are any issues. The effectiveness of the separate modules is related to this. Unit testing methodologies come in two varieties. They are:

Black box testing: Unit tests for input, user interface, and output are all covered by black box testing.

White box testing: This technique tests the functional behavior of a system by supplying input and studying the functionality output, including the underlying design structure and code of the modules..

Benefits of unit testing include:

- 1. Unit testing has the following advantages: It gives developers the chance to learn what features a unit offers and how to use them in order to gain a basic understanding of the unit API.
- 2. The programmer can use unit testing to enhance the code and guarantee that the module works as intended.
- 3. Without having to wait for other project components to be ready, unit testing enables testing of certain project components.

7.1.1 Test case for Admin login page

Test case Id	Description	Expected	Actual Output	Status
		output		
TC_001	Role or password	"Please select an	Message displayed	Pass
	are blank	item in the list"		
TC_002	Role is blank	"Please select an	Message displayed	Pass
		item in the list"		
TC_003	Password is blank	"Please enter	Message displayed	Pass
		your password"		
TC_004	Incorrect role or	"Invalid	Message displayed	Pass
	password	username, role/		
		password"		
		This message		
		should be		
		displayed		
TC_005	Correct role and	Home page	Home page is	Pass
	password	should be	displayed	
		displayed		

7.1.2 Test case for User login page

Test case Id	Description	Expected	Actual Output	Status
		output		
TC_001	Role or password	"Please select an	Message displayed	Pass
	are blank	item in the list"		
TC_002	Role is blank	"Please select an	Message displayed	Pass
		item in the list"		
TC_003	Password is blank	"Please enter	Message displayed	Pass
		your password"		
TC_004	Incorrect role or	"Invalid	Message displayed	Pass
	password	username, role/		
		password"		
		This message		
		should be		
		displayed		
TC_005	Correct role and	Home page	Home page is	Pass
	password	should	displayed	
		be displayed		
TC_006	Forgot Password	Hint question	Hint question	Pass
		page should	page displayed	
		be displayed		

7.1.3 Test case for User registration page

Test case Id	Description	Expected	Actual Output	Status
		output		
TC_001	Check all text	UI should be	UI is perfect	Pass
10_001			Of is perfect	1 455
	boxes ,buttons	perfect		
	etc.			
TC_002	Check the	Message should	Message	Pass
	registration	be displayed as	displayed	
	field by not	"please fill up		
	filling any data	this fields"		
	and click			
	register			
TC_003	Enter all fields	User should be	User registered	Pass
	and click	registered	successfully	
	register	successfully		
TC_004	Enter Password	User should not	Message	Pass
	less than 6	be registered	displayed	
	characters	"Password must		
		have atleast 6		
		characters"		
		message should		
		be displayed		

7.2 INTEGRATION TESTING

Integration testing is the procedure of analyzing the border between two software modules or units. The correctness of the interface is the main concern. Integrity testing is performed to find problems with the interactions amid combined units. After all the components have been unit tested, integration testing is conducted.

Test case Id	Description	Expected	Actual Output	Status
		output		
TC_001	Add a student	Error message	Error message	Pass
	without	should be	displayed	
	selecting a	displayed as		
	batch	"Please select a		
		batch"		
TC_002	Add a student	Student should	Student added	Pass
	by selecting a	be added	successfully	
	batch	successfully		
TC_003	Add a course	Error message	Error message	Pass
	without	should be	displayed	
	selecting a	displayed as		
	faculty	"Please select a		
		faculty"		
TC_004	Add a course	Course should	Course added	Pass
	by selecting a	be added	successfully	
	faculty	successfully		

7.3 VALIDATION TESTING

Validation testing makes sure that the product actually satisfies the customer's needs. You may also think of it as evidence that a product, when utilized appropriately, performs as intended.

Test case Id	Description	Expected	Actual Output	Status
		output		
TC_001	Name validation.	Display	Message	Pass
	Check the name	message	displayed	
	text field that has	"Name must		
	numbers	consist of text		
		only		
TC_002	Name validation.	Error message	Error message	Pass
	Check the name	should not be	not displayed.	
	text field that has	displayed.		
	text.			
TC_003	Student USN	Error message	Message	Pass
	validation enter	should be	displayed.	
	10 digits only in	displayed as		
	the student USN	"Please provide		
	field.	a valid USN".		
TC_004	Student	Entered USN	USN stored in	Pass
	validation. Enter	should be	database.	
	the USN in the	stored in the		
	format	database.		
	(XXYYXXX000)			
	Eg:			
	SG21MCA060.			

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TC_005	Batch validation.	Input should	Input not	Pass
	Check the batch	not be	accepted	
	text field that is not	accepted	1	
	in proper format.			
	(YYYY-YYYY)			
TC_006	Batch validation.	Input should	Input accepted	Pass
	Check the batch	be accepted		
	text field that is in	-		
	proper format.			
	(YYYY-YYYY)			
TC_007	CIE Marks	Display	Message	Pass
	validation. Enter	message as	displayed	
	marks greater than	"CIE marks		
	15/less than 1	should be in		
		between 1		
		and 15"		
TC_008	CIE Marks	Entered	Entered marks	Pass
	validation. Enter	marks	accepted	
	marks between 1	should be		
	and 15	accepted		
TC_009	Assignment marks	Display	Message	Pass
	validation. Enter	message as	displayed	
	marks greater than	"Assignment		
	35/less than 1	marks		
		should be in		
		between 1		
		and 35"		
TC_010	Assignment Marks	Entered	Entered marks	Pass
	validation. Enter	marks	accepted	
	marks between 1	should be		
	and 35	accepted		

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TC_011	Verify admin	Login to admin	Login	Pass
	login with	home page	successful	
	value			
	credentials			
TC_012	Verify admin	Error message	Message	Pass
	with invalid	should be	displayed	
	credentials	displayed		
TC_013	Add student to	Add Student	Student added	Pass
	the database	should be	successfully	
		stored in		
		database		
TC_014	Add new batch	Added batch	Batch added	Pass
	to the database	should be	successfully	
		stored in		
		database		
TC_015	Add new	Added course	Course added	Pass
	course to the	should be	successfully	
	database	stored in		
		database		
TC_016	Add new	Added Faculty	Faculty	Pass
	Faculty to the	should be	added	
	database	stored in	successfully	
		database		

CHAPTER 8

CONCLUSION

This application is designed to enhance and automate the CIE marks entry using a computerized system. A well-defined, efficient, controlled and managed information system or software based on web technology storing, processing and providing information through the system. The objectives were achieved by following a process model such as system analysis, design and system implementation.

In near future, the system interface could be improved, with more attractive, interactive and meaningful images. Enhance the system with an email and OTP (One Time Password) or email notifications. Enhance the current system by computerizing almost all of the services provided by the institution (online exams, enrollment, attendance and others). Evolve the system by developing several versions through users' feedback, if this solution has not been worked out appropriately.