A Project Report on

Course Information Monitoring System

Submitted in partial fulfillment of requirement
for the award of the degree

MASTER of COMPUTER APPLICATIONS

Of

Visvesvaraya Technological University

By

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PES INSTITUTE OF TECHNOLOGY
100 Ft Ring Road, B.S.K 3rd Stage, Bangalore-85

2015

PES INSTITUTE OF TECHNOLOGY

Department of MCA

100 Ft Ring Road, BSK 3rd Stage
Bangalore 85

2015

CERTIFICATE

This is to certify that the project entitled **"Course Information Monitoring System"** is a bonafide work carried out by **Abhijith B.S. 1PI13MCA01 & Joshua Fernandes 1PI13MCA31** submitted in partial fulfillment of the requirement of Fourth semester course work of MCA during the academic session Jan-May 2015.

Guide
Assistant Professor,
Department of MCA
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Dr. Neelam Bawane
Professor & Head
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Bangalore

Examiners

1.

2

DECLARATION

We **Abhijith B. S.** bearing University seat number **1PI13MCA01** and **Joshua Fernandes** bearing University Seat Number **1PI13MCA31** of 4th Semester, PESIT, hereby declare that the project entitled **"Course Information Monitoring System"** has been carried out by us under the supervision of Project Guide **Lolika Padmanabhan,** Assistant Professor, Department Of MCA, PES Institute Of Technology, Bangalore is to be submitted in partial requirements for the award of the Degree Of Master Of Computer Applications by **Visvesvaraya Technological University** during the academic year 2015. This report has been not submitted to any other organization/university for any award or degree certificate.

Date:

Place: Bangalore **Abhijith B. S.**

Date:

Place: Bangalore **Joshua Fernandes**

ACKNOWLEDGEMENT

We take this opportunity to express my profound sense of sincere and deep gratitude to all those who have contributed to the knowledge and experience that I have gained during my project work.

To begin with, I express my heartfelt gratitude to **Dr. K.S. Sridhar**, Principal, PES Institute of Technology, Bangalore for providing me an opportunity to take up this project.

I would also like to express my heartfelt thanks and regards to **Dr. Neelam Bawane**, Head of the Department of MCA, PES Institute of Technology, Bangalore, for her overwhelming support in my project.

I extend my profound gratitude to the project guide**, Lolika Padmanabhan**, Assistant Professor, Department of MCA, PES Institute of Technology, Bangalore for her valuable guidance, co-operation and suggestions and also his encouragement to complete this project.

Finally, I would like to thank my friends for all their support and encouragement during my project work.

ABSTRACT

The Course Information Management System(CIMS) will provide the head of Department, teachers and students an online application that will allow them to track the workflow of the syllabus. It will provide teachers and students with information on how much of the course has been completed and how much is left. It will be driven by three interfaces; one for the head of the department, who will be able to keep of track of every subject and teacher and how much progression has been made. A second interface for teachers to update and keep track of how much of the syllabus is complete, and a third interface for students to check how much is completed based on which semester they are in.

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1. Introduction

1.1 Purpose

The Course Management System(CMS) is a system which integrates itself with the educational department, automating the task of monitoring the progress carried out by the faculties and staff and helps the head of the department monitor the progress and help him/her make decisions and evaluate the staff performance.

1.2 Product Perspective

The product to be developed is a first of its kind, envisioned and required by the department to help monitor the faculties' progress which was not possible manually and was unfeasible to do manually.

This product is a self-contained and can be extended further to provided new services to the department.

This SRS describes the requirements of the system as a whole and each of the services provided by the product.

It also lists the interfaces to be implemented and their inter-connections.

1.3 Product Functions

It will be driven by three interfaces;

1. One for the head of the department, who will be able to keep of track of every subject and teacher and how much progression has been made.
2. A second interface for teachers to update and keep track of how much of the syllabus is complete.
3. Third interface for students to check how much is completed based on which semester they are in.
4. It provides a facility for the faculties to publish notifications for the students, like the assignments and their deadlines.

1.4 User Classes and Characteristics

HOD- this type of user will be able to track the progress of the faculties and run queries and generate report against the DB

Faculty- This type of user will be able to add/update/edit the chapters and units completed and publish notifications for the students.

Students- This type of user will be able to see the state of the completion of the Course topics.

2. REQUIREMENTS ANALYSIS

2.1 Operating Environment

Apache Server, Linux OS, MySQL DB

2.2 Design and Implementation Constraints

1. GUI is only in English.
2. Login and password is used for the identification of users.
3. Only registered Faculties and HOD will be authorized to use the services to add and edit.
4. Any student will be able to view only.
5. Limited to HTTP/HTTPS.
6. This system works on single server.

2.3 User Documentation

The Documentation of the project and the manual will be provided with the software along with the deployment.

2.4 Assumptions and Dependencies

The project assumes that the faculties will maintain up-to-date information about the course progress that they make.

The project depends on the Apache server and the server up time to make the resource available 99.9%

3. SOFTWARE REQUIREMENTS SPECIFICATION

3.1 Users

3.1.1 Head Of the Department

Allow the hod to select faculty member that will display overall progress of the teacher with respect to every subject. In the same interface will allow them to select a semester along with the subject to keep track of specific subject. Will also include a button to refresh the database for the next semester. An additional interface for the hod will provide a view of the test portion for each semester with respect to the test number.

3.1.2 Faculty

Will present the faculty member with its overall report in the first page, along with the ability to either add a new subject, edit a subject, update current date's progress, set test portions or select particular semester/subject.
The Add new subject will allow the faculty the ability to add a subject based on semester and subject name and provide texts boxes with chapter name and number of hours.
The edit a subject will allow the faculty to edit either the number of hours or the chapter description along with feature to add more chapters or delete existing ones.
The update current date's progress will allow them to update what chapter was completed today and how many hours was taken for which semester/subject.
Set test portions will allow them to select chapter from a list of completed portions to include in a particular test.
Selecting a particular semester/subject will provide them a view of their current progress; by generating reports of how much time has passed and how much progress has been made.

3.1.3 Student

Students will be able to enter their semester and track all the subjects progress and view Test portions for the subject if available.

3.2 Functional Requirements

3.2.1 Ability for the HOD to monitor and generate reports.

The HOD will be able to keep of track of every subject and teacher and how much progression has been made. And he/she will be able to generate reports against the database which helps her in decision making and in evaluation of faculties.

3.2.2 The Faculty should be able to update progress and manipulate Course information of the subject she handles

The Faculty should be able to add Chapters and units under them and manipulate them which are reflected in the DB

3.2.3 The system should provide an interface for students to check their course progress corresponding to their Semester.

The Student enters their semester and section and should be provided with an overall view of their semester, followed by subject wise view.

3.2.4 The system provides a facility for the faculties to publish notifications for the students, like the assignments and their deadlines.

The Faculty should be able to generate notification reminders on their interface which should reflect on the students interface.

3.3 Non- Functional Requirements

3.3.1 Performance Requirements

(1) Static numerical requirements:

(a) The number of terminals to be supported: 20+

(b) The number of simultaneous users to be supported: 20+

(c) Number of files and records to be handled: 10

(d) Sizes of tables and files: 100mb

(2) The numbers of transactions and tasks will be 5 per second and 95% of the transactions shall be processed in less than 1 s on a normal workload conditions and the numbers of transactions and tasks will be 20 per second and 95% of the transactions shall be processed in less than 5 s on a peak workload conditions

3.3.2 Safety Requirements

Data will be transmitted with the use HTTP protocols and use inbuilt browser security measures.

3.3.3 Security Requirements

Users will be authenticated based on provided login details. Faculty members will not be able to track other faculty member's progress or view reports. Highest clearance will be provided to the hod.

3.3.4 Software Quality Attributes

Availability

Is available anywhere in campus when connected to the intranet. Will display a 404 page in case of loss of connection. No data will be lost and no commits will be made until complete transaction is made to the server.

Usability

The system is easy to handle and navigates in the most expected way with no delays. The system program reacts accordingly and transverses quickly between its states.

3.4 Software and Hardware Requirement

3.4.1 Hardware Interface

Client Side			
	Processor	RAM	Disk Space
Internet Explorer – 6 or above	All Intel or AMD - 1 GHZ	256 MB	100 MB

ServerSide			
	Processor	RAM	Disk Space
Apache Server	All Intel or AMD - 2 GHZ	2GB	1 GB
MySql		512 MB	500MB(Excluding Data Size)

3.4.2 Software Interfaces

Client on Internet
Web Browser, Operating System (any)

Client on Intranet
Web Browser, Operating System (any)

Web Server
Apache (WAMP, XAMP), Operating System (any)

Data Base Server
MySQL, Operating System (any)

Development End
LAMP (Linux, Apache, HTML, XML, AJAX, PHP), MySQL, OS (Windows),

3.4.3 Communications Interfaces

1. It uses the any Modern Web browser capable of running Java-script on client side.
2. It makes use of HTTP Protocol.
3. The system services should be accessible throughout the Local Area Network which is available to each of the faculties on their computer systems.

4. ANALYSIS AND DESIGN

4.1 Use Case

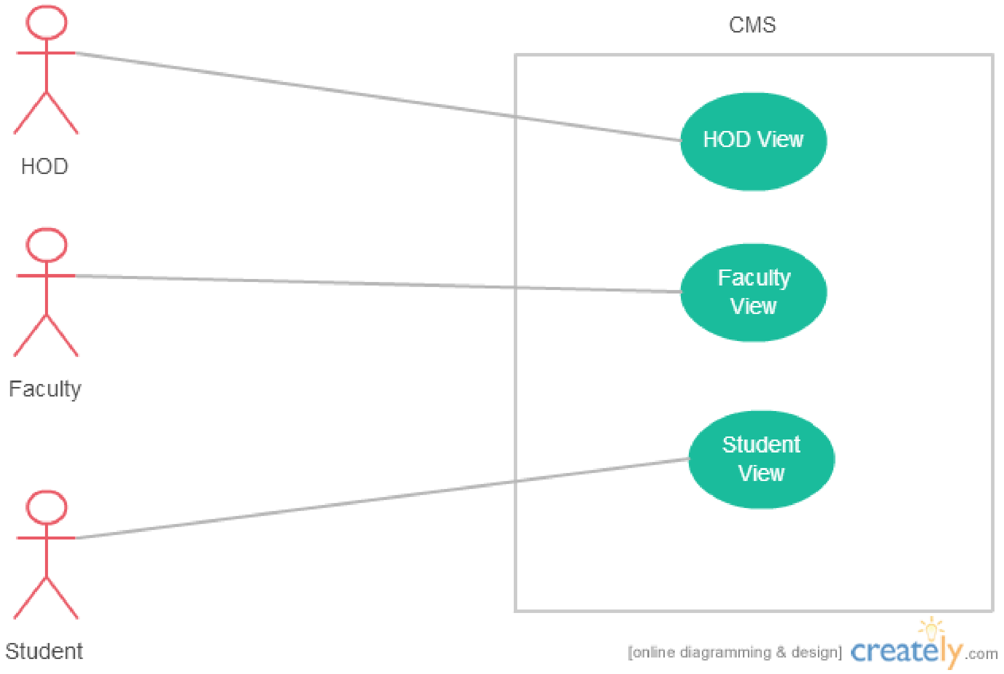


Figure 1 CMIS Use Case

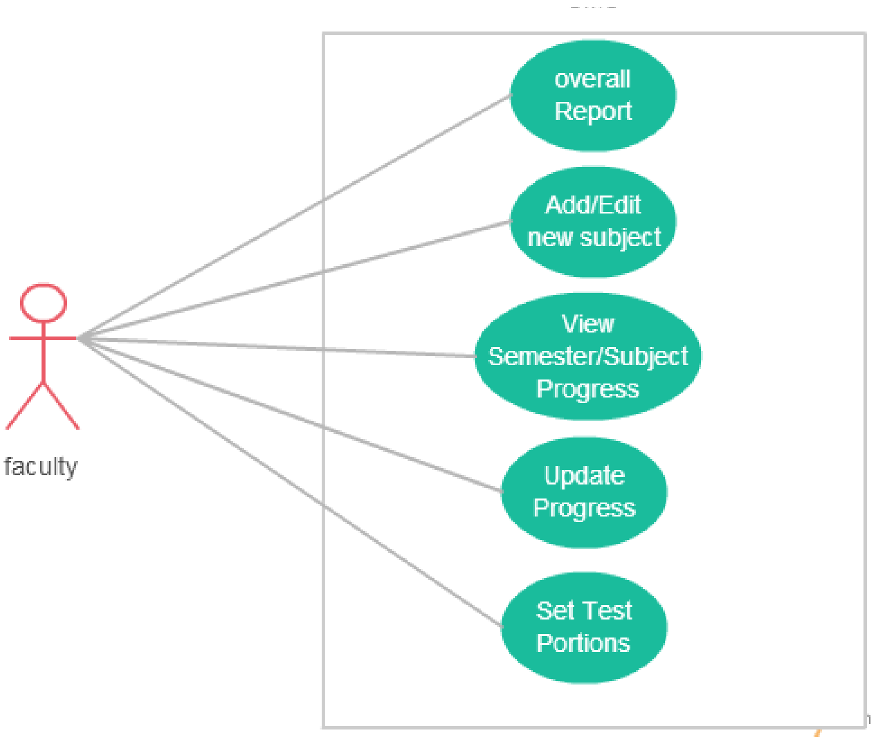


Figure 2 Faculty Use Case

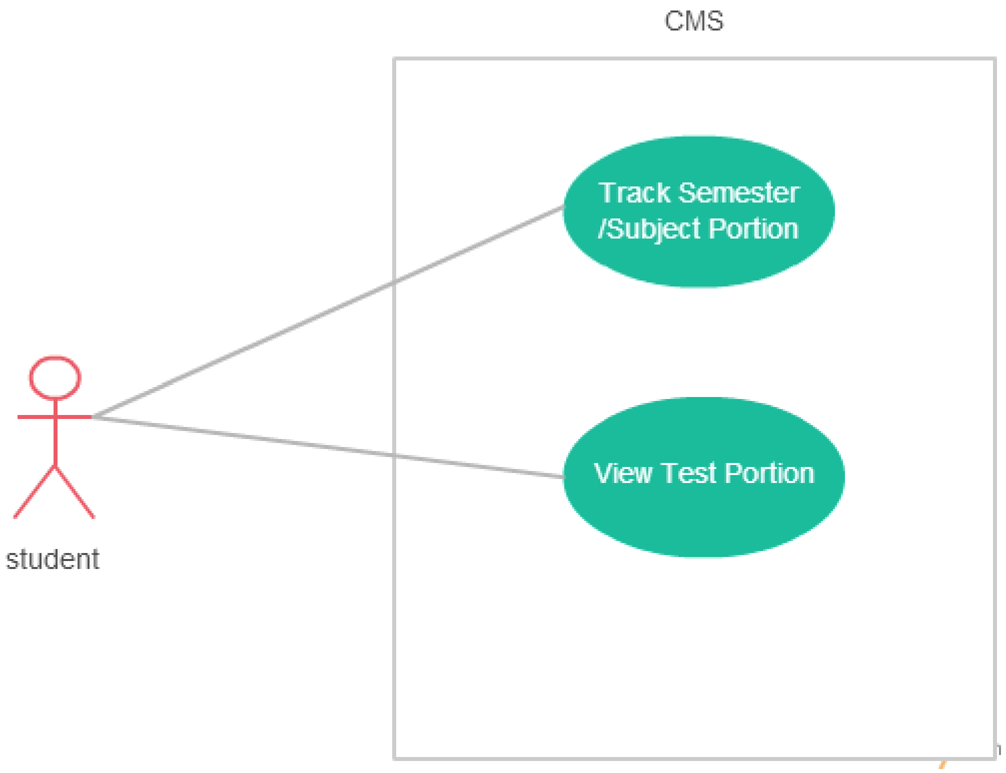


Figure 3 Student Use Case

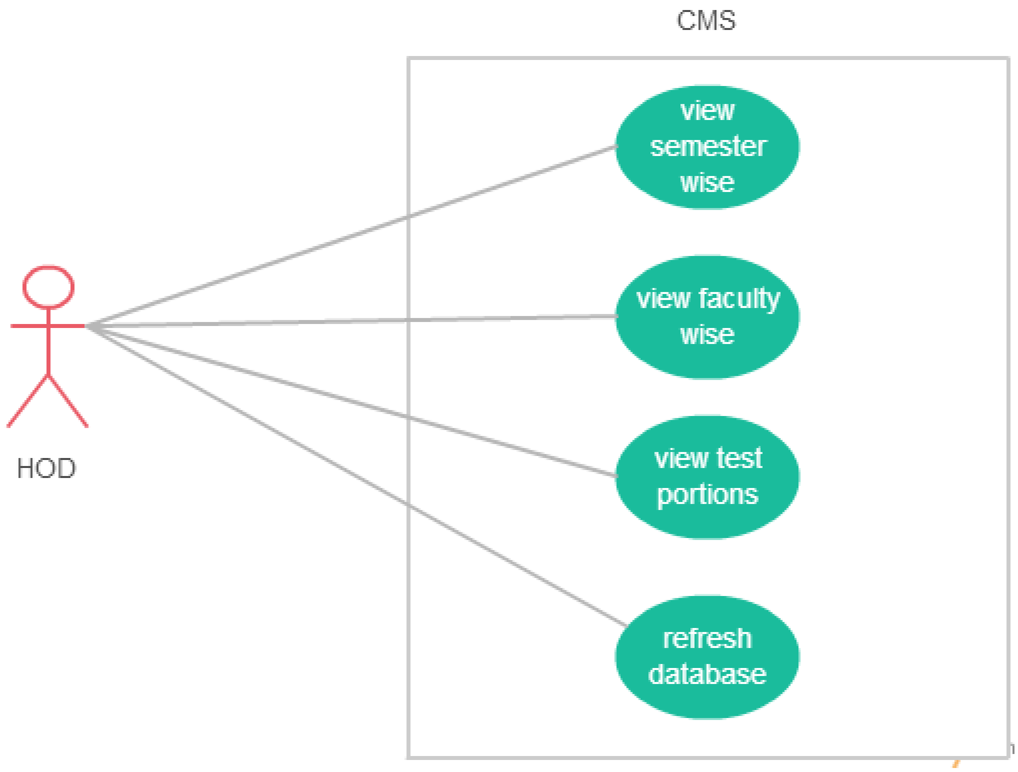


Figure 4 HOD Use Case

4.2 ER Diagram

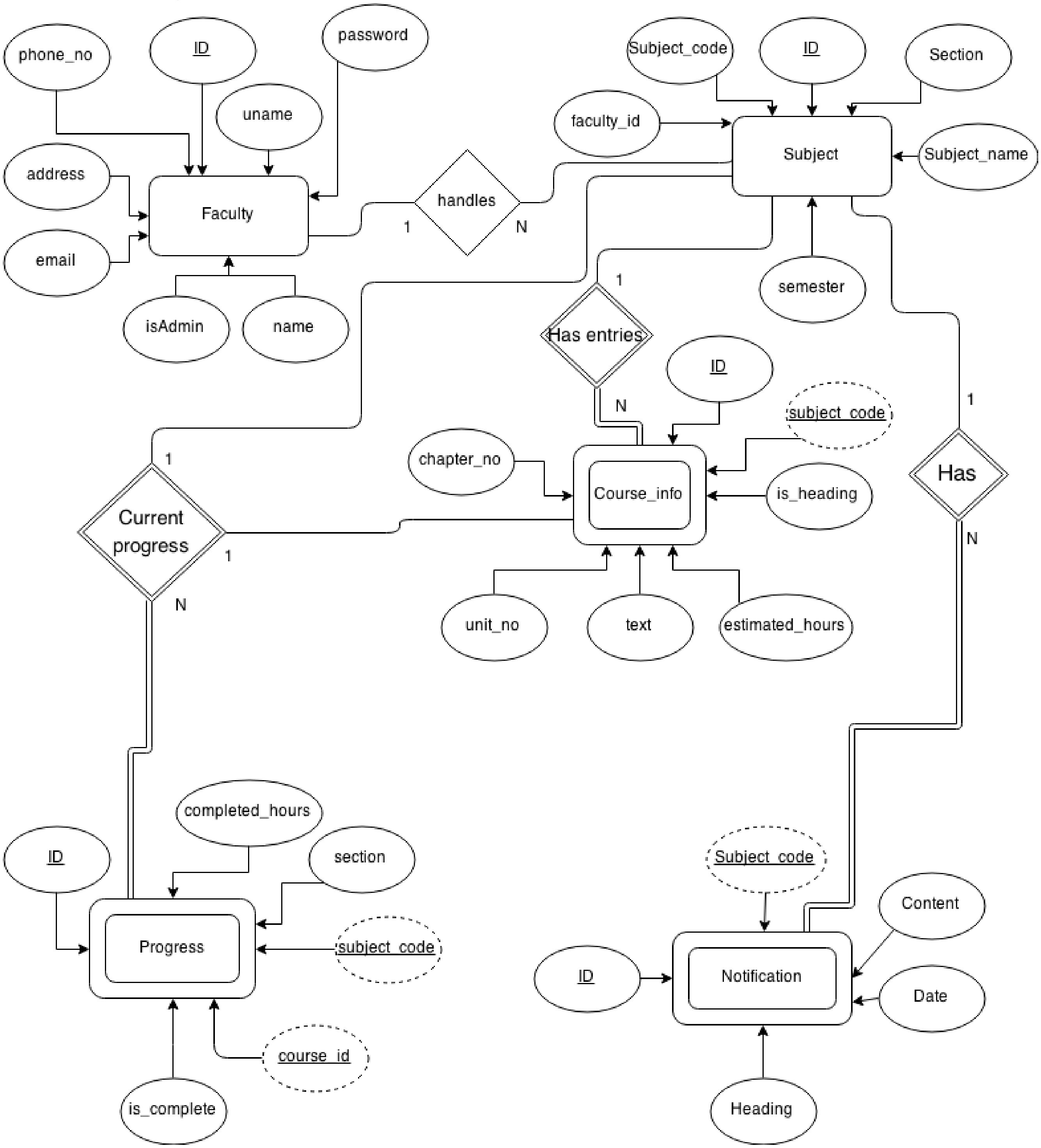


Figure 5 ER Diagram

4.3 DFD Diagram

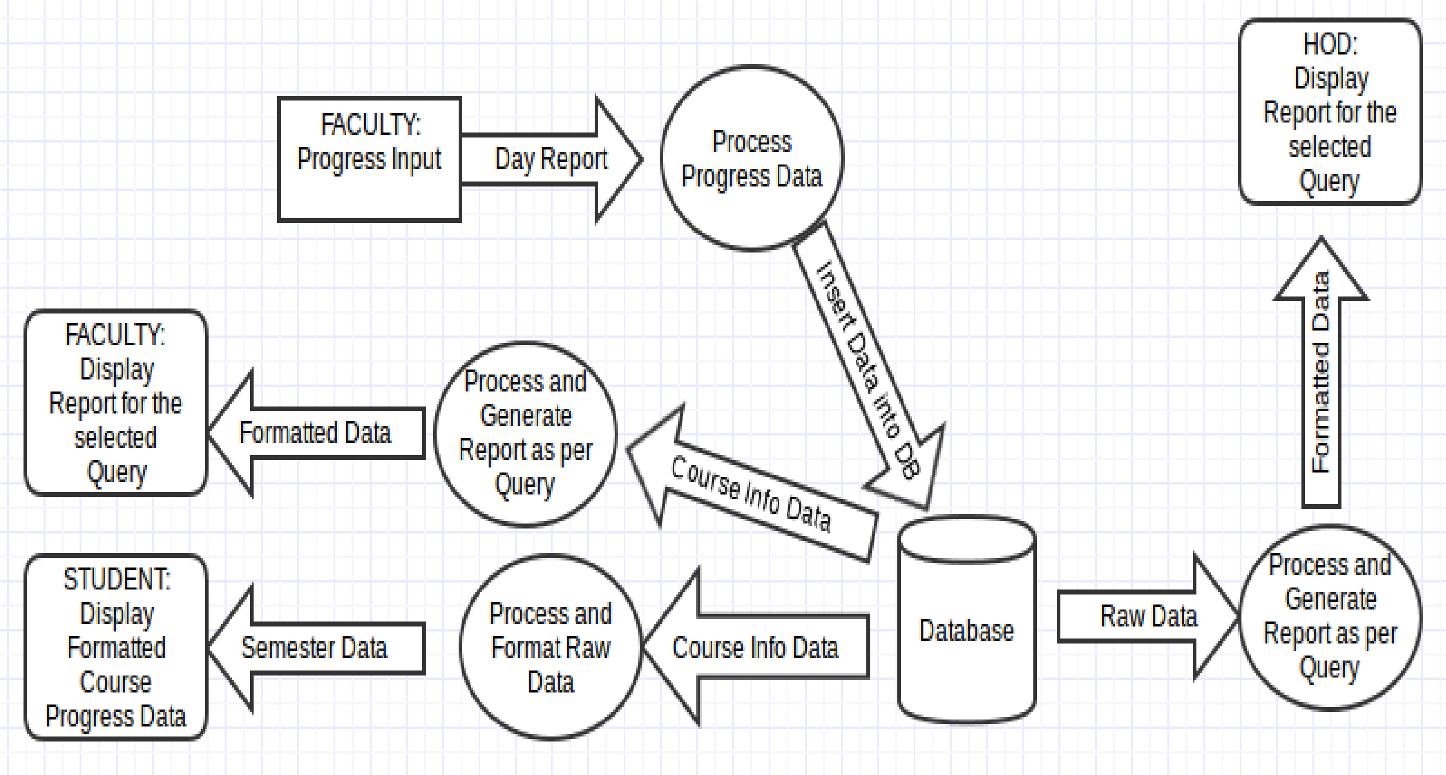

FACULTY: Progress Input
Day Report
Process Progress Data
HOD: Display Report for the selected Query
Insert Data into DB
Formatted Data
FACULTY: Display Report for the selected Query
Formatted Data
Process and Generate Report as per Query
Course Info Data
Database
Raw Data
Process and Generate Report as per Query
STUDENT: Display Formatted Course Progress Data
Semester Data
Process and Format Raw Data
Course Info Data

Figure 6 DFD Diagram

4.4 Data Dictionary

Course_info

Name	Data type	Comment
Id	int(11)	Primary Key
chap_no	int(2)	
unit_no	int(2)	
Text	varchar(256)	
est_hrs	int(3)	
is_heading	int(1)	Bianary
sub_code	varchar(20)	

Table 1course_info data dictionary

Faculty

Name	Data type	Comment
Id	int(11)	Primary Key
Uname	varchar(30)	Unique
Pword	varchar(18)	
Name	varchar(30)	
isAdmin	int(2)	
email	varchar(50)	
address	varchar(200)	
phone_no	varchar(15)	

Table 2Faculty data dictionary

Notification

Name	Datatype	Comment
id	int(5)	Primary Key
heading	varchar(40)	
content	varchar(500)	
date	date	
subject_code	varchar(15)	

Table 3notification data dictionary

Progress

Name	Datatype	Comment
id	int(5)	Primary Key
completed_hrs	int(3)	
is_complete	int(3)	Binary
subject_code	varchar(20)	
section	varchar(3)	
course_id	int(5)	

Table 4Progress Data Dictionary

Subject

Name	Datatype	Comment
id	int(5)	Primary Key
subject_code	varchar(15)	Unique
section	varchar(4)	
subject_name	varchar(40)	
faculty_id	int(5)	
semester	int(3)	

Table 5Subject Data Dictionary

5. IMPELEMENTATION

5.1 Code

Connection.php

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "cms";

$conn = new mysqli($servername, $username, $password, $dbname);
?>
```

Login.php

```
session_start();

 //the below code block is required as it controls which user can access the pages,please don't
remove it
if(isset($_SESSION['unames'])) //every page checks if logged in ,and if not then go to login
page , we are already in login page so no else condition
{
  if($_SESSION['isAdmin']==1) // if admin, then go to admin page
   {
     header('Location: admin.php');
   }
   if($_SESSION['isAdmin']==0) //if faculty go to faculty page
   {
     header('Location: faculty.php');
   }
}
$pluname="Enter faculty ID";
$plpassword="Enter Password";
if(isset($_POST['logs'])){
            include 'connection.php';
            //conn object is initialized in connection.php
            if ($conn->connect_error) { //Check connection
                        die("Connection failed: " . $conn->connect_error);
            }
            $pluname=$_POST['uname'];
            $plpassword="";
            $sql = "SELECT name,pword,isAdmin FROM faculty where
uname='".$_POST['uname']."' ";
            $result = $conn->query($sql);
            if ($result->num_rows > 0) {

                        $row = $result->fetch_assoc();
```

```
        //echo "id: " . $row["id"]. " - Name: " . $row["firstname"]. " " .
$row["lastname"]. "<br>";
        if($_POST['pword'] == $row["pword"])
        {
         $_SESSION["unames"] = $_POST['uname'];
            $_SESSION["name"]=$row["name"];
            if($row["isAdmin"]==1)
            {
                $_SESSION["isAdmin"] = 1;
                header('Location: admin.php');
                //http_redirect("admin.php", array("uname" =>
$_POST['uname']), false, HTTP_REDIRECT_PERM);
            }
            else{
                $_SESSION["isAdmin"] = 0;
                header('Location: faculty.php');
            }
        }
        else{
            $pluname='/" value="'.$_POST['uname'].'"';
            $plpassword="Invalid Password";
        }
    } else {
        $pluname="Invalid Username";
    }
$conn->close();
}
?>
```

Inserting Data

```
//Code to insert the notification if it was submitted by user
    if(isset($_POST['submit']) && $_POST['submit']=="Post Notification")
     {
       if(!empty($_POST['title']) && !empty($_POST['description']) &&
!empty($_POST['subject_code'])){
       //got notification request, process it
          $sql="INSERT INTO notification(heading,content,date,subject_code)
VALUES('".$_POST['title']."','".$_POST['description']."',CURDATE(),'".$_POST['subject_c
ode']."');";
          $result=$conn->query($sql);
          if(!$result) {echo "<h2>Error...Unable to post Notification...</h2>";}
          }
     }

    //Code to delete the notification requested by user
    if(isset($_POST['delete']) && $_POST['delete']=="Delete")
```

```
            {
              if(!empty($_POST['id'])){
              //delete the notification,process it
                     $sql="DELETE FROM notification WHERE id=".$_POST['id'].";";
                     if(!($conn->query($sql))) {echo "<h2>Error...Unable to delete
Notification...</h2>";}
                     }
            }
```

View Data

```
<?php

          echo '<form action="" method="GET">';

          echo '<input type=hidden name="subject_id" value="'.$subjectid.'">';
                    //setting hidden data of subject id and section and code
          echo '<input type=hidden name="subject_code" value="'.$subjectcode1.'">';
          echo '<input type=hidden name="section_sel" value="'.$subjectsec1.'">';

                                                                                   //fetching course
information data
          $sql="select
c.id,c.chap_no,c.unit_no,c.`text`,c.est_hrs,c.is_heading,p.completed_hrs,p.is_complete from
course_info c left join subject s on c.sub_code = s.subject_code
left join progress p on p.course_id=c.id and p.section=s.section
where s.subject_code='".$subjectcode1."'
and s.section='".$subjectsec1."' ORDER BY c.chap_no,c.unit_no";

          $result = $conn->query($sql);

          while($row = $result->fetch_assoc())
          {
                    if($row["is_heading"]==1)
                              echo '<tr class="odd">';
                    else
                              echo '<tr class="even">';
                    echo '<td>'.$row["chap_no"].'</td>';
                    echo '<td>'.$row["unit_no"].'</td>';
                    echo '<td>'.$row["text"].'</td>';
                    if($row["is_heading"]==0){
                              echo '<td>'.$row["est_hrs"].'</td>';
                              echo '<td><input type=text name="'.$row["id"].'"
value="'.$row["completed_hrs"].'" size=2 /></td>';
                    }
                    else
                              echo "<td></td><td></td>";
```

```
                if($row["is_heading"]==1)
                        echo '<td></td>';
                else
                {
                        echo '<td><button name="to_add_id" value="'.$row["id"].'"
type="submit">Add hour</button></td>';
                        //echo '<td><input type=submit value="Add Hour"
name="add'.$row["id"].'" </td>';
                        echo '<td><button name="to_update" value="'.$row["id"].'"
type="submit">Update hour</button></td>';
                }

                echo '</tr>';

        }
        echo '</form>';
        ?>
```

Logout

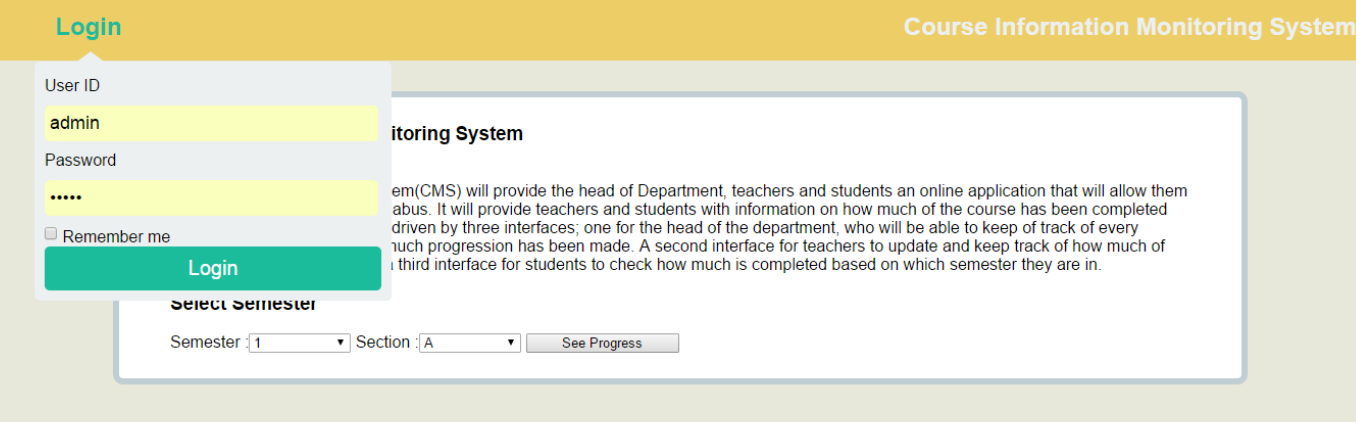
```
<?php
  session_start();   // start current session
  session_destroy(); //destroy all session data
  header('Location: index.php');
?>
```

Charts

```
<?php
   include_once('./connection.php');
        //fetching main information
        if ($conn->connect_error) { //Check connection
                die("Connection failed: " . $conn->connect_error);
        }
        function printPie($element)
        {
        $subject_code=$_GET["subject_code"];
        $section=$_GET["section_sel"];
        global $conn;
        $query="select sum(c.est_hrs) as estimated,sum(p.completed_hrs) as completed
   from course_info c left join subject s on c.sub_code = s.subject_code
   left join progress p on p.course_id=c.id and p.section=s.section
   where s.subject_code='".$subject_code."'
   and s.section='".$section."'
```

```
    and c.is_heading = 0;";

            $result = $conn->query($query);
            $row = $result->fetch_assoc();

            $estimated=$row["estimated"];
            $completed=$row["completed"];
            $remaining=intval($estimated)-intval($completed);
            $r=array("Remaining",$remaining,"#b7b3a3","#6b6964");
            $c=array("Completed",$completed,"#20b31c","#11720d");
    $values=array($r,$c);

                echo " <script> var pieData = [ ";
                        foreach($values as $k=>$v)
                        {
                                    echo "{value: '".$v[1]."',label: '".$v[0]."',color: '".$v[2]."',highlight:
'".$v[3]."'},";
                        }
                        echo "];";
                        echo " window.onload = function(){
                                       var context =
document.getElementById('".$element."').getContext('2d');
                                       var skillsChart = new Chart(context).Pie(pieData);
                                       var title = document.getElementById('PieTitle');
                                       title.innerHTML=\"Estimated hours: ".$estimated." Completed:
".$completed." Remaining: ".$remaining."\";
                                       }
                                      </script>";
             }

?>
```

5.2 Screen Shots



Login

Course Information Monitoring System

User ID

admin

Password

•••••

□ Remember me

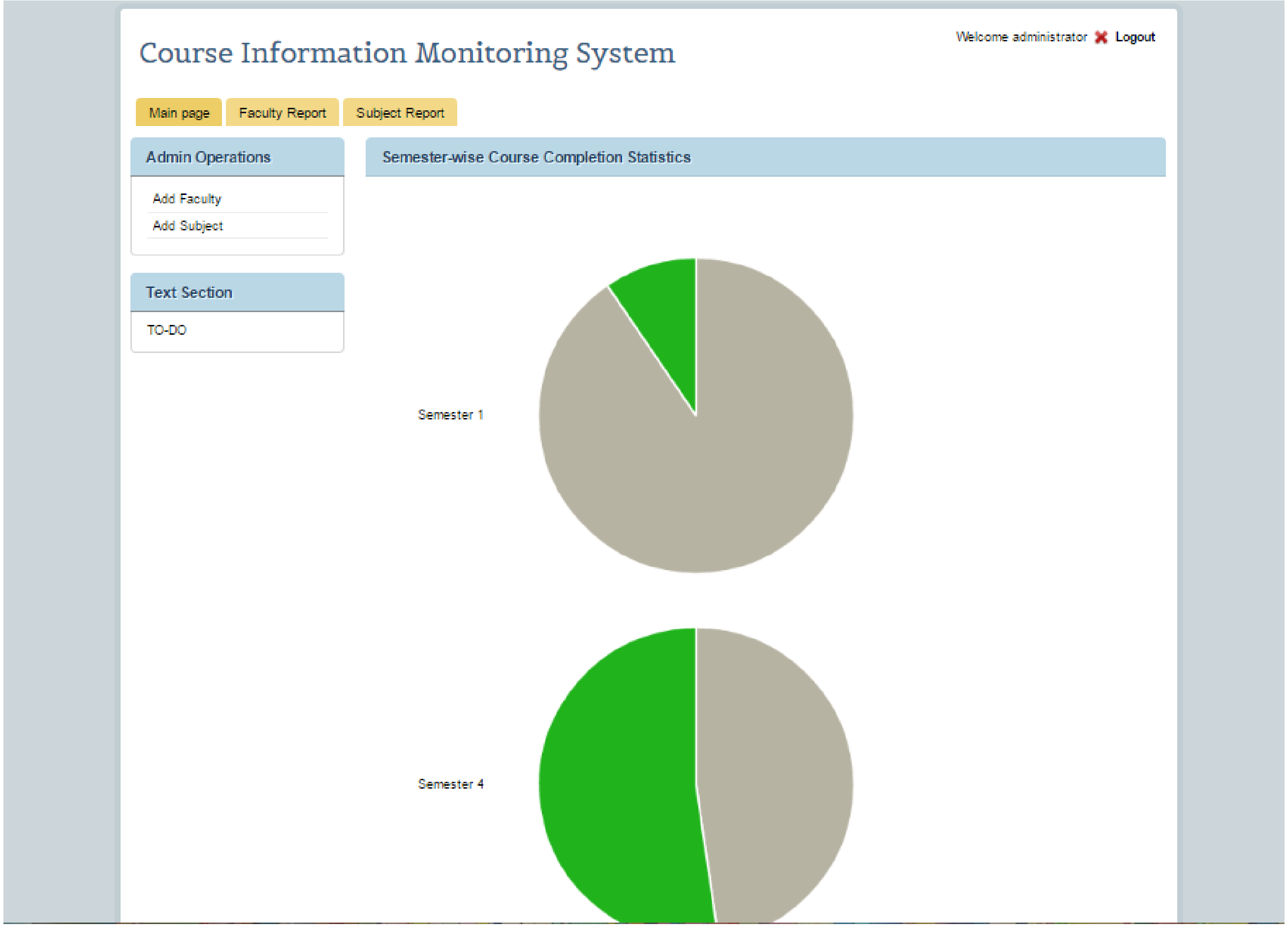
itoring System

em(CMS) will provide the head of Department, teachers and students an online application that will allow them
abus. It will provide teachers and students with information on how much of the course has been completed
driven by three interfaces; one for the head of the department, who will be able to keep of track of every
nuch progression has been made. A second interface for teachers to update and keep track of how much of
ı third interface for students to check how much is completed based on which semester they are in.

Select Semester

Semester : 1 Section : A

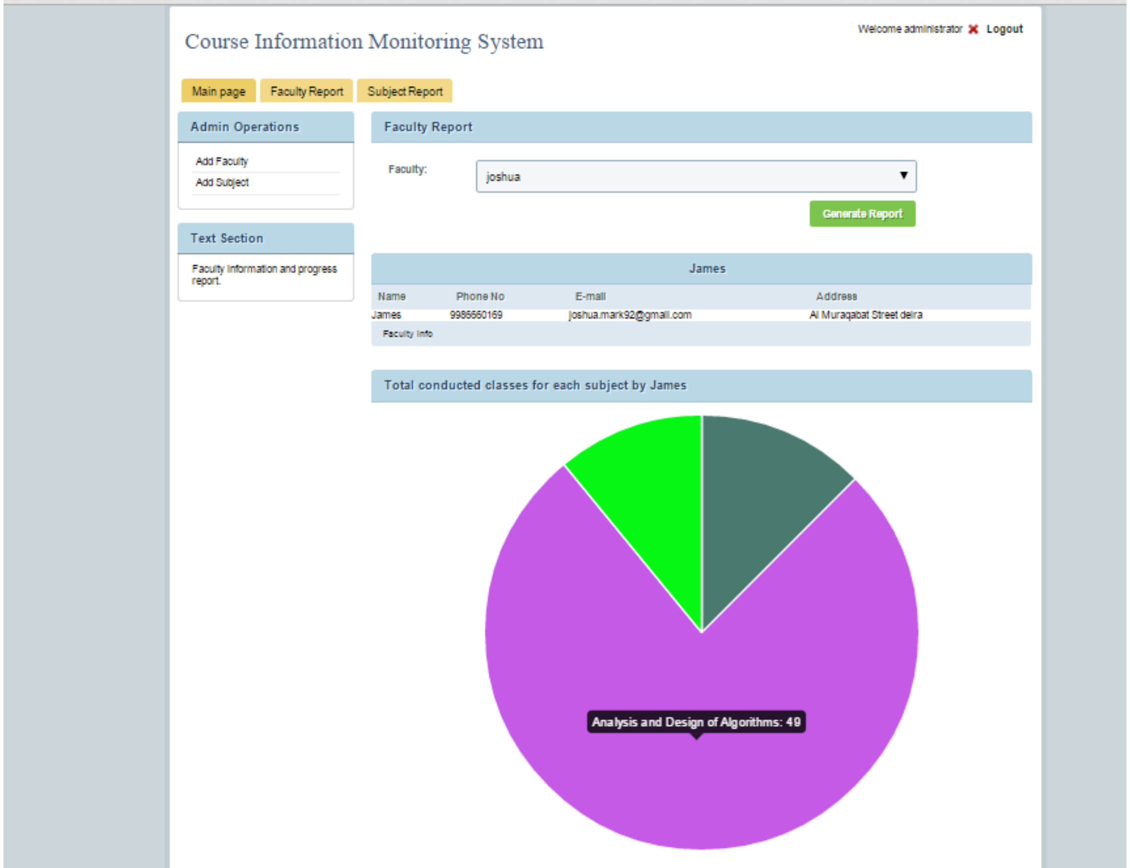
Figure 7 Login Screen Shot



Course Information Monitoring System

Welcome administrator

Figure 8 HOD Screen Shot



Course Information Monitoring System
Welcome administrator ✖ Logout
Main page
Faculty Report
Subject Report
Admin Operations
Add Faculty
Add Subject
Text Section
Faculty Report
Generate Report
Total conducted classes for each subject by James
Analysis and Design of Algorithms: 49

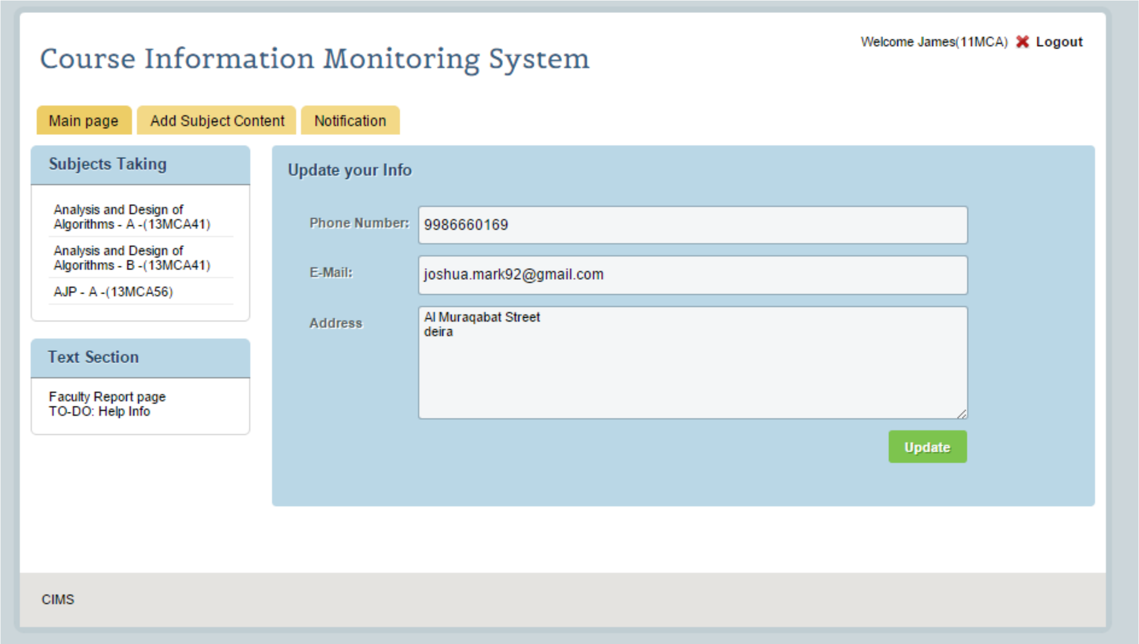
Faculty information and progress report.

Faculty: joshua ▼

James

Name	Phone No	E-mail	Address
James	9986660169	joshua.mark92@gmail.com	Al Muraqabat Street deira
Faculty Info			

Figure 10HOD faculty report Screen Shot



Analysis and Design of Algorithms - A -(13MCA41)

Analysis and Design of Algorithms - B -(13MCA41)

AJP - A -(13MCA56)

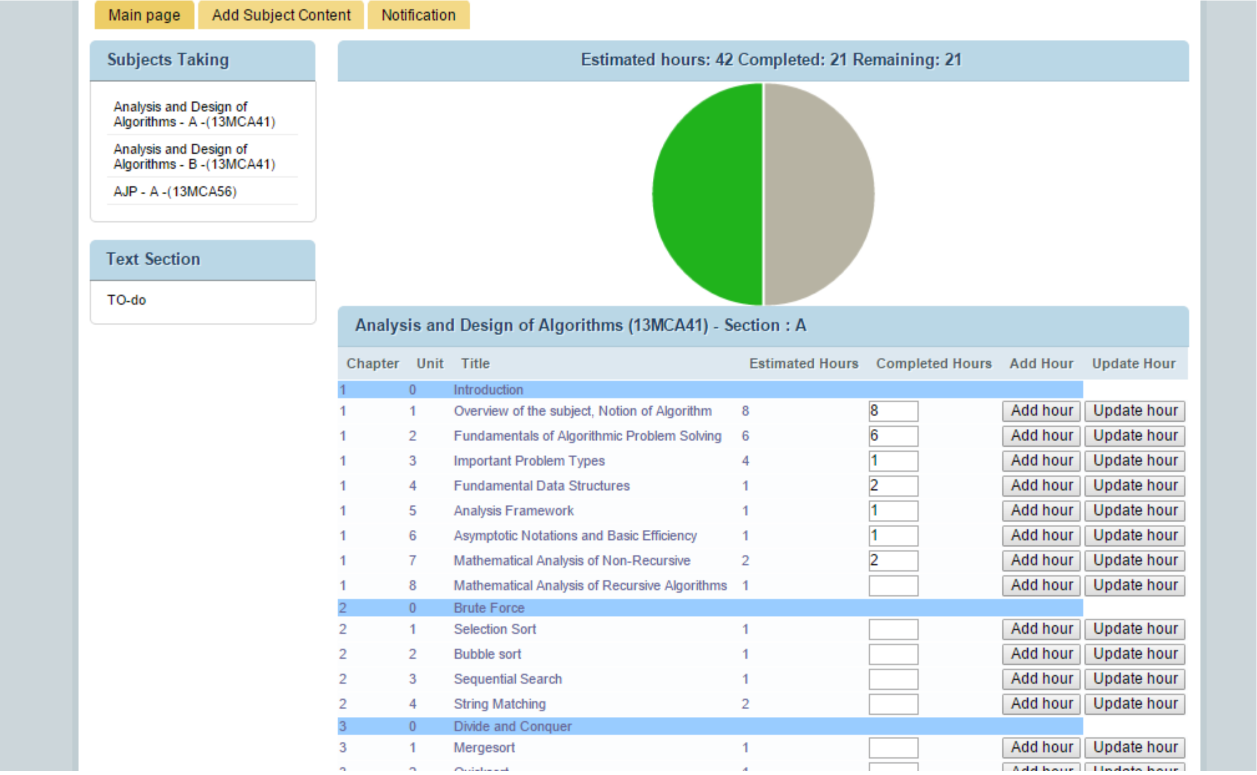
Faculty Report page
TO-DO: Help Info

Phone Number: 9986660169

E-Mail: joshua.mark92@gmail.com

Address: Al Muraqabat Street
deira

Figure 9Faculty Page Screen Shot



Main page | Add Subject Content | Notification

Subjects Taking

- Analysis and Design of Algorithms - A -(13MCA41)
- Analysis and Design of Algorithms - B -(13MCA41)
- AJP - A -(13MCA56)

Text Section

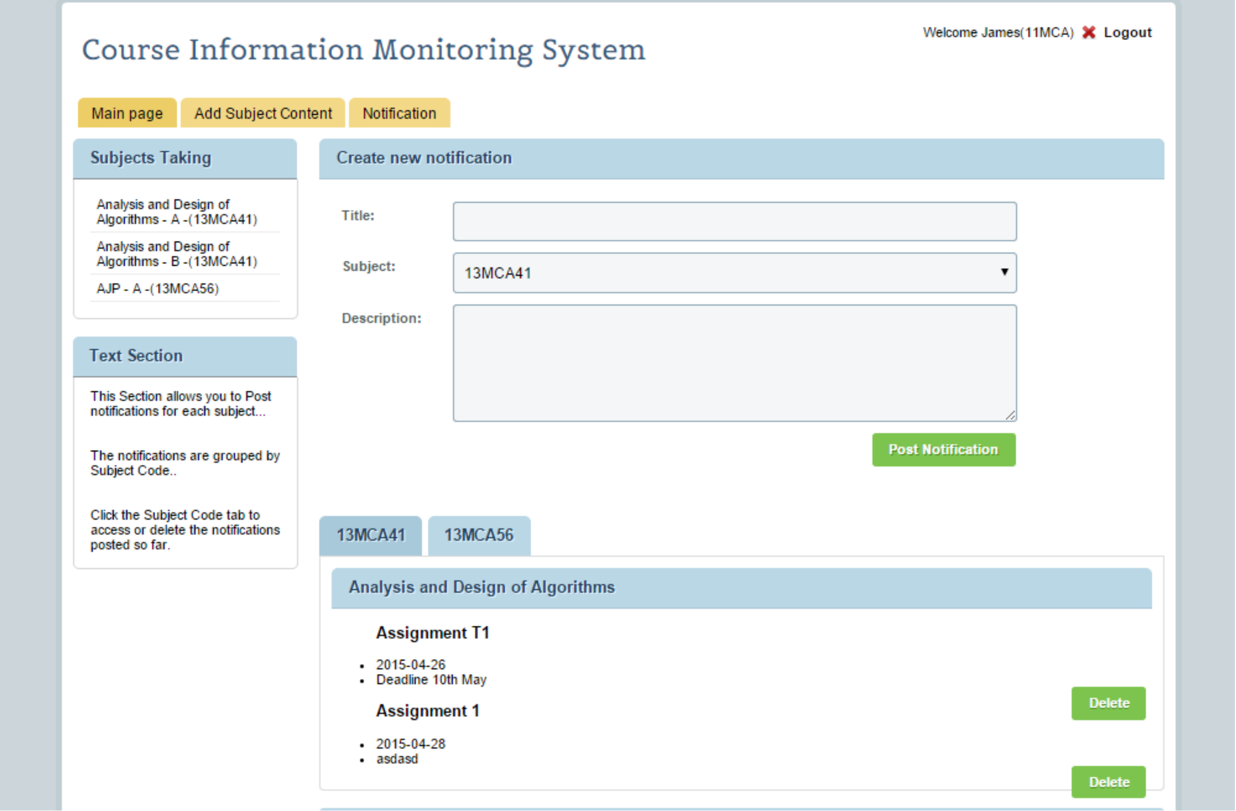
TO-do

Estimated hours: 42 Completed: 21 Remaining: 21

Analysis and Design of Algorithms (13MCA41) - Section : A

Chapter	Unit	Title	Estimated Hours	Completed Hours	Add Hour	Update Hour
1	0	Introduction				
1	1	Overview of the subject, Notion of Algorithm	8	8	Add hour	Update hour
1	2	Fundamentals of Algorithmic Problem Solving	6	6	Add hour	Update hour
1	3	Important Problem Types	4	1	Add hour	Update hour
1	4	Fundamental Data Structures	1	2	Add hour	Update hour
1	5	Analysis Framework	1	1	Add hour	Update hour
1	6	Asymptotic Notations and Basic Efficiency	1	1	Add hour	Update hour
1	7	Mathematical Analysis of Non-Recursive	2	2	Add hour	Update hour
1	8	Mathematical Analysis of Recursive Algorithms	1		Add hour	Update hour
2	0	Brute Force				
2	1	Selection Sort	1		Add hour	Update hour
2	2	Bubble sort	1		Add hour	Update hour
2	3	Sequential Search	1		Add hour	Update hour
2	4	String Matching	2		Add hour	Update hour
3	0	Divide and Conquer				
3	1	Mergesort	1		Add hour	Update hour
3	2	Quicksort	1		Add hour	Update hour

Figure 12Faculty Update Screen Sho



Course Information Monitoring System

Welcome James(11MCA) ✖ Logout

Main page | Add Subject Content | Notification

Subjects Taking

- Analysis and Design of Algorithms - A -(13MCA41)
- Analysis and Design of Algorithms - B -(13MCA41)
- AJP - A -(13MCA56)

Text Section

This Section allows you to Post notifications for each subject...

The notifications are grouped by Subject Code..

Click the Subject Code tab to access or delete the notifications posted so far.

Create new notification

Title:

Subject: 13MCA41 ▾

Description:

Post Notification

13MCA41 | 13MCA56

Analysis and Design of Algorithms

Assignment T1

- 2015-04-26
- Deadline 10th May

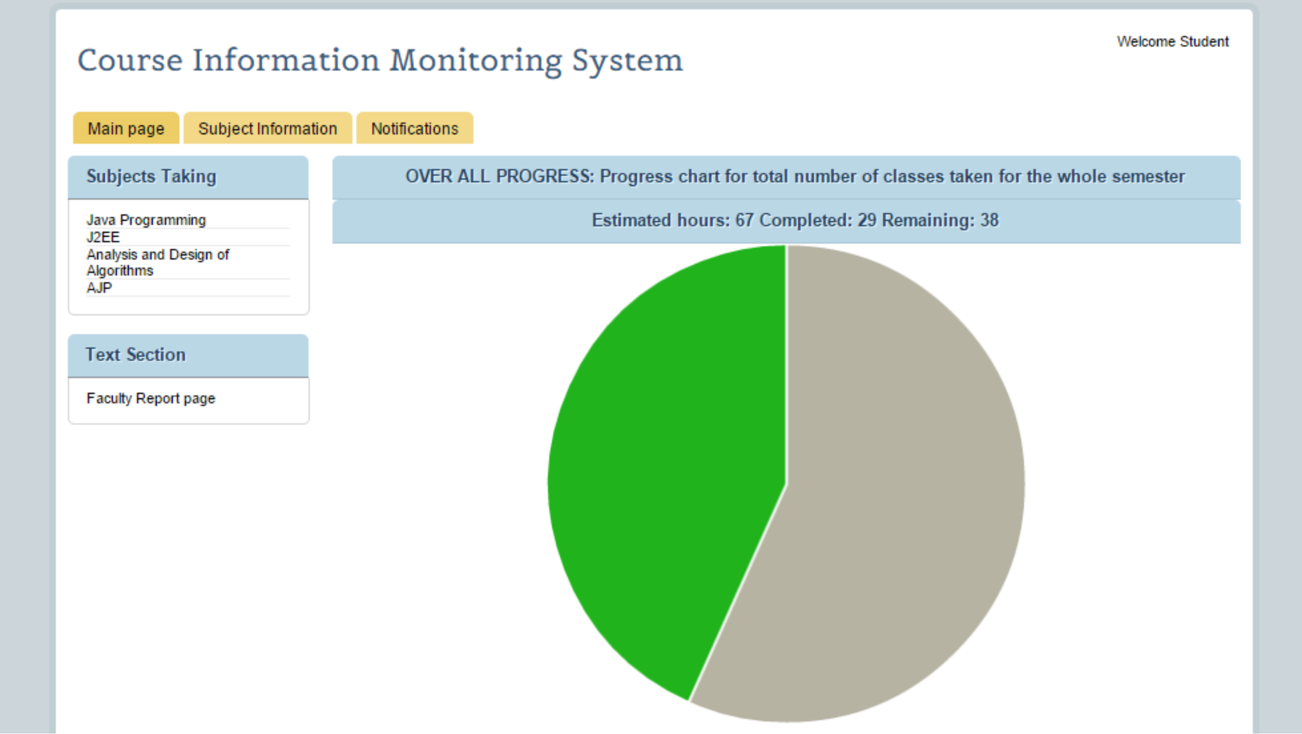
Delete

Assignment 1

- 2015-04-28
- asdasd

Delete

Figure 13Faculty Notification Screen Shot



Course Information Monitoring System

Welcome Student

Subjects Taking

Java Programming
J2EE
Analysis and Design of Algorithms
AJP

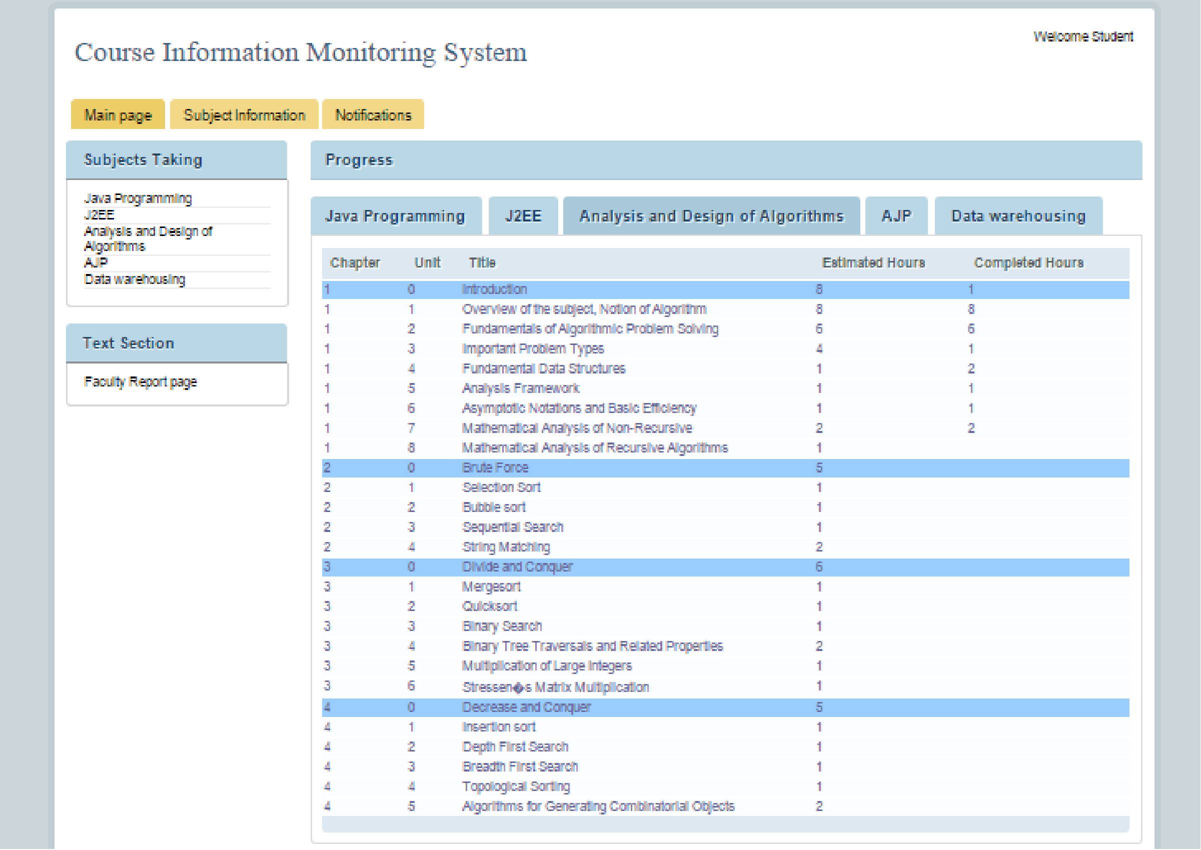
Text Section

Faculty Report page

OVER ALL PROGRESS: Progress chart for total number of classes taken for the whole semester

Estimated hours: 67 Completed: 29 Remaining: 38

Figure 14Student Screen Shot



Course Information Monitoring System

Welcome Student

Subjects Taking

Java Programming
J2EE
Analysis and Design of Algorithms
AJP
Data warehousing

Text Section

Faculty Report page

Progress

Chapter	Unit	Title	Estimated Hours	Completed Hours
1	0	Introduction	8	1
1	1	Overview of the subject, Notion of Algorithm	8	8
1	2	Fundamentals of Algorithmic Problem Solving	6	6
1	3	Important Problem Types	4	1
1	4	Fundamental Data Structures	1	2
1	5	Analysis Framework	1	1
1	6	Asymptotic Notations and Basic Efficiency	1	1
1	7	Mathematical Analysis of Non-Recursive	2	2
1	8	Mathematical Analysis of Recursive Algorithms	1	
2	0	Brute Force	5	
2	1	Selection Sort	1	
2	2	Bubble sort	1	
2	3	Sequential Search	1	
2	4	String Matching	2	
3	0	Divide and Conquer	6	
3	1	Mergesort	1	
3	2	Quicksort	1	
3	3	Binary Search	1	
3	4	Binary Tree Traversals and Related Properties	2	
3	5	Multiplication of Large Integers	1	
3	6	Stressen�s Matrix Multiplication	1	
4	0	Decrease and Conquer	5	
4	1	Insertion sort	1	
4	2	Depth First Search	1	
4	3	Breadth First Search	1	
4	4	Topological Sorting	1	
4	5	Algorithms for Generating Combinatorial Objects	2	

Figure 15Student Subject Overall Screen Shot

6. SOFTWARE TESTING

6.1 Testing Objectives:

Testing is a process of executing a program with the intent of finding an error A good test case is one that has a probability of finding an as yet undiscovered. A successful test is one that uncovers an undiscovered error.

6.2 Testing Principles:

- All tests should be traceable to end user requirements
- Tests should be planned long before testing begins
- Testing should begin on a small scale and progress towards testing in large
- Exhaustive testing is not possible

6.3 Unit testing:

Unit testing is essential for the verification of the code produced during the coding phase and hence the goal is to test the internal logic of the modules. Using the detailed design description as a guide, important paths are tested to uncover errors with in the boundary of the modules. These tests were carried out during the programming stage itself.

6.4 Integration Testing:

Integration testing focuses on unit tested modules and build the program structure that is dictated by the design phase.

6.5 System testing:

System testing tests the integration of each module in the system. It also tests to find discrepancies between the system and its original objective, current specification and system documentation. The primary concern is the compatibility of individual modules. Entire system is working properly or not will be tested here, and specified path ODBC connection will correct or not, and giving output or not are tested here these verifications and validations are done by giving input values to the system and by comparing with expected output. Top-down testing implementing here.

6.6 Test Cases:

Test cases are derived to ensure that all statements in the program have been executed at least once during testing and that all logical conditions have been executed. Using White-Box testing methods, the software engineer can drive test cases that guarantee that logical decisions on their true and false sides. Exercise all logical decisions on their true and false sides.

6.6.1 Login Page

S.NO.	Test	User Input	Expected Result	Actual Result	Status
1.	Check login	Valid username and password	Login to user's homepage	If admin, go to admin.php, if faculty, go to faculty.php	Pass
2		Valid username and invalid password	Print "Incorrect Password"	Set's placeholder of password an invalid	Pass
3		Invalid username	Print "Invalid username"	Sets placeholder of username as invalid	Pass

6.6.2 Add Faculty Page

S.NO.	Test	User Input	Expected Result	Actual Result	Status
1.	Check faculty form input	Null name	Print "Enter a name"	Java alert "Enter a name"	Pass
2		Invalid name(special characters)	Prints "Invalid name"	Java alert "Enter a Valid name"	Pass
3		Null username	Print "Enter a user name"	Java alert "Enter a user name"	Pass
4		Null Password	Print "Enter a Password"	Java alert "Enter a Password"	Pass
5		Password length less than 8	Print "Password is too short"	Java alert "Please Enter a password with 8 Characters"	Pass
6		Null repeat Password	Print "Enter the repeat Password"	Java alert "Enter the repeat Password"	Pass
7		Repeat password does not match	Print "Passwords do not match"	Java Alert "Passwords do not match"	Pass

6.6.3 Add Subject Page

S.NO.	Test	User Input	Expected Result	Actual Result	Status
1.	Check Subject form input	Null Subject code	Print “Input subject code”	Java alert “Enter a subject code”	Pass
2		Subject code with special characters	Print “Invalid subject code”	Java alert “Enter valid subject code”	Pass
3		Null Subject name	Print “Input subject name”	Java alert “Enter a subject name”	Pass

6.6.4 Faculty Information

S.NO.	Test	User Input	Expected Result	Actual Result	Status
1.	Check Faculty Information form input	Null Phone number	Print “Input Phone number”	Java alert “Enter your phone number”	Pass
2		Invalid phone number (characters)	Print “Invalid phone number”	Java alert “Enter valid phone number”	Pass
3		Null e-mail	Print “Input e-mail”	Java alert “Enter your e-mail”	Pass
4		Invalid e-mail	Print “Input valid e-mail”	Java alert “Enter valid e-mail”	Pass
5		Null address	Print “Input your address”	Java alert “Enter your address”	Pass

6.6.5 Notification

S.NO.	Test	User Input	Expected Result	Actual Result	Status
1.	Check Notification creation form	Null Title	Print “Input Title”	Java alert “Enter a title”	Pass
2		Null Description	Print “Input Description”	Java alert “Enter a description”	Pass

6.6.6 Add Chapters

S.NO.	Test	User Input	Expected Result	Actual Result	Status
1	Check Chapter creation form	Null Chapter Title	Print "Input Chapter Title"	Java alert "Enter a chapter title"	Pass
2		Null Unit name	Print "Input Unit name"	Java alert "Enter the unit name"	Pass
3		Non-integer estimated hours	Print "Invalid unit number"	Java alert "Invalid estimated hours"	Pass

6.6.7 Course-info update

S.NO.	Test	User Input	Expected Result	Actual Result	Status
1	Check completed hours form input	Null value	Print "Input a integer completed hours"	Java alert "Enter integer for completed hours"	Pass
2		Non-integer value	Print "Input a integer completed hours"	Java alert "Enter integer for completed hours"	Pass

7. CONCLUSION

The foundation idea of the project was to provide a convenient and unpretentious platform for faculties and the Head of the Department to synchronize amongst them self, using an online interface to share real time information about the course progress made by the faculty. This project also helps faculty to organize their strategy for the semester, in order to complete the course's topics in time.

This project uses data mining and data visualization techniques to provide a graphical informational tool for faculties and the Head of the Department to coordinate amongst them self's.

This project "Course Information Management System" exploits the features provided by the various web technologies like, PHP v5, MySQL v5, Apache server v2 in the backend and HTML v5, Ajax and JavaScript in the front end.

This particular project deals with the problems on managing the progress of course under a department and avoids the problems which occur when carried manually. Identification of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system which is more user friendly, GUI oriented and provides real time data analysis from the database.

8. FUTURE ENHANCEMENTS

This project provides a base platform and an idea which can be taken forward to involve more modules to automate and digitize the tasks which are normally carried out manually.

One such module would allow the faculty to select the subjects already completed and post them as the notification which would be included in the upcoming test's portions rather than posting it on bulletin boards manually.

Another feature would be to create a module which would alert the faculty if their estimated/completed hours exceed their allotted hours and prompt the faculty to make a request to the head of the department to allocate extra hours for her particular subject.

A feature could be added to the student module to give their feedback about the faculty after the end of the semester.

In regard of data mining and visualization, more reports and visualization technique like bar, line graphs could be generated.

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