

# **Database Management Systems - CSE2004**

**Fall Semester - 2017~2018**

## **Project Report**

### **Review III**

**Slot - D2**

**Faculty - Murali S.**

**Title:** Creating an upgraded CAL Management System

**Team Members:**

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# **1. Introduction**

Computers in the present world are more powerful than the human mind. It can be argued that we are far behind computers in processing power. If not for emotions, we would have been lesser beings. Hence, our work done by computers will be much better and accurate.

Databases are such a method where computers are being used to keep records rather than human book-keepers. They have no errors and finding information is very easy. Hence, we are trying to implement the database systems so as to improve our grasp of this fundamental unit of computers.

## **1.1 Abstract**

This project deals with the designing and implementation of a website that can process VIT's CAL system. A student submits documents as DAs, Labs or Project Reviews. A teacher will check these documents submitted by the student and grade them. The above has been implemented in our system. We have added an additional feature in our version of vtop that doesn't exist in the present vtop - the comment system.

The end product will be a website where students and teachers will be login and execute the CAL system that works in our college.

## **1.2 Motivation**

The motivation behind this project is obviously the vtop system offered by our college, which offers many features like attendance, the course page for the courseware and the CAL system.

We have been using this system for a year, thus arousing our curiosity about how this system works and how easy or difficult is it to implement this.

Since, we are learning Web Programming along with Database Systems, we decided it will be a good experience for us to combine these two important parts of Computer Science, which go hand in hand

in the real world. thus, we decided to implement a working prototype of vtop but constraining ourselves to the CAL Management part due to the time constraint of a semester.

### **1.3 Aim**

We are focusing on the Student and Teacher logins and not on the admin. We can see that the CAL system doesn't require the admin - as in a registration scenario. The admin isn't necessary.

Students should be able to see their personal information details, their registered courses and submit and talk to the teachers.

Teachers should be able to see their personal information, allotted courses and see, grade and comment on assignments.

The above mentioned points have been the goal we have been aiming at.

### **1.4 Objective**

The main objective is to learn about a database system and simulate such a system, so that under all circumstances, there should be a connection between the front end and the back end.

We have to learn about teamwork and how to divide work into modules - a system that is used in the industry.

We have to improve our programming skills in languages such as php, html and sql.

We have to learn to use many software like Apache Web Server, mySQL, Xampp and many more.

To improve our presentation skills by presenting our work to our faculty and to gain their input.

## **2. Overview**

The project will open up to a login page - with two portals - one for both students and teachers. The project has been stored on the server.

On logging into the student portal, we see two tabs - My Info and CAL Management. The My Info tab will display the personal information of the logged student. The CAL Management tab will show the registered courses - CourseID, Course Name, Type, Credits and slot. On clicking the process button, we will be taken into the Course Activities Page, which will hold the DA submission, Lab submission and Review report submission pages. Each of these pages will have a question viewing portal along with a submission and a viewing portal. The comment will also be on the same page.

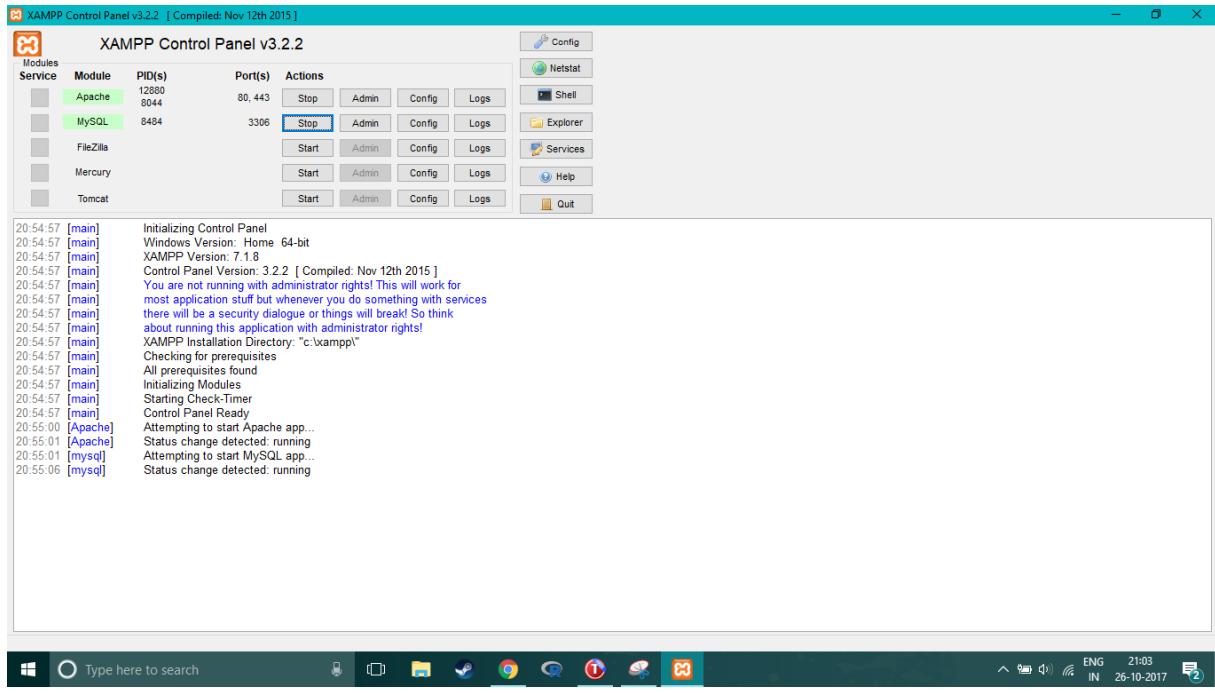
On logging into a teacher page, we will see the same things as the student login except the submission page will have the grading instead of answer upload.

The top right of the page has the Log Out button.

## 2.1 Requirement Analysis

For the project, we needed the following softwares:

(1.) XAMPP - Hosting the mySQL server



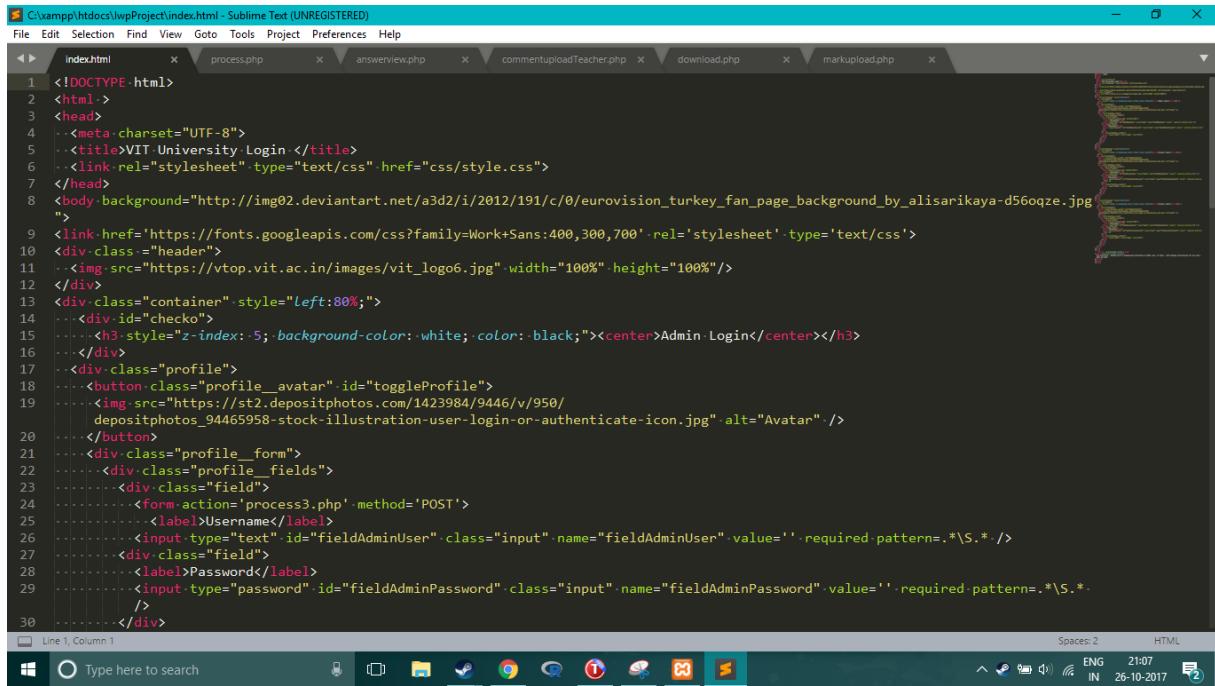
Control Panel for XAMPP

The screenshot shows the phpMyAdmin interface for the 'iwp' database. The left sidebar shows tables: New, doctorsoffice, food\_delivery, information\_schema, iwp, mysql, performance\_schema, phpmyadmin, simple-website, and test. The main area displays the structure of the 'iwp' table, which has 10 rows and 8 columns. The columns are: Table, Action, Rows, Type, Collation, Size, and Overhead. The table data includes various records for admin, allotted, course, department, enrolls, requests, reviews, student, teacher, and teaches. At the bottom, there are buttons for Create table, Print, and Data dictionary.

Table	Action	Rows	Type	Collation	Size	Overhead
admin	Browse  Structure  Search  Insert  Empty  Drop	1	InnoDB	utf8_general_ci	16 Kib	-
allotted	Browse  Structure  Search  Insert  Empty  Drop	3	InnoDB	latin1_swedish_ci	48 Kib	-
course	Browse  Structure  Search  Insert  Empty  Drop	25	InnoDB	utf8_general_ci	64 Kib	-
department	Browse  Structure  Search  Insert  Empty  Drop	5	InnoDB	latin1_swedish_ci	32 Kib	-
enrolls	Browse  Structure  Search  Insert  Empty  Drop	28	InnoDB	utf8_general_ci	16 Kib	-
requests	Browse  Structure  Search  Insert  Empty  Drop	4	InnoDB	utf8_general_ci	16 Kib	-
reviews	Browse  Structure  Search  Insert  Empty  Drop	18	InnoDB	utf8_general_ci	16 Kib	-
student	Browse  Structure  Search  Insert  Empty  Drop	98	InnoDB	utf8_general_ci	16 Kib	-
teacher	Browse  Structure  Search  Insert  Empty  Drop	15	InnoDB	utf8_general_ci	16 Kib	-
teaches	Browse  Structure  Search  Insert  Empty  Drop	8	InnoDB	utf8_general_ci	16 Kib	-
10 tables	Sum	197	InnoDB	utf8_general_ci	256 Kib	0 B

phpMyAdmin - Accessing our Database

## (2). A text editor (we used Sublime Text 3) to write the code



The screenshot shows a Sublime Text 3 window with multiple tabs open. The active tab is 'index.html' which contains the source code for a login page. The code includes HTML, CSS, and JavaScript. The Sublime Text interface has a dark theme, and the status bar at the bottom shows 'Line 1, Column 1', 'Spaces: 2', 'HTML', and the date/time '26-10-2017 21:07'. The taskbar at the bottom of the screen shows icons for various applications like File Explorer, Task View, and Start.

```
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>VIT University Login </title>
<link rel="stylesheet" type="text/css" href="css/style.css">
</head>
<body background="http://img02.deviantart.net/a3d2/i/2012/191/c/0/eurovision_turkey_fan_page_background_by_alisarikaya-d56oqze.jpg">
<link href='https://fonts.googleapis.com/css?family=Work+Sans:400,300,700' rel='stylesheet' type='text/css'>
<div class="header">

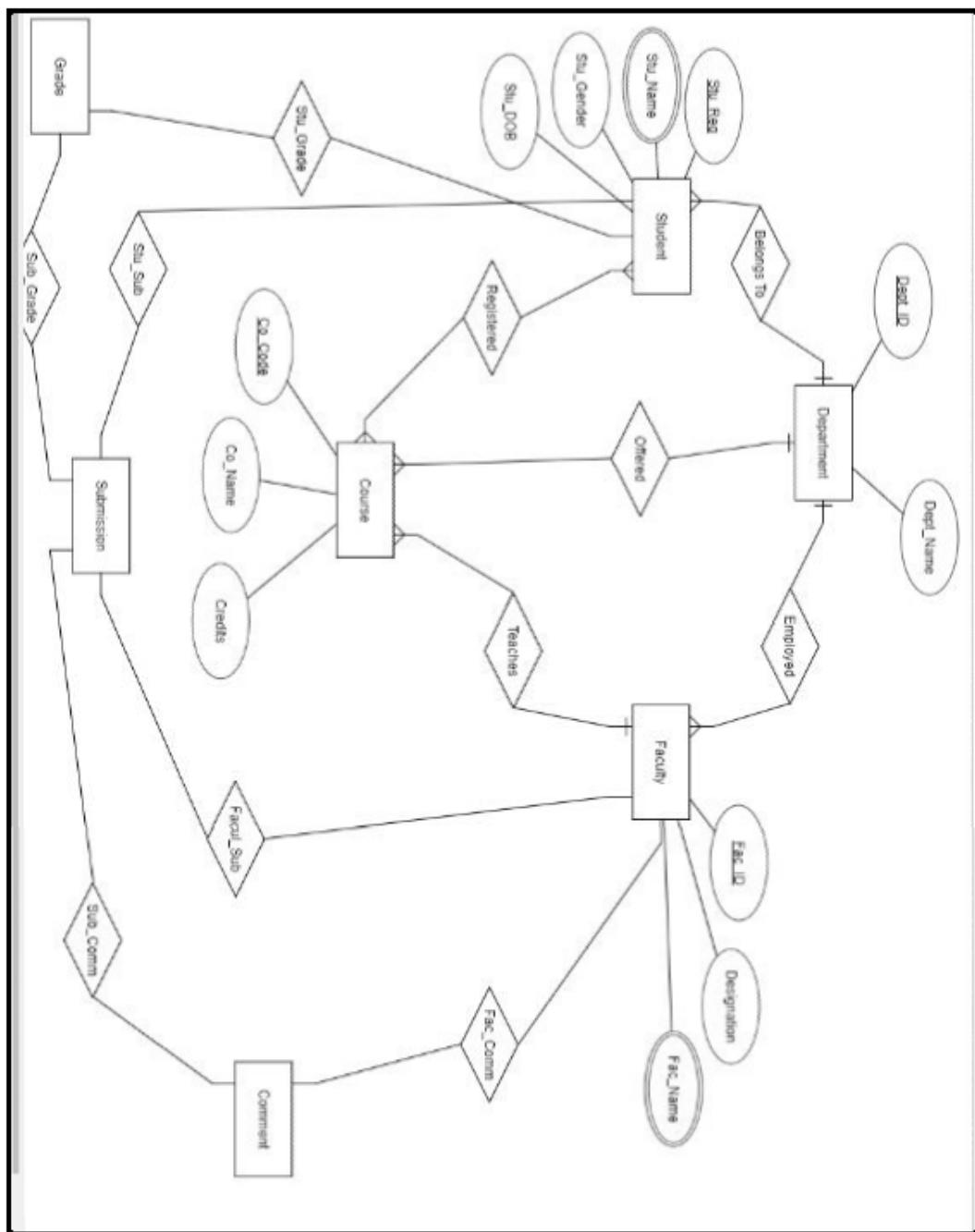
</div>
<div class="container" style="left:80%;>
<div id="checkbox">
<h3 style="z-index: -5; background-color: white; color: black;"><center>Admin Login</center></h3>
</div>
<div class="profile">
<button class="profile_avatar" id="toggleProfile">

</button>
<div class="profile_form">
<div class="profile_fields">
<div class="field">
<form action='process3.php' method='POST'>
<label>Username</label>
<input type="text" id="fieldAdminUser" class="input" name="fieldAdminUser" value='' required pattern=".*\S.*" />
<div class="field">
<label>Password</label>
<input type="password" id="fieldAdminPassword" class="input" name="fieldAdminPassword" value='' required pattern=".*\S.*" />
</div>
</div>
</div>
</div>
</div>
```

The text editor showing our code for the Login Page

## 2.2 Frameworks and Modules

### 2.2.1 ER Diagram

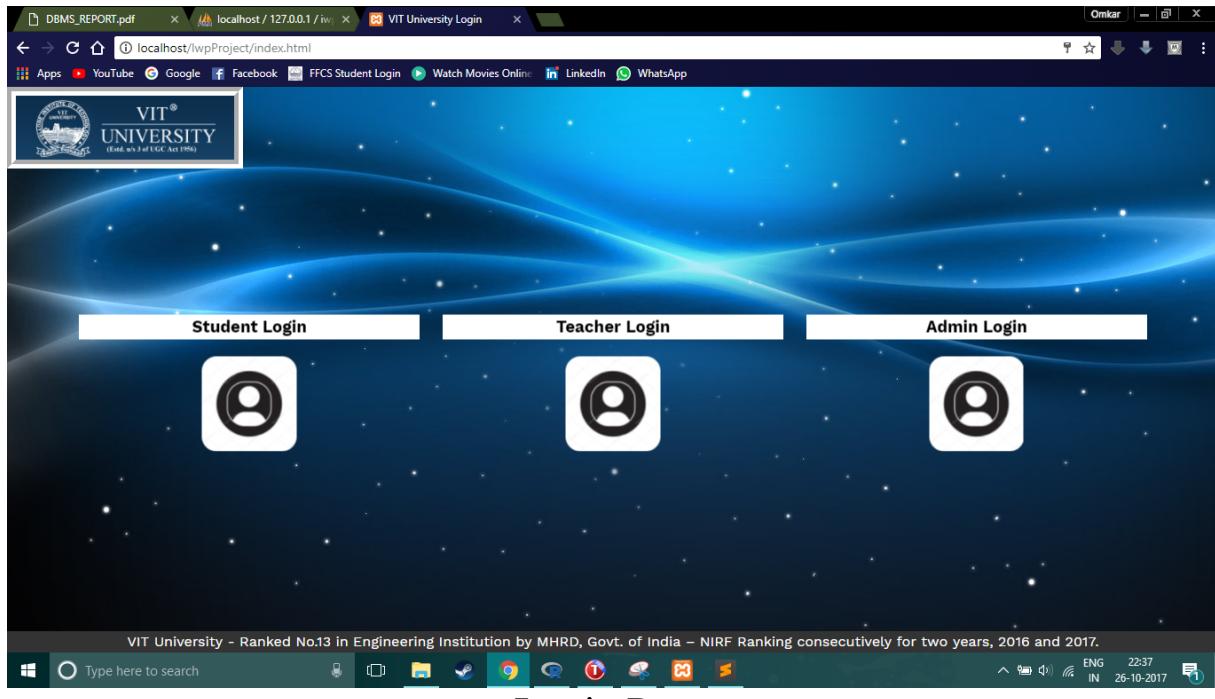


## 2.2.2 Relational Schema

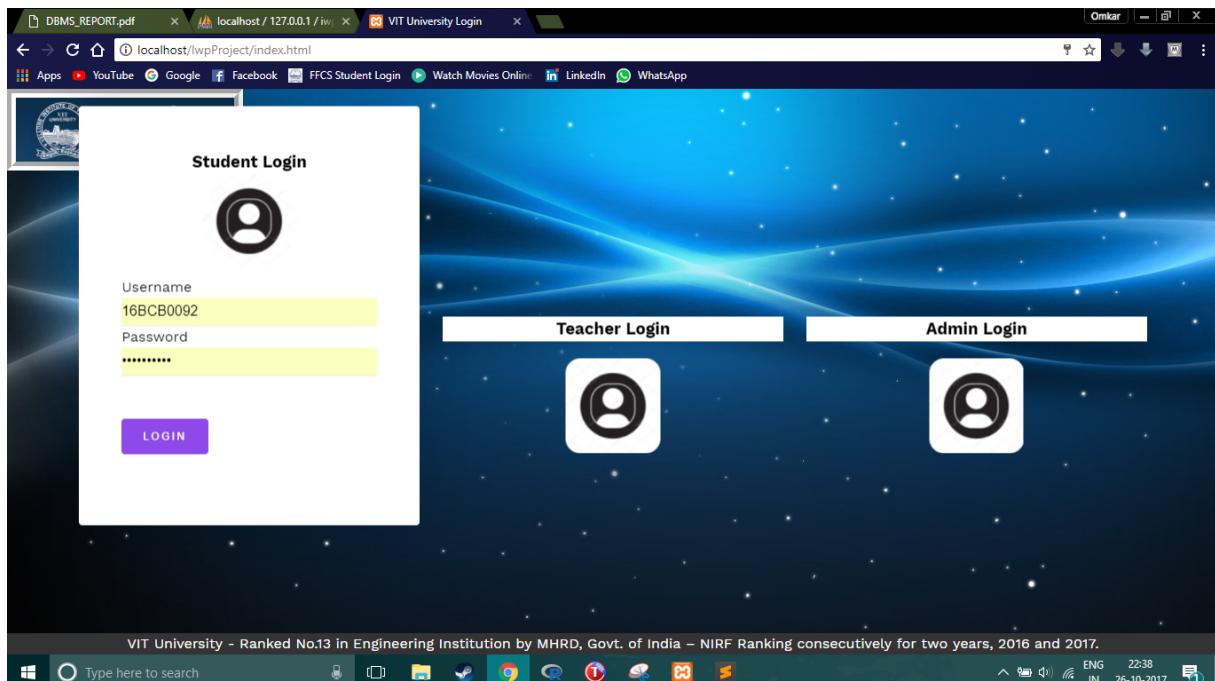
<b>iwp reviews</b>	<b>iwp teacher</b>	<b>iwp admin</b>	<b>iwp course</b>	<b>iwp student</b>
# Select referenced key	# Serial_No : int(11)	# Serial_No : int(11)	# Serial_No : int(11)	# Serial_No : int(11)
Course_ID : varchar(5)	Teacher_ID : varchar(5)	Admin_ID : varchar(5)	Course_ID : varchar(5)	Student_ID : varchar(9)
Student_ID : varchar(9)	Teacher_PW : varchar(20)	Course_Name : varchar(50)	Student_PW : varchar(20)	Student_Name : varchar(40)
Assignment : varchar(15)	Teacher_Name : varchar(40)	Course_Type : varchar(3)	Student_DOB : date	Dept_No : varchar(5)
# Max_Mark : int(3)	Teacher_Email : varchar(20)	Course_Credit : int(1)	Dept_No : varchar(5)	Dept_Name : varchar(10)
QuestionPath : varchar(500)	Teacher_Experience : int(11)	Course_Slot : varchar(2)	Student_EmailID : varchar(40)	Admin_ID : varchar(5)
AnswerPath : varchar(500)	Dept_No : varchar(5)	Student_DOB : date	Dept_No : varchar(5)	Admin_ID : varchar(5)
# Marks : int(3)	Admin_ID : varchar(5)	Course_Credit : int(11)	Student_EmailID : varchar(40)	Student_PhoneNo : varchar(10)
TeacherComment : varchar(500)	Teacher_PhoneNo : varchar(10)	# allotment_status : int(11)	Dept_No : varchar(5)	
TeacherComment : varchar(500)			Admin_ID : varchar(5)	
			Admin_ID : varchar(5)	
			Student_PhoneNo : varchar(10)	

### 3. Implementation

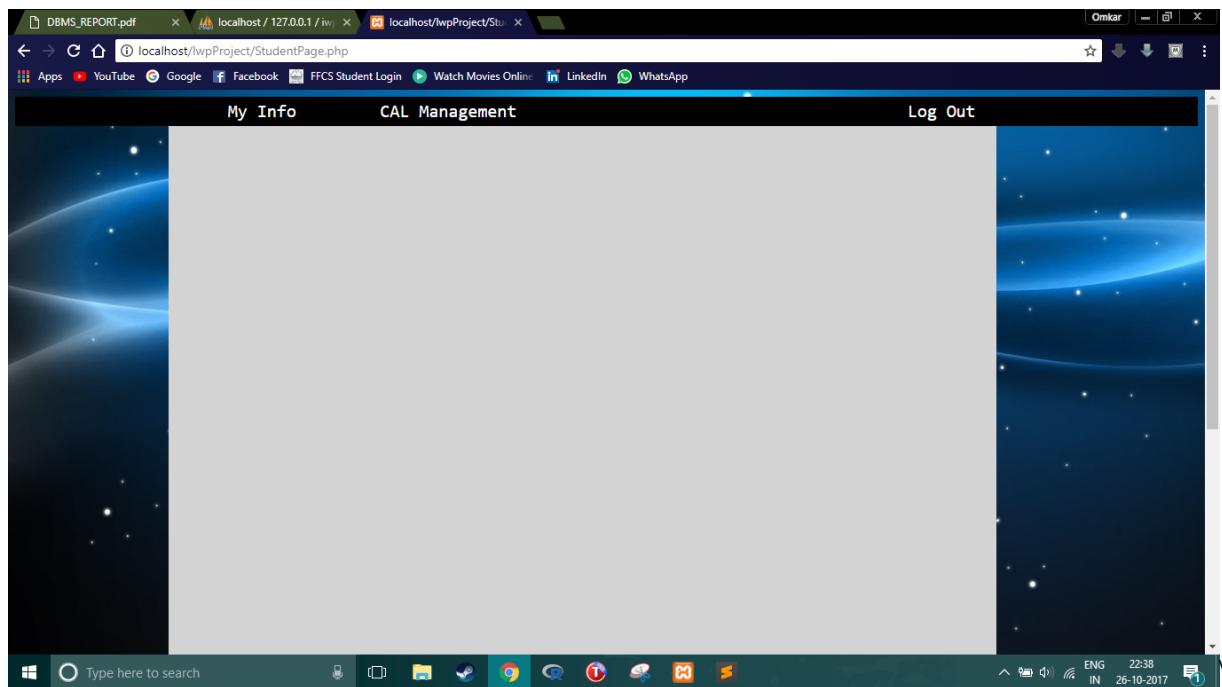
#### 3.1 Results - Screenshots



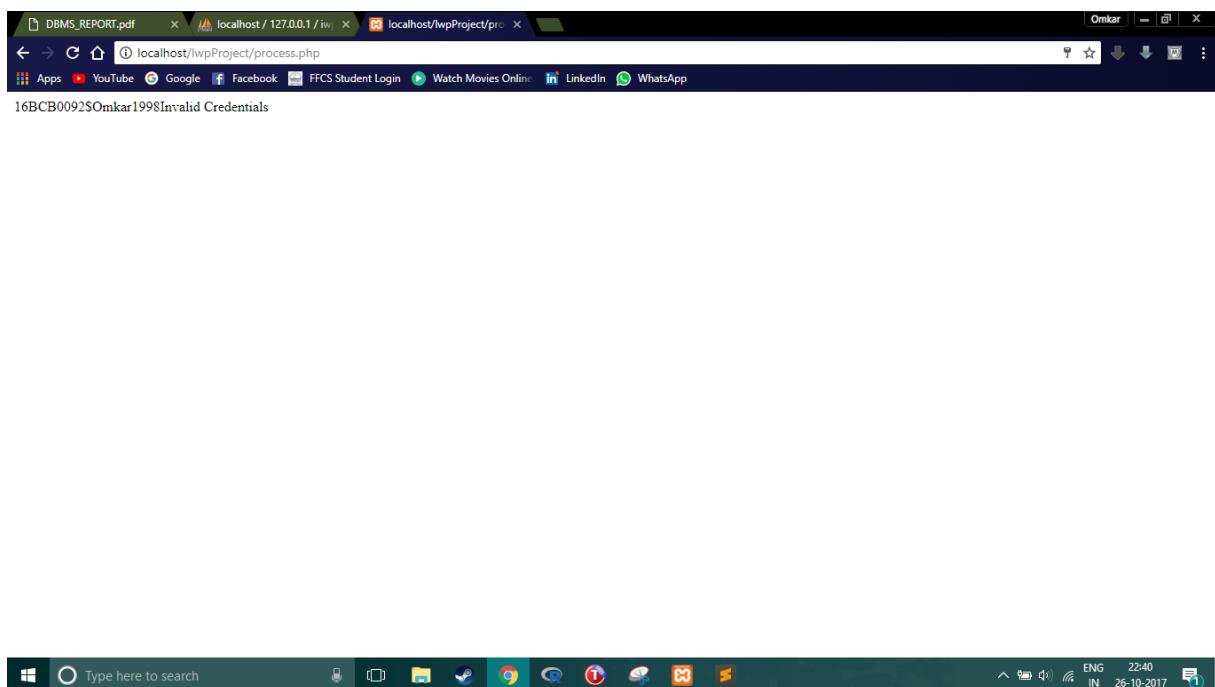
Login Page



Login Page on clicking the widget



On entering Student Login - with right page



On entering wrong credentials

This screenshot shows the 'My Info' page of a web application. The page has a header with tabs for 'My Info', 'CAL Management', and 'Log Out'. Below the header is a section titled 'My Details' containing a table with four rows of student information:

Name	Saikat Bhattacharyya
Registration_No	16BCB0092
Email_ID	saikat01244569@gmail.com
Phone_Number	8584965037

The background of the page features a blue space-themed image.

## My Info Page

This screenshot shows the 'CAL Management' page of the web application. The page has a header with tabs for 'My Info', 'CAL Management', and 'Log Out'. Below the header is a section titled 'Course Details' containing a table with four rows of course information:

Serial No	Course ID	Course Name	Type	Credits	Slot	Process
1	CS203	Object Oriented Programming	ELA	3	L3	Process
2	CS201	Introduction to Python Programming	ELA	3	L1	Process
3	CS101	Operating Systems	ETH	4	A2	Process
4	CS501	Database Management - J Component	EPA	1	P1	Process

The background of the page features a blue space-themed image.

## CAL Management Page

This screenshot shows a web browser window titled "localhost/1wpProject/StudentPage.php". The page has a header with "My Info", "CAL Management", and "Log Out" buttons. Below the header is a section titled "Course Activities". A table displays course information: Course ID CS203, Course Name Object Oriented Programming, Type ELA, Credit 3, and Slot L3. Another table lists 10 lab assignments from Serial No 1 to 10, each labeled "Lab Assignment" followed by a number (1 through 10), with a "Process" button next to each entry.

Course ID	Course Name	Type	Credit	Slot
CS203	Object Oriented Programming	ELA	3	L3

Serial No	Lab Assignment	Process
1	"Lab Assignment" 1	Process
2	"Lab Assignment" 2	Process
3	"Lab Assignment" 3	Process
4	"Lab Assignment" 4	Process
5	"Lab Assignment" 5	Process
6	"Lab Assignment" 6	Process
7	"Lab Assignment" 7	Process
8	"Lab Assignment" 8	Process
9	"Lab Assignment" 9	Process
10	"Lab Assignment" 10	Process

## Lab Assignment Submission Page

This screenshot shows a web browser window titled "localhost/1wpProject/StudentPage.php". The layout is identical to the previous screenshot, with "My Info", "CAL Management", and "Log Out" buttons at the top. The "Course Activities" section shows a single course entry: Course ID CS101, Course Name Operating Systems, Type ETH, Credit 4, and Slot A2. Below this, a table lists three digital assignments from Serial No 1 to 3, each labeled "Digital Assignment" followed by a number (1 through 3), with a "Process" button next to each entry.

Course ID	Course Name	Type	Credit	Slot
CS101	Operating Systems	ETH	4	A2

Serial No	Digital Assignment	Process
1	"Digital Assignment" 1	Process
2	"Digital Assignment" 2	Process
3	"Digital Assignment" 3	Process

## Theory Assignment Submission Page

The screenshot shows a web browser window titled "localhost/lwpProject/StudentPage.php". The page has a header with "My Info", "CAL Management", and "Log Out". Below the header is a section titled "Course Activities".  
**Course Details:**

Course ID	Course Name	Type	Credit	Slot
CS501	Database Management - J Component	EPA	1	P1

  
**Assignment List:**

Serial No	Assignment	Marks Alloted	Process
1	Review_1	Not Alloted	[Process]
2	Review_2	Not Alloted	[Process]
3	Review_3	Not Alloted	[Process]

## Project Assignment Submission Page

The screenshot shows a web browser window titled "localhost/lwpProject/StudentPage.php". The page has a header with "My Info", "CAL Management", and "Log Out". Below the header is a section titled "Course Activities".  
**Course Details:**

Course ID	Course Name	Type	Credit	Slot
CS501	Database Management - J Component	EPA	1	P1

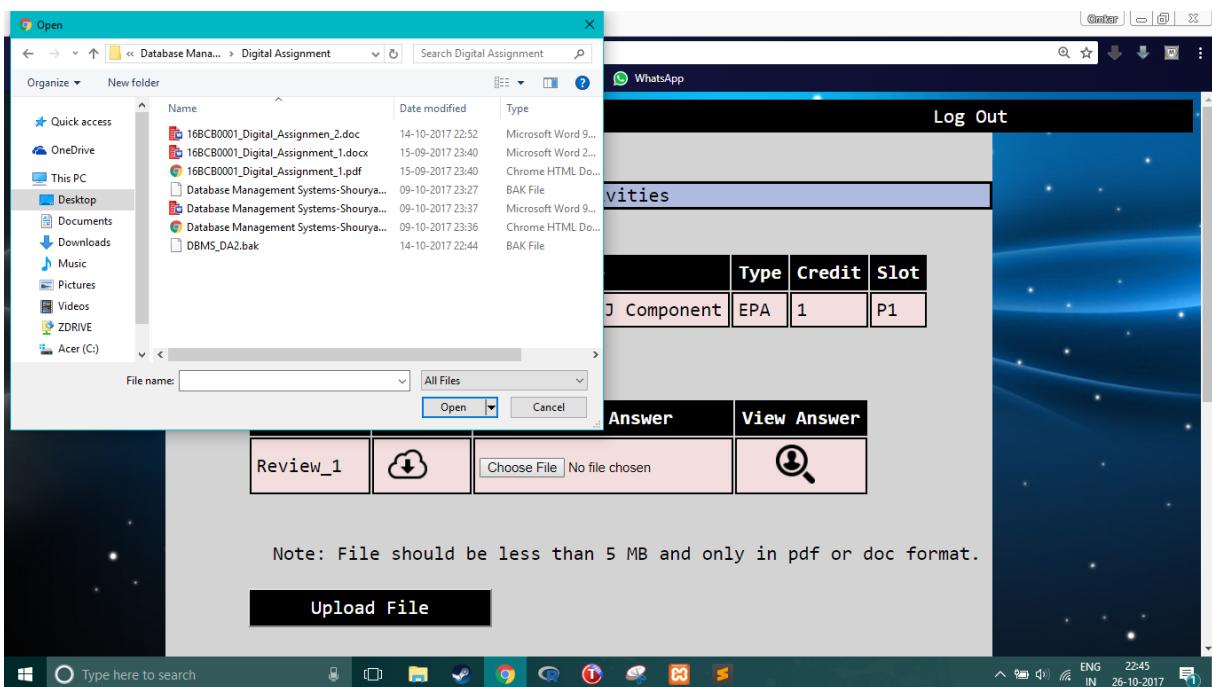
  
**Assignment Submission Form:**

Assignment	Question	Upload Answer	View Answer
Review_1	[Cloud icon]	<input type="file"/> Choose File No file chosen	[Search icon]

Note: File should be less than 5 MB and only in pdf or doc format.

**Upload File**

## Review Assignment Submission Page



## Submission of Answer Page

A screenshot of a web browser window titled 'localhost / 127.0.0.1 / i...'. The main content area is titled 'Course Activities'. It contains a table:

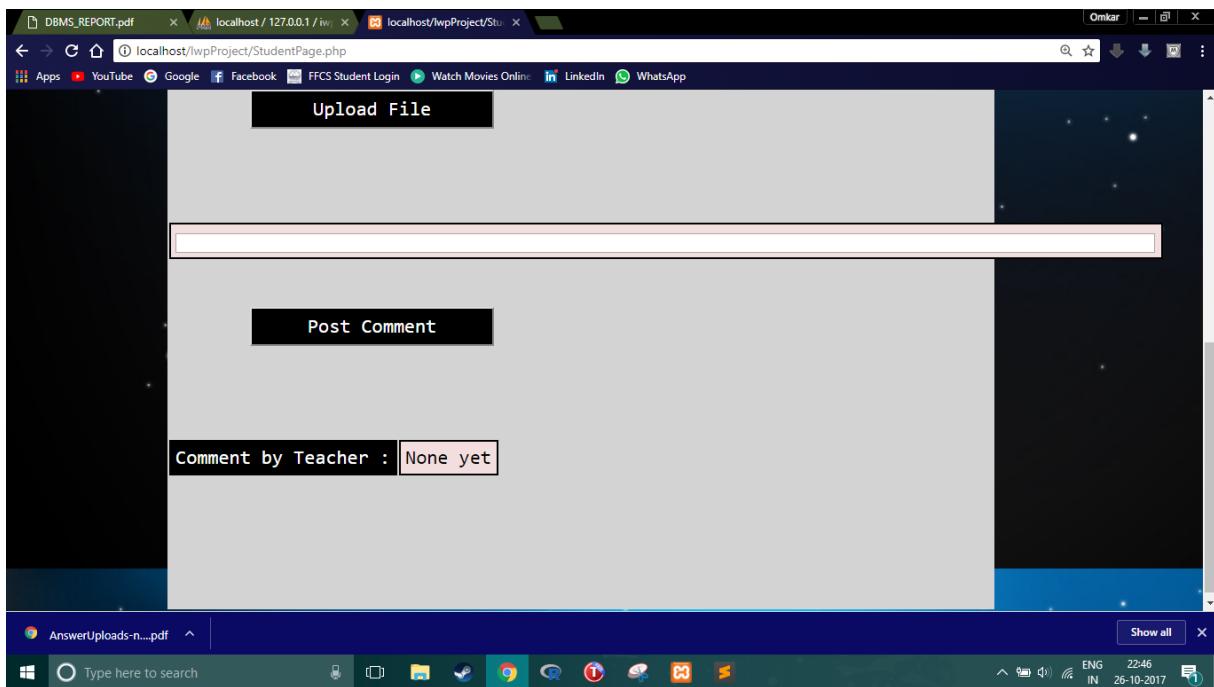
Course ID	Course Name	Type	Credit	Slot
CS501	Database Management - J Component	EPA	1	P1

Below the table is a form:

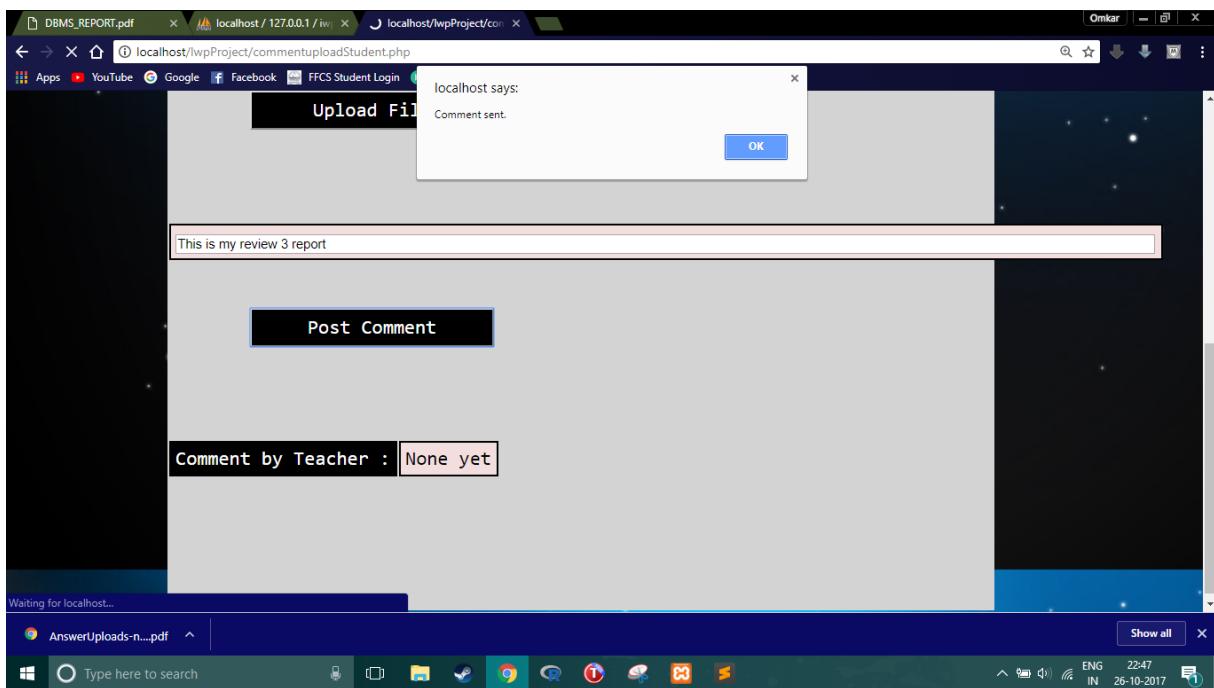
Assignment	Question	Upload Answer	View Answer
Review_1		<input type="file"/> Choose File No file chosen	

A note at the bottom states: 'Note: File should be less than 5 MB and only in pdf or doc format.'

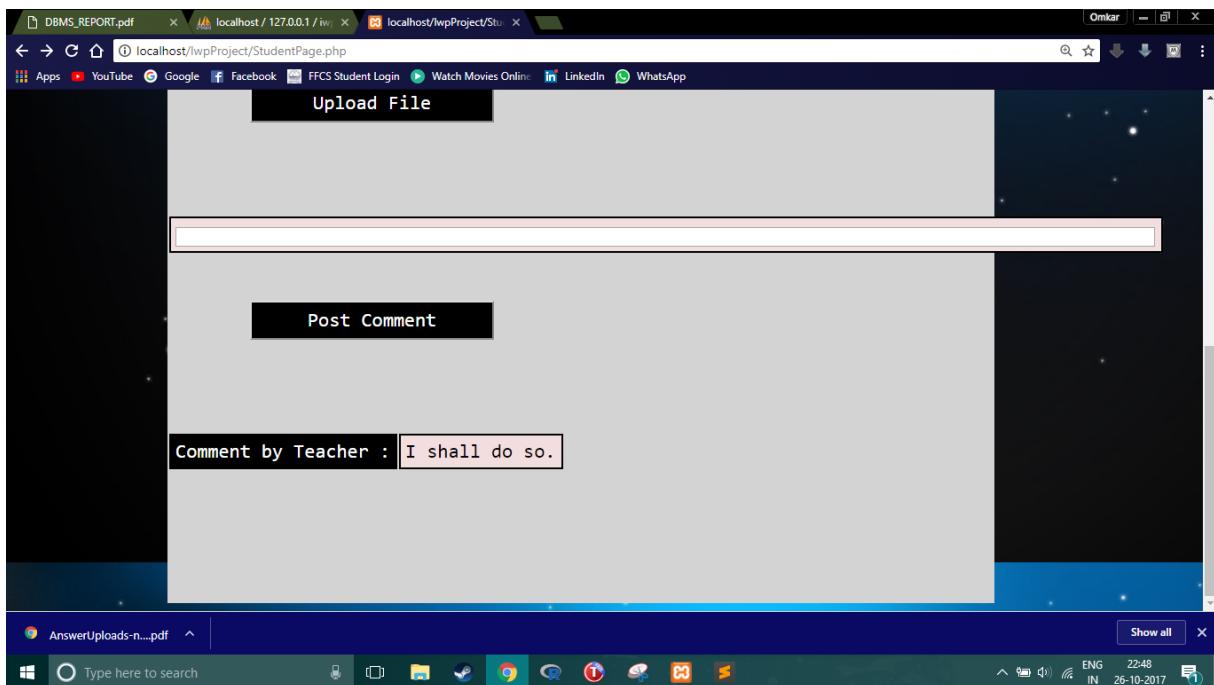
View Answer - Download at the bottom of the screen



## Comment Section



On submission of comment



## Response by the teacher

My Info CAL Management Log Out

My Details

Name	Padmapriya R
Identification No.	12133
Email_ID	padmapriya@gmail.com
Phone_Number	9089012124

## Teacher Info

**CAL Management**

**Course Details**

Serial No	Course ID	Course Name	Type	Credits	Slot	Process
1	CS102	Database Management	ETH	4	A1	<a href="#">Process</a>
2	CS501	Database Management - J Component	EPA	1	P1	<a href="#">Process</a>
3	CS101	Operating Systems	ETH	4	A2	<a href="#">Process</a>

## CAL Management Page

**CAL Management**

**Students**

Serial No.	Student ID	Process
1	16BCB0092	<a href="#">Process</a>
2	16BCB0016	<a href="#">Process</a>
3	16BCB0033	<a href="#">Process</a>
4	16BCB0001	<a href="#">Process</a>

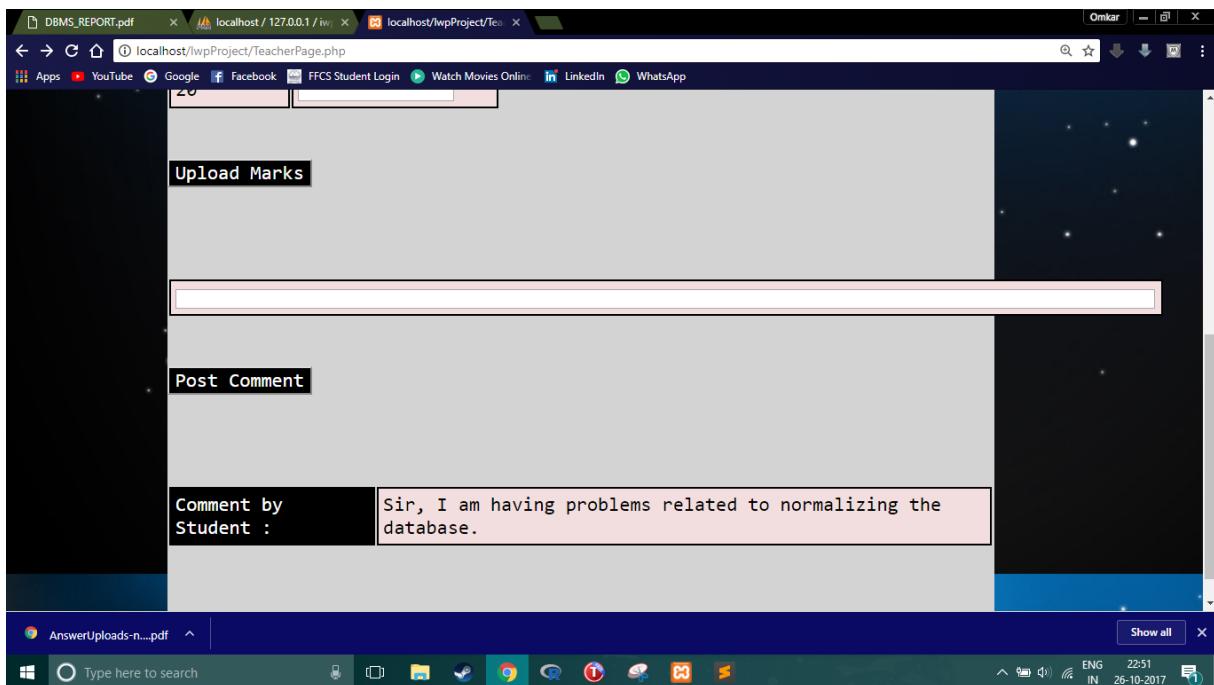
The students enrolled in the course page

The screenshot shows a web browser window titled "My Info CAL Management". At the top right is a "Log Out" button. Below the title, the page displays "Review\_1 Details". It has three main sections: "Question" (with a cloud icon), "Upload Question" (with a "Choose File" input field showing "No file chosen"), and "Answer" (with a magnifying glass icon). Below these is a "Upload File" button and a note: "Note: File should be less than 5 MB and only in pdf or doc format." Further down is a table with "Full Marks" (20) and "Enter scored marks" (20). The browser's address bar shows "localhost/lwpProject/TeacherPage.php". The taskbar at the bottom includes icons for various applications like Google Chrome, File Explorer, and Task View.

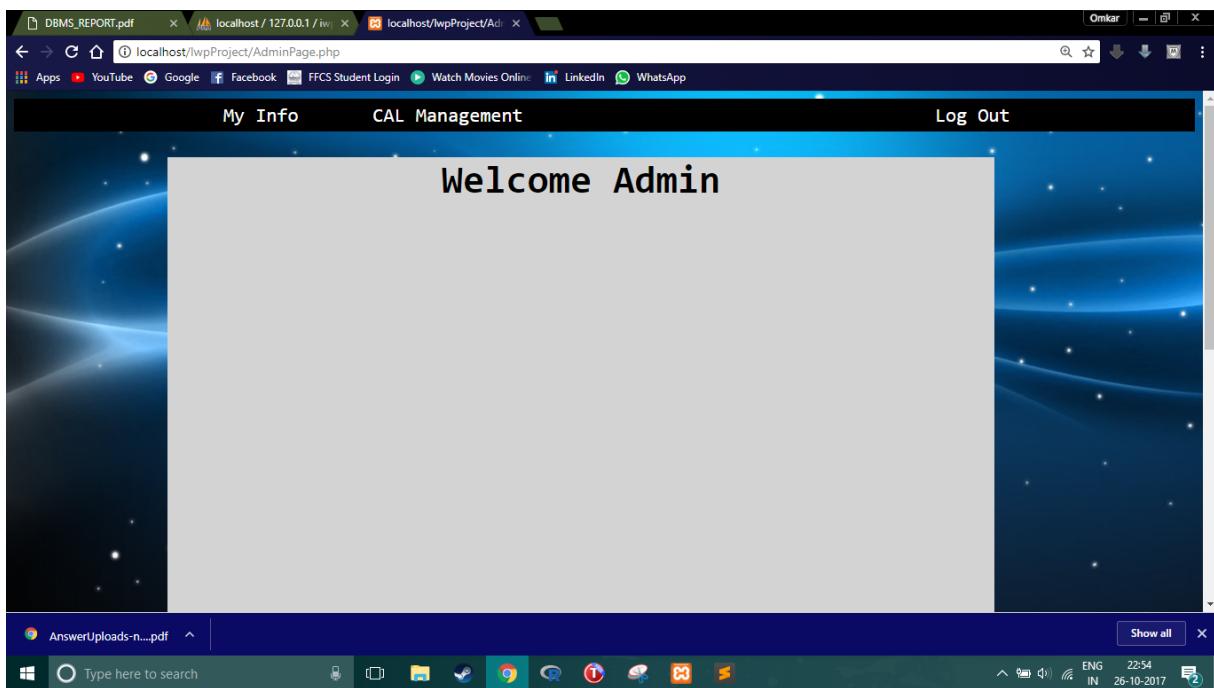
## Marks and Document Viewing Page

The screenshot shows a web browser window titled "localhost/lwpProject/markupload.php". It displays "Review\_3 Details" with sections for "Question" (cloud icon), "Upload Question" (choose file input), and "Answer" (magnifying glass icon). Below is an "Upload File" button and a note about file format. A table shows "Full Marks" (50) and "Enter scored marks" (50). At the bottom is an "Upload Marks" button. A modal dialog box is open, displaying "localhost says: Marks updated." with an "OK" button. The browser's address bar shows "localhost/lwpProject/markupload.php". The taskbar at the bottom includes icons for various applications like Google Chrome, File Explorer, and Task View.

On submission of marks



## Viewing student comments



## Admin Page Login

**As our source code has 20+ files, we are not adding the full source code to this document as it will increase the size of the document and lead to further confusion.**

## **4. Future Work**

This project has reached its culmination but there can be a few more additions as we couldn't add a few things like the admin controls and timetable - a thing we wanted to do at first.

Also, we want to learn how to make websites beautiful - for which we need photoshop. Once we learn photoshop, I think we'll be able to make a site that will match if not beat, the present vtop.

**Thank You.**