A Project Report

On

COMPUTER SCIENCE DEPARTMENT PORTAL

Submitted by

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Under the guidance

Of

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R K Valley, Y.S.R. Kadapa, Andhra Pradesh

RAJIV GANDHI UNIVERSITIES OF KNOWLEDGE TECHNOLOGIES

(A.P. Government Act 18 of 2008)

RGUKT IIIT RK VALLEY

Vempalli Kadapa, Andhra Pradesh – 516300.

<u>CERTIFICATE</u>

This is to certify that the project entitled "COMPUTER SCIENCE DEPARTMENT PORTAL" is a bona fide project work submitted by N.SADHIYA(R170821) in the department of COMPUTER SCIENCE AND ENGINEERING for the partial fulfillment of requirements for the award of degree of Bachelor of Technology in Computer Science and Engineering for the year 2022-2023 carried out the work under the supervision of

Mr. K Vinod Kumar

Computer Science and Engineering

RGUKT RK VALLEY

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Head of the Department(CSE)

MSIT(IIT-HYD)

Computer Science and Engineering

RGUKT RK VALLEY

DECLARATION

We hereby declare that this report submitted by us under the guidance and supervision of Mr. K Vinod Kumar is a bona fide work. We also declare that it has not been submitted previously in part or in full to this university or other university or institution for the award of any degree or diploma.

DATE:

PLACE:RK VALLEY.

                                                  N.SADHIYA (R170821)

SSSSSSSSSSSS

<u>ACKNOWLEDGEMENT</u>

The satisfaction that accompanies the successful completion of any task would be incomplete without the mention of the people who made it possible and whose constant guidance and encouragement crown all the efforts success.

I am extremely greatful to our respected Director, Prof. K.SANDHYA RANI for fostering an excellent academic climate in our institution.

I also express our sincere gratitude to our respected Head of the Department Mr. N. Satyandandaram for his encouragement, overall guidance in viewing this project a good asset and effort in bringing out this project.

I would like to convey thanks to our guide at college Mr. K. Vinod Kumar for his guidance, encouragement, co-operation and kindness during the entire duration of the course and academics.

<div align="right">

With Sincere Regards,

N.SADHIYA   **R170821**

</div>

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Abstract

The Computer Science Department portal is a web-based platform designed to provide a centralized space for computer science students, faculty to access important information, resources related to the department. The portal aims to streamline various administrative tasks.This portal includes main features like:

1.COURSE MANAGEMENT : A course management system that allows faculty to add and share content, course materials with students.

2.STUDENT RESOURCES : A repository of resources such as guides, tutorials, and links that students can access to improve their learning.

3.NEWS AND ANNOUNCEMENTS : A section for department news and announcements, like events, job oppurtunities, and updates.

4.ASSIGNMENT MANAGEMENT : A section where the faculty can add assignments and view the status of the assignments given and students can access those assignments.

Purpose

This portal introduces a new web-based department portal, which combines all useful features in other commercial systems and implements new functions. Its powerful features and friendly user interfaces allow teachers and students to handle their works in a convenient, efficient, and systematical way. In addition, this system also has very good portability and extensibility.

Advantages

- Provide an interactive platform between students and teachers.
- It is very much faster than manual system.
- Much flexible to work.
- User oriented.
- Data can be stored for a longer period.

System Requirements

Hardware Configuration:

Client Side:

Ram	512 MB
Hard disk	10 GB
Processor	1.0 GHz

Server side:

Ram	1 GB
Hard disk	20 GB
Processor	2.0 GHz

Software Requirement:

Front end	HTML ,CSS ,jquery ,java script,Bootstrap
Server side Language	PHP
Database server	MYSQL
Web Browser	Firefox ,Windows or any equivalent OS
Operating system	Ubuntu , Windows or any equivalent OS
Software	xampp

Introduction

1. Introduction to Web Technologies

1.1 Internet

The Internet is a global wide

Area network that connects computer system across the world. The Internet provides different online services.

1.2 WWW(World Wide Web)

The World Wide Web is a set of all
The websites connected to the internet worldwide. It is
Also known as WWW or Web. It is a system of interlinked hypertext documents accessed via the internet. We can access a webpage by the use of a web browser and navigate between them by using hyperlinks.
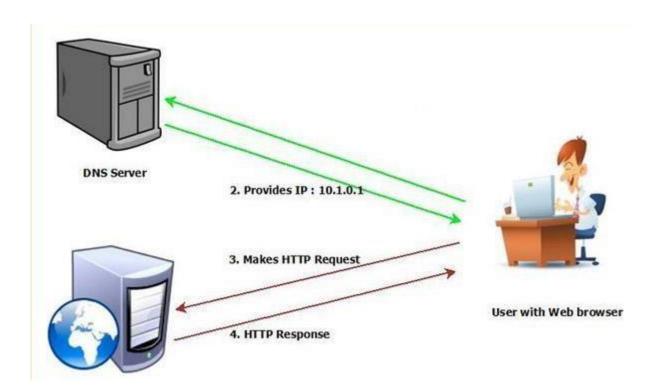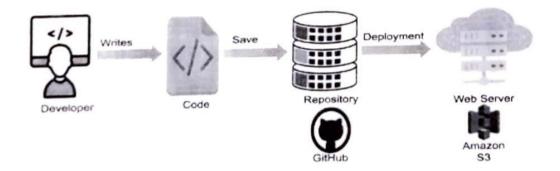
1.3 Why web application?

Web applications have become an essential component of business in today's world. By using the web applications, businesses can now develop and become simpler, and achieve their objectives much faster. These applications can help target numerous clientele and customers at a time.
Organizations are rapidly embracing this aspect of the internet by creating web applications with the help of developers to meet their business demands, Web applications are important for a number of reasons.

1.4   How does the Web work?
        1.4.1 User Flow:

1.4.2   Developer flow

2   Tools and Technologies Used:

Frontend   **: HTML and CSS3, Bootstrap**

Backend   **: PHP**

Database   **: MySQL**

Tool   **: Xampp**

2.4 HTML:

HTML stands for **Hyper Text Markup Language.**
HTML is the standard markup language for Webpages.

HTML elements are the building blocks of the
HTML Markup. HTML elements consist of start tag, end tag and
content in between them.

2.5 CSS3:

CSS stands for **Cascading Style Sheets.** It describes how HTML
elements are to be displayed on screen, paper or in other media. CSS
saves a lot of work. It can control the layout of multiple web pages
all at once.

2.6 PHP:

PHP stands for **Hypertext preprocessor**. It is a server-side scripting language that is embedded in HTML. IT is used to manage dynamic content, database, session tracking, even build entire ecommerce sites. It is integrated with a number of

popular databases including MySQL, PostgreSQL, Oracle, Sybase, Informix and Microsoft SQL Server.

2.7 MySQL:

MySQL is a freely available open-source Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). SQL is the most popular language for adding, accessing and managing content in a database. **MySQL** is an essential part of almost every open-source PHP application.

3 Learnings During the Project:

3.4 PHP concepts:

PHP is a popular general-purpose scripting language that is especially suited to web development. Fast, Flexible and Pragmatic, PHP powers everything from your blog to the most popular websites in the world.

3.5 DBMS:

A database management system (DBMS) is system software for creating and managing databases. A DBMS makes it possible for end users to create, read, update and delete data in a database.

3.6 SQLite3:

SQLite is a relational database management system. It is very easy to use a database engine. It is self-contained, serverless, zeroconfiguration and transactional. It is very fast and lightweight, and the entire database is stored in a single disk file. It is used in a lot application as internal data storage.

3.7 Responsive Web Design

Responsive web design (RWD) is a web development approach that creates dynamic changes to the appearance of a website, depending on the screen size and orientation of the device being used to view it. RWD is one approach to the problem of designing for the multitude of devices available to customers, ranging from tiny phones to huge desktop monitors.

3.7.2 Why responsive design

We recommend using responsive web design because it:

- Makes it easier for users to share and link to Your content with a single URL.

- Helps Google's algorithms accurately Assign indexing properties to the page rather than needing to signal the existence of corresponding desktop/mobile pages.

- Requires less engineering time to maintain multiple pages for the same content.

- Reduces the possibility of the common mistakes that affect mobile sites.

- Requires no redirection for users to have a deviceoptimized view, which reduces load time. Also, user agent-based redirection is error-prone and can degrade your site's user experience (see Pitfalls when detecting user agents for details).

- Saves resources when Googlebot crawls your site. For responsive web design pages, a single Googlebot user agent only needs to crawl your page once, rather than crawling multiple times with different Googlebot user agents to retrieve all versions of the content. This improvement in crawling efficiency can indirectly help Google index more of your site's content and keep it appropriately fresh.

SYSTEM ANALYSIS AND DESIGN

FEASIBILITY STUDY:

A feasibility analysis is undertaken to determine the possibility or probability of either improving the existing system or developing a completely new system.

It helps to obtain an overview of the problem and to get rough assessment of whether feasible solution exists. There are three aspects in feasibility study portion of the preliminary investigation.

1) Operational feasibility

2) Technical feasibility

3) Economical feasibility

Operational feasibility:-

It is a measure of how well a proposed system solves the problems, and takes advantages of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development.

Operational feasibility covers two aspects. One is the technical performance aspect and other is the acceptance within the organization. Operational feasibility determines how the proposed system will fit the current operations and what, if any job restructuring and retraining may be needed to implement the system.

In the system operational feasibility checks, whether the user who is going to use the system is able to work with the software with which the system id coded and also the mind of the user going to use system. If the user does not understand or is able to work on the system further development is waste.

The system is easy to learn and it will require a very short time to learn the operation of the system for a person having knowledge in accounting. So that system was operationally feasible

Technical feasibility :-

This involves questions such as whether the technology needed for the system exists, how difficult it will be to build, and whether the firm has enough experience using that technology. The assessment is based on an outline design of system requirements in terms of Input, Processes,

Output, Fields, Programs, and Procedures. This can be quantified in terms of volumes of data,trends, frequency of updating, etc. in order to estimate whether the new system will perform adequately or not.

The technical feasibility in the proposed system deals with the technology used in the system. It deals with the hardware and software used in the system whether they are of latest technology or not. It happens that after a system is prepared a new technology arises and the user wants the system based on that technology. Thus it is important to check the system to be technically feasible.

The minimum memory requirement is 32MB of RAM while 64MB is better to have for better performance. As far as software is concerned, MySQL and PHP should be installed on the server.

Economic feasibility :-

Economic analysis is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that are expected from a candidate system and compare them with costs. If benefits outweigh costs, then the decision is made to design and implement the system.
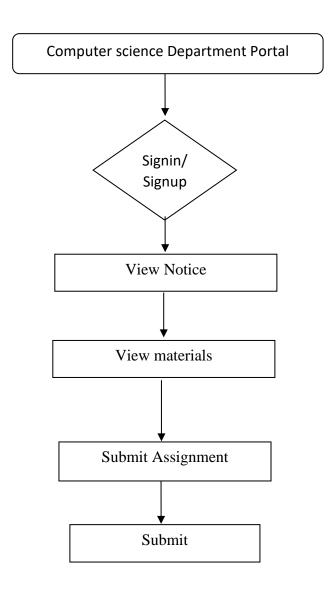
Implementation of this system will be a lifetime investment, which will ensure returns to the store of good services and market value throughout the future. So the system is found economically feasible.
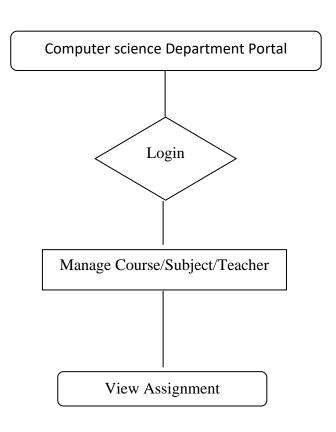
PROJECT DESIGNING

Design Document:

- The entire system is projected with a physical diagram which specifics the actual storage parameters that are physically necessary for any database to be stored on to the disk. The overall systems existential idea is derived from this diagram.

- The relation upon the system is structure through a conceptual ER-Diagram, which not only specifics the existential entities but also the standard relations through which the system exists and the cardinalities that are necessary for the system state to continue.

- The content level DFD is provided to have an idea of the functional inputs and outputs that are achieved through the system. The system depicts the input and output standards at the high level of the systems existence.
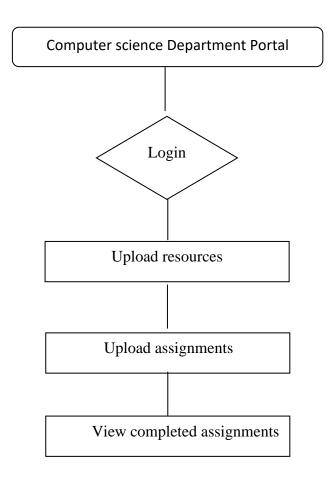
User flow chart

```
┌─────────────────────────────────────┐
│   Computer science Department Portal │
└─────────────────────────────────────┘
                  │
                  ▼
              ╱────────╲
             ╱  Signin/  ╲
             ╲  Signup   ╱
              ╲────────╱
                  │
                  ▼
┌─────────────────────────────────────┐
│             View Notice             │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│            View materials           │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│          Submit Assignment          │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│               Submit                │
└─────────────────────────────────────┘
```

Admin flow chart:

Computer science Department Portal

Login

Manage Course/Subject/Teacher

View Assignment

Teacher flow chart:

```
┌─────────────────────────────────────┐
│   Computer science Department Portal │
└─────────────────────────────────────┘
                  │
                  ◇
                Login
                  │
        ┌───────────────────┐
        │  Upload resources │
        └───────────────────┘
                  │
        ┌───────────────────┐
        │ Upload assignments│
        └───────────────────┘
                  │
        ┌─────────────────────────┐
        │ View completed assignments │
        └─────────────────────────┘
```

2. Unified Modeling Language Diagrams(UML):

- The unified modeling language allows the software engineer to express an analysis model using the modeling notation that is governed by a set of syntactic semantic and pragmatic rules.

- A UML system is represented using five different views that describe the system from distinctly different perspective. Each view is defined by a set of diagram, which is as follows.

User Model View

i.   This view represents the system from the users perspective.

ii. The analysis representation describes a usage scenario from the end-users perspective.

Structural model view

◆   In this model the data and functionality are arrived from inside the system.

◆   This model view models the static structures.

Behavioral Model View

◆   It represents the dynamic of behavioral as parts of the system, depicting the interactions of collection between various structural elements described in the user model and structural model view.

Implementation Model View

◆   In this the structural and behavioral as parts of the system are represented as they are to be built.

Environmental Model View

In this the structural and behavioral aspects of the environment in which the system is to be implemented are represented.

UML is specifically constructed through two different domains they are

◆   UML Analysis modeling, which focuses on the user model and structural model views of the system.

◆   UML design modeling, which focuses on the behavioral modeling, implementation modeling and environmental model views.

USE CASE DIAGRAMS

1) **Use Case Diagrams Student**:

2) Use Case Diagrams Admin:

- Signin
- Dashboard
- Course (Add/Delete)
- Subject (Add/Delete)
- Teacher (Add/Update)
- View Upload Assignment
- News(Add/Del)
- Generate Report
- Search Upload Assignment
- View Profile
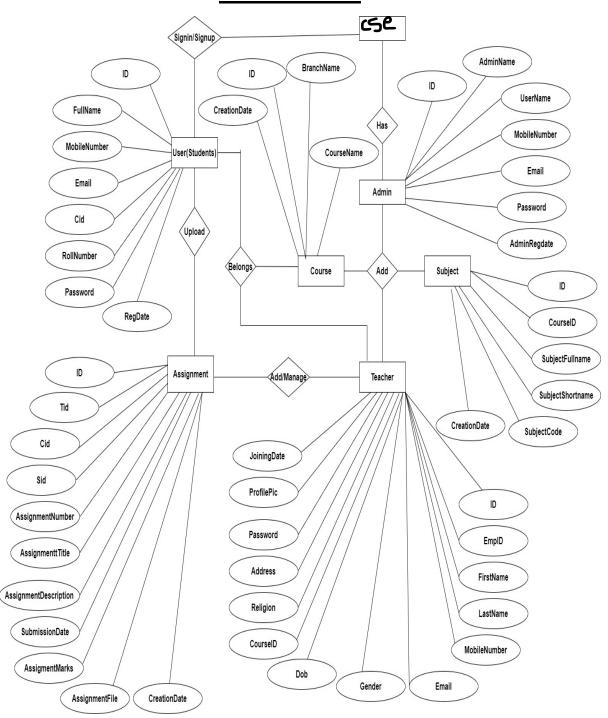- Change Password

3) Use Case Diagrams Teacher:

ENTITY-RELATIONSHIP Diagrams:

E-R (Entity-Relationship) Diagram is used to represents the relationship between entities in the table.
The symbols used in E-R diagrams are:

<u>SYMBOL</u>   <u>PURPOSE</u>

Represents Entity sets.

Represent attributes.

Represent Relationship Sets.

Line represents flow

ER DIAGRAM

Testing:

System testing is a series of different test whose primary purpose is to fully exercise computer based system.

We can say that it will run according to its specifications and in the way users expect. Special test data are input for processing, and the results examined. A limited number of users may be allowed to use the system so that analyst can see whether they try to use it in unforeseen ways. It is desirable to discover any surprises before the organization implements the system and depends on it.

- We follow Black Box testing.

- Black box testing attempts to find errors in following

- Incorrect or missing function

- Interface errors

- Errors in data structure

- Initialization and termination errors

SOURCE CODE :

```html
<!DOCTYPE html>
<html lang="en">
<head>
<title>DEPARTMENT OF COMPUTER SCIENCE</title>
<!-- Style-sheets -->
<link href="css/bootstrap.css" rel="stylesheet" type="text/css" media="all" />
<link href="css/font-awesome.css" rel="stylesheet">
<link rel="stylesheet" href="css/flexslider.css" type="text/css" media="screen" property=""
/>
<link href="css/style.css" rel="stylesheet" type="text/css" media="all" />
<!--// Style-sheets -->
<!--web-fonts-->
<link href="//fonts.googleapis.com/css?family=Open+Sans:300,400,600,700"
rel="stylesheet">
<link href="//fonts.googleapis.com/css?family=Righteous" rel="stylesheet">
<!--//web-fonts-->
</head>
<body>
<!-- banner -->
<div class="banner" id="home">
<div class="container">
<!-- header -->
<header>
<div class="header-bottom-w3layouts">
<div class="main-w3ls-logo">
<h1><a href="index.php"></span>DEPARTMENT OF <br> COMPUTER SCIENCE
AND ENGINEERING</a></h1>
</div>
<!-- navigation -->
<nav class="navbar navbar-default">
<!-- Brand and toggle get grouped for better mobile display -->
<div class="navbar-header">
<button type="button" class="navbar-toggle collapsed" data-toggle="collapse" data-
target="#bs-example-navbar-collapse-1"
aria-expanded="false">
<span class="sr-only">Toggle navigation</span>
<span class="icon-bar"></span>
<span class="icon-bar"></span>
<span class="icon-bar"></span>
```

```html
</button>
</div>
<!-- Collect the nav links, forms, and other content for toggling -->
<div class="collapse navbar-collapse" id="bs-example-navbar-collapse-1">
<ul class="nav navbar-nav">
<li><a class="active" href="index.php">Home</a></li>
<li><a href="user/login.php">Students</a></li>
<li><a href="teacher/login.php">Teacher</a></li>
<li><a href="admin/login.php">Admin</a></li>
</ul>
</div>
<!-- /.navbar-collapse -->
</nav>
</div>
<div class="clearfix"></div>
<!-- //navigation -->
</header>
<!-- //header -->
<!-- banner-text -->
<div class="banner-text">
<div class="callbacks_container">
<ul class="rslides" id="slider3">
<li>
<div class="slider-info">
<p>Everybody should learn to program a computer, because it teaches you how to
think</p>
</div>
</li>
<li>
<div class="slider-info">
<p>Coding is a superpower because you can speak the language of robots and command
them to do whatever you like</p>
</div>
</li>
</ul>
</div>
<div class="clearfix"></div>
</div>
</div>
```

```
</div>
<!-- //banner -->
<!-- Notice -->
<div class="testimonials-section">
<div class="container">
<h5 class="main-w3l-title">Notice By College</h5>
<section class="slider">
<div class="flexslider">
<ul class="slides">
<li>
<div class="testimonial-agileits-w3layouts">
<h3>Farewell</h3>
<p>Farewell is going to be celebrated in our cse department so be ready... </p>
<p>2023-05-02 23:30:34</p>
</div>
<div class="clearfix"> </div>
</li>
<li>
<div class="testimonial-agileits-w3layouts">
<h3>Assignments</h3>
<p>Assignments have been updated kindly check. </p>
<p>2023-05-02 23:31:18</p>
</div>
<div class="clearfix"> </div>
</li>
</ul>
</div>
</section>
</div>
</div>

<!-- Testimonials -->
<!-- Footer -->
<div class="footer-agileits-w3layouts">
<div class="container">
<div class="btm-logo-w3ls">
<h2><a href="index.html"></a></h2>
</div>
<div class="clearfix"> </div>
</div>
</div>
```

```html
<!-- //Footer -->
<a href="#home" class="scroll" id="toTop" style="display: block;"> <span
id="toTopHover" style="opacity: 1;"> </span></a>
<!-- //smooth scrolling -->

<script type='text/javascript' src='js/jquery-2.2.3.min.js'></script>
<!-- stats -->
<script src="js/jquery.waypoints.min.js"></script>
<script src="js/jquery.countup.js"></script>
<script>
$('.counter').countUp();
</script>
<!-- //stats -->
<!-- flexSlider -->
<script defer src="js/jquery.flexslider.js"></script>
<script type="text/javascript">
$(window).load(function () {
$('.flexslider').flexslider({
animation: "slide",
start: function (slider) {
$('body').removeClass('loading');
}
});
});
</script>
<!-- //flexSlider -->
<!-- Responsiveslides -->
<script src="js/responsiveslides.min.js"></script>
<script>
// You can also use "$(window).load(function() {"
$(function () {
// Slideshow 4
$("#slider3").responsiveSlides({
auto: true,
pager: true,
nav: false,
speed: 500,
namespace: "callbacks",
before: function () {
$('.events').append("<li>before event fired.</li>");
},
after: function () {
```
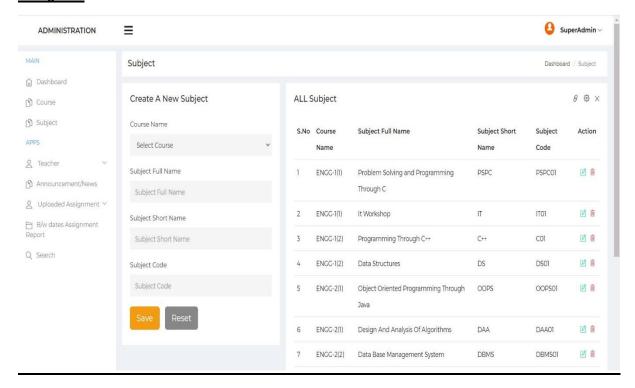
```
$('.events').append("<li>after event fired.</li>");
}
});
});
</script>
<!-- // Responsiveslides -->
<!--search-bar-->
<script src="js/main.js"></script>
<!--//search-bar-->

<!-- start-smoth-scrolling -->
<script type="text/javascript" src="js/move-top.js"></script>
<script type="text/javascript" src="js/easing.js"></script>
<script type="text/javascript">
jQuery(document).ready(function ($) {
$(".scroll").click(function (event) {
event.preventDefault();
$('html,body').animate({
scrollTop: $(this.hash).offset().top
}, 1000);
});
});
</script>
<!-- start-smoth-scrolling -->
<!-- here stars scrolling icon -->
<script type="text/javascript">
$(document).ready(function () {
/*
var defaults = {
containerID: 'toTop', // fading element id
containerHoverID: 'toTopHover', // fading element hover id
scrollSpeed: 1200,
easingType: 'linear'
};
*/
$().UItoTop({
easingType: 'easeOutQuart'
});
});
</script>
<!-- //here ends scrolling icon -->
```

```html
<!-- Js for bootstrap working-->
<script src="js/bootstrap.js"></script>
<!-- //Js for bootstrap working -->
</body>
</html>
```

HOME PAGE

ADMIN MODULE

Admin Login:

Dashboard:

Admin profile:

Course:

Subject:

Add teacher:

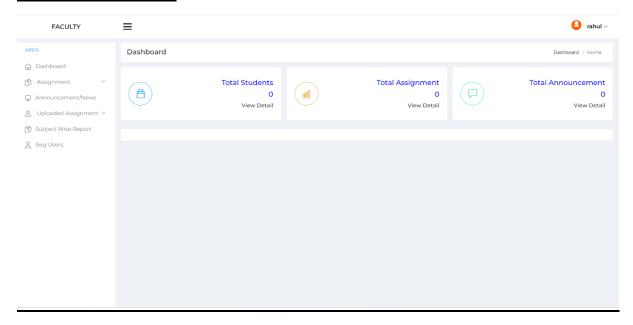## Notice:

Manage Teacher:

Upload assignment:

FACULTY MODULE

Faculty Login:

Faculty Dashboard:

Faculty Profile:

FACULTY   ☰   🔴 rahul ∨

APPS

🏠 Dashboard

📄 Assignment   ∨

🖥 Announcement/News

👤 Uploaded Assignment ∨

📄 Subject Wise Report

👤 Reg Users

Faculty Details   Dashboard / Faculty Details

Faculty Details   🖉 ⚙ X

rahul kumar

About

Name:	rahul kumar
Gender:	Male
Date of Birth:	1995-09-11
Religion:	HINDU
Email:	rahul@gmail.com
Course	ENGG-1 (1)
Address	4-32.KADAPA
Joining Date	2023-05-03 08:57:33

Change Password:

FACULTY   ☰   🔴 rahul ∨

APPS

🏠 Dashboard

📄 Assignment   ∨

🖥 Announcement/News

👤 Uploaded Assignment ∨

📄 Subject Wise Report

👤 Reg Users

Change Password   Dashboard / Change Password

Change Password   🖉 X

Current Password

New Password

Confirm Password

[Change]

40

Add Assignment:

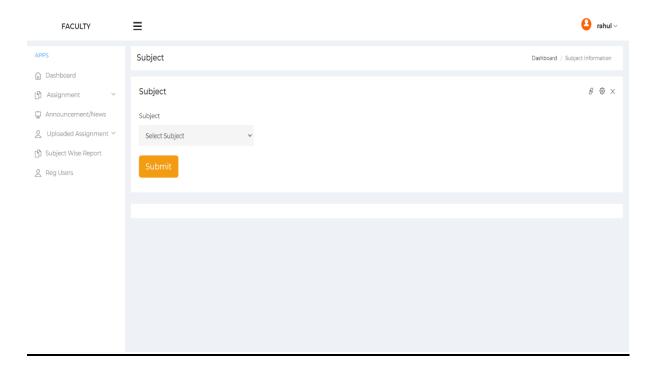# Manage Assignment:

Update Assignment:
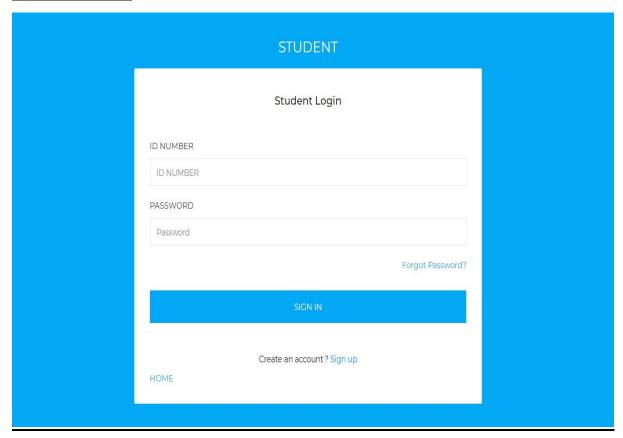

Announcement:
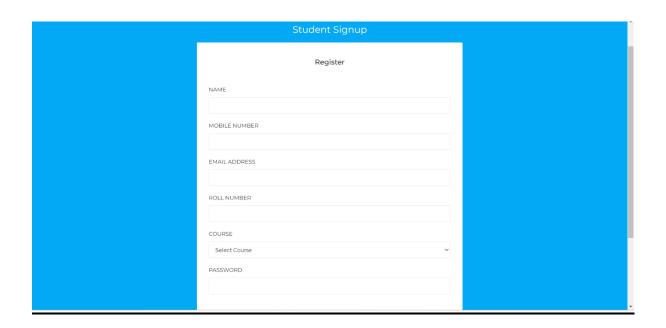
Unchecked Assignment:

Checked Assignment:

STUDENT MODULE:
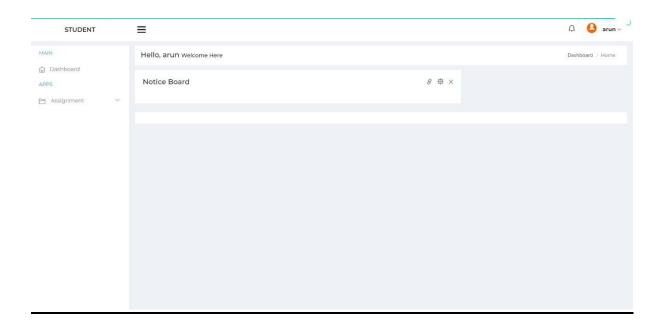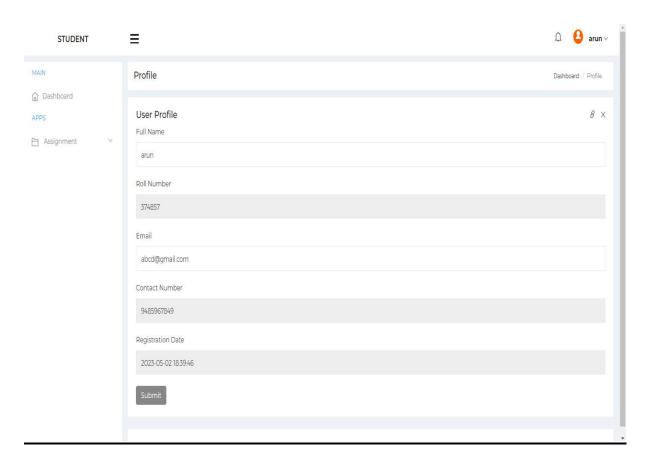
Student Login:
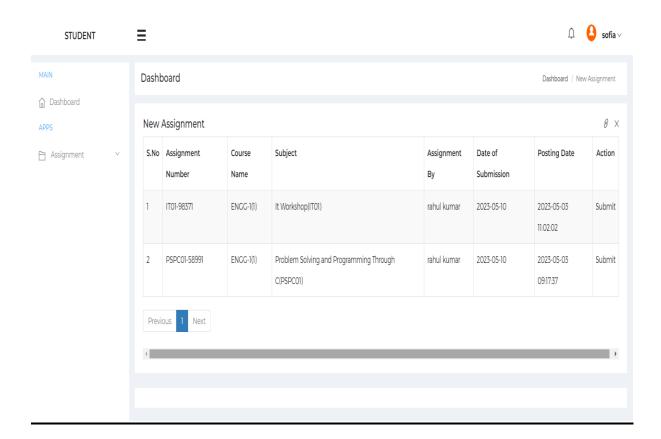

Student Signup:
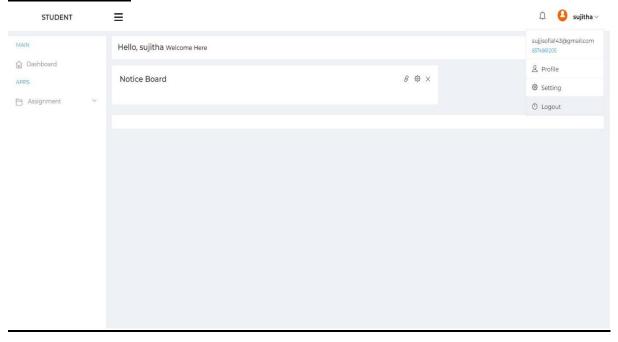
Student Dashboard:

Student Profile:

New Assignment:

Student logout:

CONCLUSION

The currently implemented system provides faculty and students powerful features to handle resources and assignments. The utilization of DBMS produces high system efficiency in data manipulation. Cross platform attributes of PHP and MySQL make it a portable system on most operating systems with slight modifications. In addition, the system security is strengthened by multiple security schemes. The database design is very important during implementation because the database structure can significantly affect system efficiency and flexibility. Currently, the database structure is constructed in a very flexible manner, so that new data attributes or items can be easily added to the system without changing current structure significantly. For further implementation, more features can be added to the system, such as the management of backup data or disaster recovery. More information could be explored according to users' requirements.

REFERENCES

For PHP
https://www.w3schools.com/php/default.asp
https://www.sitepoint.com/php/
https://www.php.net/
https://www.killerphp.com/
http://www.tutorialspoint.com/php/

For MySQL
https://www.mysql.com/
http://www.mysqltutorial.org

For XAMPP
https://www.apachefriends.org/download.html