# SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

**Ramapuram Campus, Chennai- 600089.**

## FACULTY OF ENGINEERING AND TECHNOLOGY

**Department of Computer Science and Engineering**

**Academic Year (2017 – 2018) –YEAR II / SEMESTER IV**

## PROGRAMMING USING PHP MINI PROJECT REPORT

Submitted by


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**COMPUTER SCIENCE AND ENGINEERING**

of

**SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

**RAMAPURAM CAMPUS - CHENNAI 600 089**

**APR 2018**

# SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

**(Deemed to be University Under Section 3 of UGC Act, 1956)**

**Ramapuram Campus, Chennai- 600089.**

## BONAFIDE CERTIFICATE

Certified that this project report titled "**sourceX – A Student Teacher Interface",** is the bonafide work of **Sri Gayathri (RA1611003020018), R. Gayathri (RA1611003020023), Aruna P (RA1611003020048) and Tarishi Jauhari (RA1611003020065)** who carried out the project work under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate**.**

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# ACKNOWLEDGEMENTS

We would like to thank our respected PHP teacher, Mr. D. Ganesan for his consistent mentoring, guidance and appreciation, and without whom this research project would not have been completed. We would also like to thank our institution, SRM Institute of Science and Technology for giving us this opportunity to bring forth our ideas and encouraging us.

# ABSTRACT

This thesis project consists of the development of an improved web application which serves as a one stop solution for both teachers and students. The ultimate goal of this application is to create the foundation for a web-based framework which enhances the interactions amongst the members of classroom, amplifies productivity, and also streamlines the entire communication process more efficiently. Increasingly, prominence is being placed on the Internet's role to facilitate communication within peer groups. The need of the hour is clearly a dedicated, digitized platform built solely to optimize information and provide ease of access. Hence, we present to you, *sourceX*.

sourceX can be easily described as a Web CMS (Content Management System). It is a stand-alone application to create data, as well as deploy content, onto web pages. It is also client-centered as it allows client control to host files and documents.

As such, the web application employs easy-to-use, inexpensive, cloud-based tools and services, such as Google Drive and GitHub to host the files. In order to use many of these services together, the web application was purpose-built using the server-side development framework, PHP, in conjunction with the database system, phpMyAdmin. Apart from these, the websites were designed and developed using HTML, CSS and JavaScript.

The key highlights of the project include a feed where students can keep a track of the recent activity in the cloud using the help of Twitter and an exclusive teacher feed to gain access and view the uploaded files, an interactive calendar and to-do list which integrates the information provided by the user with the database, as well as a schedule for both teachers and students to view. Overall, the UI isn't overly complex and won't take much time to adapt to.

There are, however, a few features missing that can be expected out of a student-teacher oriented platform. This includes the ability to check one's attendance and grades from the student end, whilst being able to edit attendance and grades from the teacher's end.

sourceX is a project far from complete. Nevertheless, with constant update rollouts, developments and bug-fixes, there is very high potential of opening up the code for downloads and permitting collaborations with others looking to use and improve the application model.

# CHAPTER 1

# 1. INTRODUCTION

This project provides a framework for implementing an interface accessible and beneficial to both students and teachers. Previously there was no structured way of achieving this; it was implemented using external applications and did not have a platform on its own. This led to inefficiency and muddling up of data. In order to build an effective system to improve usability, a few things must be kept in mind:

- ✓ What is the best way to organize data?
- ✓ What is the best platform to retrieve data from?
- ✓ How should the retrieved data be made available?

By establishing these, a structured method can be created. The remainder of this chapter introduces the reader to the background that led to this project. Afterward, it defines the scope of this thesis.

## 1.1 BACKGROUND

Recently, the Internet has become a powerful platform to deploy various systems and applications. It has also caused a shift in priority towards web-based applications rather than desktop-based application. There has been an increase in the number of frameworks and libraries developed over time for the execution of tasks of different kinds. Digitized data has also gained importance. Long gone are the days when everyone used to carry around a hard copy of all the notes and information sent to them by teachers.

We need to keep up with the times. In this constantly evolving time and age, digital solutions have to be employed. Conventional methods may be preferred by some, but the advantages of digital solutions overweigh the need for those methods.

## 1.2 WEB APPLICATION DEVELOPMENT

A particular kind of web application that has been gaining popularity is the Content Management System (CMS). This kind of application typically provides a reasonable degree of configurability and extensibility that system administrators and end-users tend to favor, as the system itself is already available, and customizations consist in the development of components (or modules, depending on the system's nomenclature) that will be installed on top of the CMS system. Thus, these systems can be considered both as web applications and as web application frameworks.

## 1.3 SCOPE

The scope of this thesis is to lay out the ground framework and implement it up to a small scale. All changes start off small. Further improvements and features can be easily added on with time and constant development.

# CHAPTER 2

## 2. PROBLEM DESCRIPTION

As university students, we often strive to find solutions to problems we face that are well within our scopes as programmers to solve. A common problem faced by all students in general is that of notes sharing. Class notes are vital for any student. Previously, students used to collect notes by either Xerox or printing them out manually. However in recent times, constant availability of resources at any time proves to be a huge boon. A digitized world demands a digital solution. The need of the hour is to utilize available resources and tools to improve the existing way in which students and teachers share notes, thereby making the entire process more beneficial to all.

This is the primary motive behind our project, as we, too, feel the need to improve the existing system. With a proper interface, we wouldn't have to frantically check our phones and emails the night before our exams, scrolling through hundreds of chats and messages, trying to locate that *one file* we forgot to save. A new framework could be a game changer in the way information is spread to students and potentially reduce the time spent by all involved as well as increasing productivity at the same time.

# CHAPTER 3

## 3. EXISTING SOLUTIONS

### 3.1 WhatsApp

Technology plays a fundamental role in every student's life. It affects how they live, work, play, and most importantly learn. Integrating technology into the classroom is an effective way to connect with other students, and teachers as well. Recently, the high rates of infiltration of smartphones into the market has initiated growing use of WhatsApp as a communication platform for various student groups, and more recently, for groups of teachers and students. Both use it alike to circulate notes, to keep themselves reminded of ceaseless deadlines and inevitable exam schedules.

Smartphones are ubiquitous, hence relying on them makes sense, especially with services like WhatsApp. The underlying purpose of WhatsApp is to facilitate communication, and at its most basic level, education is nothing but communication. WhatsApp can provide means through which teachers can achieve faster and more seamless communication with their students. It also allows students to discuss amongst themselves.

WhatsApp has advantages over other technological tools employed by the education system, such as low cost, simplicity and accessibility. Until recently there was no technological tool which was used as frequently as WhatsApp by both adults and students.

The option of creating group chats bundled up with collaborative notes sharing ultimately is one of the best ways of utilizing resources to enhance productivity.

The problem arises with the exclusion of an essential feature to decide *where* each user would like to save the file inside their phone. This implies that all files get dumped in one folder and there is no automatic way to organize the data. Even if each subject teacher had a separate group, all sent media are placed together in the same *WhatsApp Folder*, irrespective of which group it was sent from.

The work-around solution would be that the student has to manually rename and relocate each file inside their phone. It is, however, time consuming and tends to get complicated if the number of files is large.

### 3.2 Google Drive

Another potential feasible solution is to directly send all the notes via Google Drive to a common class email account. It isn't implemented as commonly as WhatsApp, yet remains an alternative due to the fact that almost everyone has a Gmail account. Google Drive has tons of customizable options to organize files and folders as well as to decide by *whom* the said files can be accessed and shared. Not to mention the fact that it is always wise to use cloud to backup and view data as it can never get physically *lost*.

There are very few drawbacks, of course. More often than not, there isn't full participation from the class on the group e-mail as it can be confusing for some, having to remember the username and password, which may get constantly changed. Most teachers also wouldn't like to let students view and edit files from their own personal accounts as the data gets scattered, messy and potentially can even get lost. It is also hard to keep track of who updated what in which folder.

In conclusion, Google Drive is one tool which facilitates ease of sharing of data. On its own, it can have some drawbacks, most of which involve the fact that its interface isn't quite as personal to the users. Hence a solution can be achieved by implementing Google Drive or other cloud based services to host the files. But the usage stops there. The information regarding the files and updates will be executed within the website instead. Even Google Drive can be embedded within the website.

Due to the shortcomings of the other existing solutions, we believe that in this regard, our proposed solution will be more advantageous and ultimately serve its required purpose.

# CHAPTER 4

## 4. PROPOSED SOLUTION

So far, we introduced you, the reader, to the topics of *what* is the problem we hope to tackle and *why* the existing solutions don't work. Now, we will brief you about what we think can be done to overcome the problems faced.

Before we started to design any interface or link any databases, we kept a few things clearly in mind as to what was needed in the project:

- ✓ The solution must implement separate interfaces for teachers and students.
- ✓ Students must have the ability to check the recent updates and view the corresponding files.
- ✓ Teachers, on the other hand, must be able to implement upload of files through their interface
- ✓ Teachers and students must be able to access their feeds through separate logins provided
- ✓ Things like class schedules, calendars (to mark important dates) and a to-do list can be added to maximize the efficiency of both demographics.

After keeping in mind all the requirements mentioned above, we successfully designed a framework. Meet *sourceX*, a student-teacher interface, our proposed solution to combat the problem.

## 4.2 MERITS OVER EXISTING SOLUTION

There are stark differences between our proposed solution and the pre-existing one. At the core, both of them can be used by students and teachers to share notes. However, sourceX is a platform independent project. This means that apart from using Google Drive for storage, any user can directly access files and information through the website without relying on external apps like WhatsApp or software, but solely through the web.

There are several other such demerits of using WhatsApp. For instance, it automatically degrades the quality of any image and compresses files sent in order to optimize the amount of space it demands. This is a huge drawback as the clarity and definition of any notes shared can get lost in this manner.

Although mobiles are pocket-friendly, their small size can be hard to read from. The alignment of most files and notes sent are not adjusted for mobile screens and are often intended to be viewed on desktops and laptops. Hence it makes sense to develop a website purely for desktop viewing. WhatsApp does have a desktop version, but relies on the user's phone to be connected to the internet, hence rendering it inefficient.

Despite being able to share notes in the class groups, students will likely get distracted by the constant bombardment of messages and notifications if they use their phones for educational purposes. On the contrary, the sourceX website is less prone to distraction.

Ultimately, WhatsApp is just a way to connect with people. It is a type of social media and is not meant for the intended use.

Yet another reason for requiring a separate student-teacher interface is the fact that students tend to forget to download the notes sent to them in the group. This is because some notes are sent during class hours and some prefer to download notes and large files only over Wi-Fi. Limited access to Wi-Fi during college hours hence prohibits students from downloading files then and there itself. Over due course of time, they eventually forget about it and ultimately the purpose is lost.

In sourceX, however, downloading or not is ultimately the student's wish. He can open the file directly within the browser and study it.

Hence, we find that in several ways, sourceX is more meritorious over the existing solutions.

# CHAPTER 5

## 5. MODULES

### 5.1 Overall view

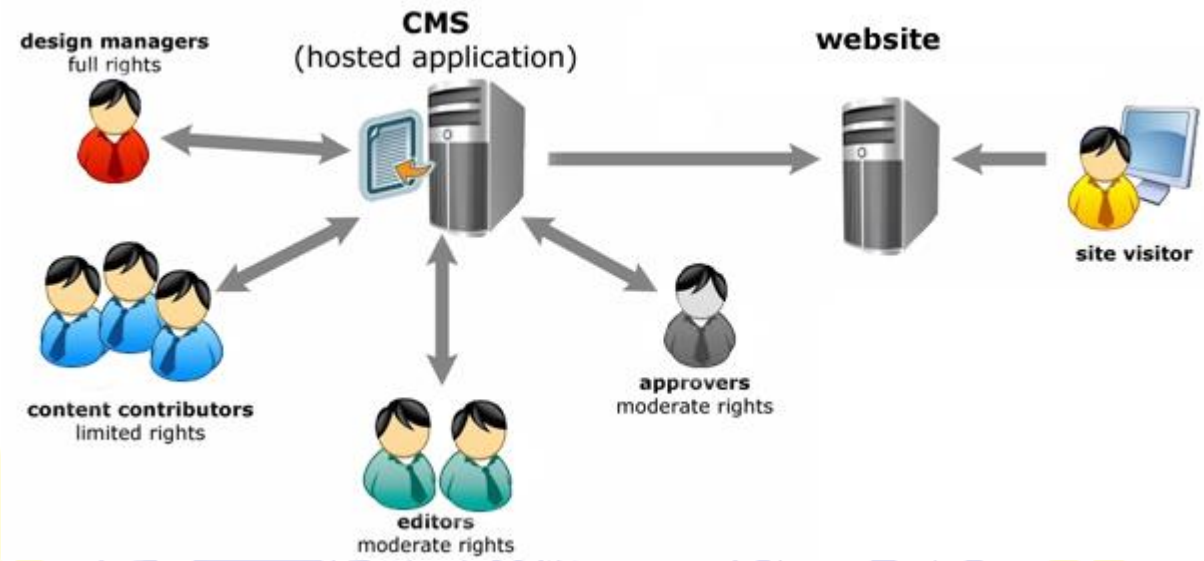



**Figure 5.1. Gives an overall view of the Web Content Management System Architecture**

### 5.2 Register & Login

The very first step in using this website to access information is to create an account. This feature is open to both teachers and students. On the home page, there is a button to login or register. A popup appears asking whether the user is a teacher or student. Accordingly, it redirects either to student login or teacher login. If the user hasn't yet registered with sourceX, he can do so by clicking on the 'Register' button. To create an account, the user needs to enter various details like name, a valid email address, (student/teacher) ID and password. The ID and password will be required for subsequent log in. As of this current version of the website, there is no option to reset password, or delete account. However this is a feature likely to be implemented soon.

### 5.2 Student Feed

After successful account creation or log in, the next web page (shown in Figure 8.3) allows the student to view the Twitter feed. There is a sidebar through which he can directly access the To-Do list and Calendar. Under the academia option, he can either view his class timetable or view the Google Drive files. Under each folder (consisting of subjects) are the subfolders where he can see the list of files. Under account options in the sidebar, he can choose to sign out, which redirects him back to the home page.

### 5.3 Teacher Feed

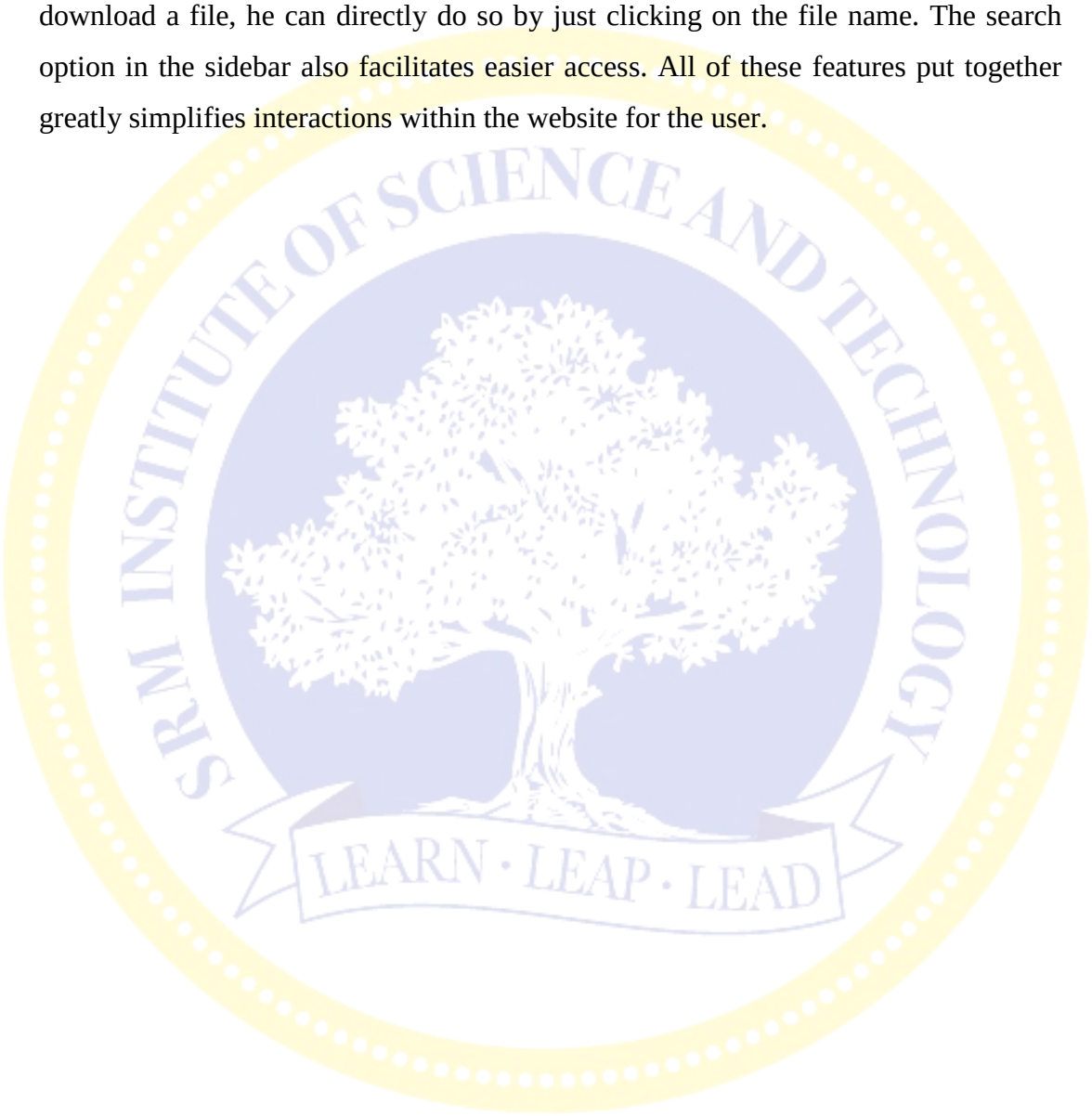
The layout of the teacher feed is quite similar to the student feed, but the content varies entirely. After successful account creation or log in, the teacher gets redirected to the teacher feed (shown in Figure 8.2). The teacher feed consists of the various folders present in the Drive. By clicking on each one, he will be redirected in a new tab to that particular folder in the Drive. Hence he can directly upload the files from there. A similar sidebar is present, through which he can directly access the To-Do list and Calendar. Under the academia option, he can view his class schedule or view the class name list. This is a simple option wherein he can see the list of students present in each section. Similar to the student feed, the teacher can also sign out using the Account Settings.

### 5.4 Google Drive

After a folder has been added directly to the drive, faculty users can upload images, notes and documents for the students. The Drive interface to upload files is very simple. The teacher can just drag and drop the files onto the required folder. This triggers the call to update the Student Feed Twitter account which gets reflected in the actual Student Feed. The trigger is achieved using a website called If This Then That (ifttt). The updated files can also be seen in the sidebar. Clicking on any file will automatically commence download onto the computer.

### 5.5 Ease of Access

The website is carefully designed to be user friendly and avoids being overly complex. Its design is very intuitive and informative so that even people with little experience in computers can easily use this system. All the information that needs to be displayed are directly accessible from the student feed. If a student wishes to download a file, he can directly do so by just clicking on the file name. The search option in the sidebar also facilitates easier access. All of these features put together greatly simplifies interactions within the website for the user.



# CHAPTER 6

## 6. WEBSITE FLOW

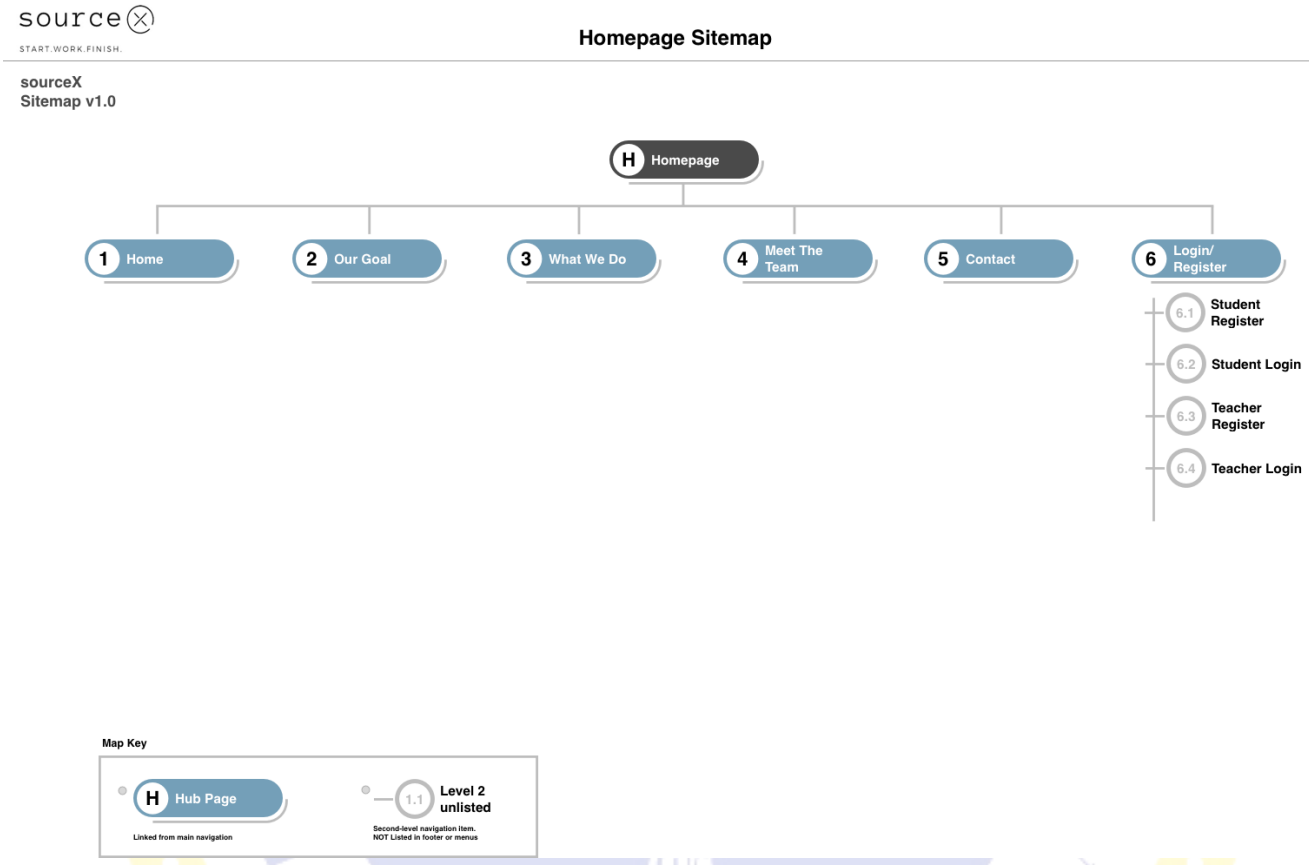



**Figure 6.1. Home page layout**

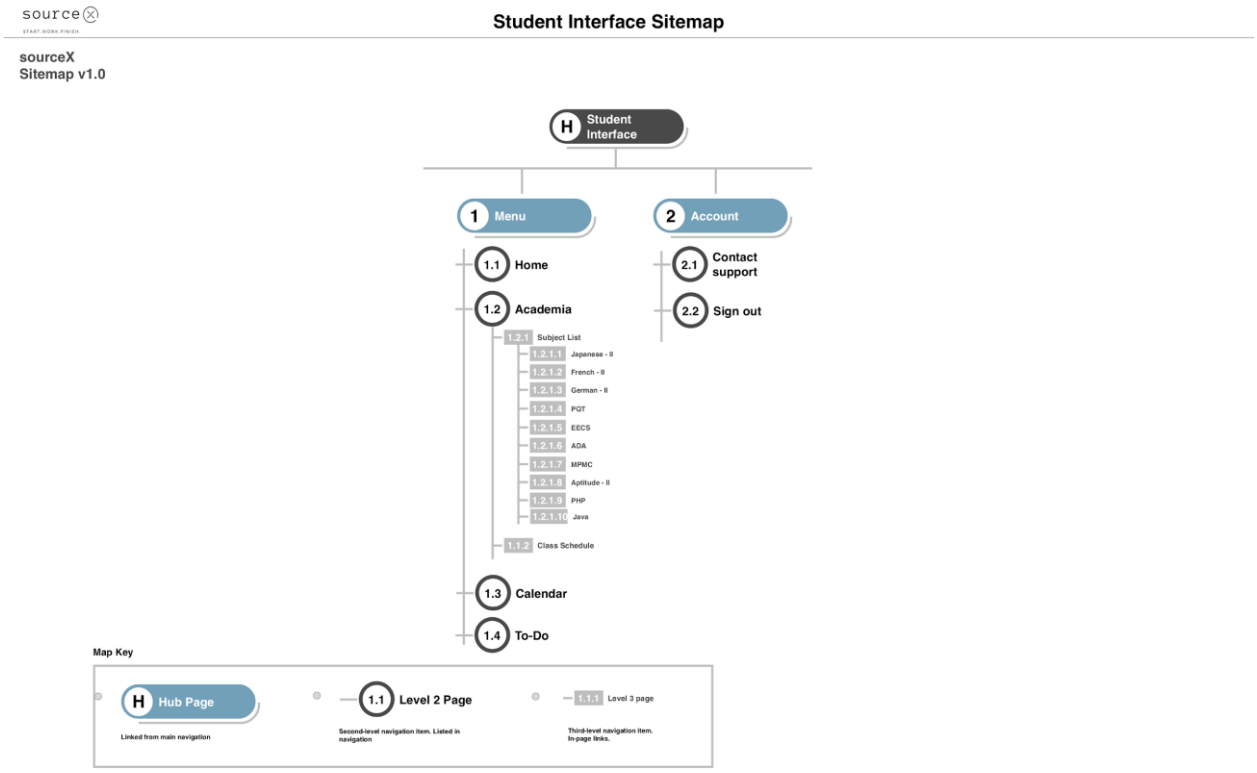



**Figure 6.2. Student feed site map**

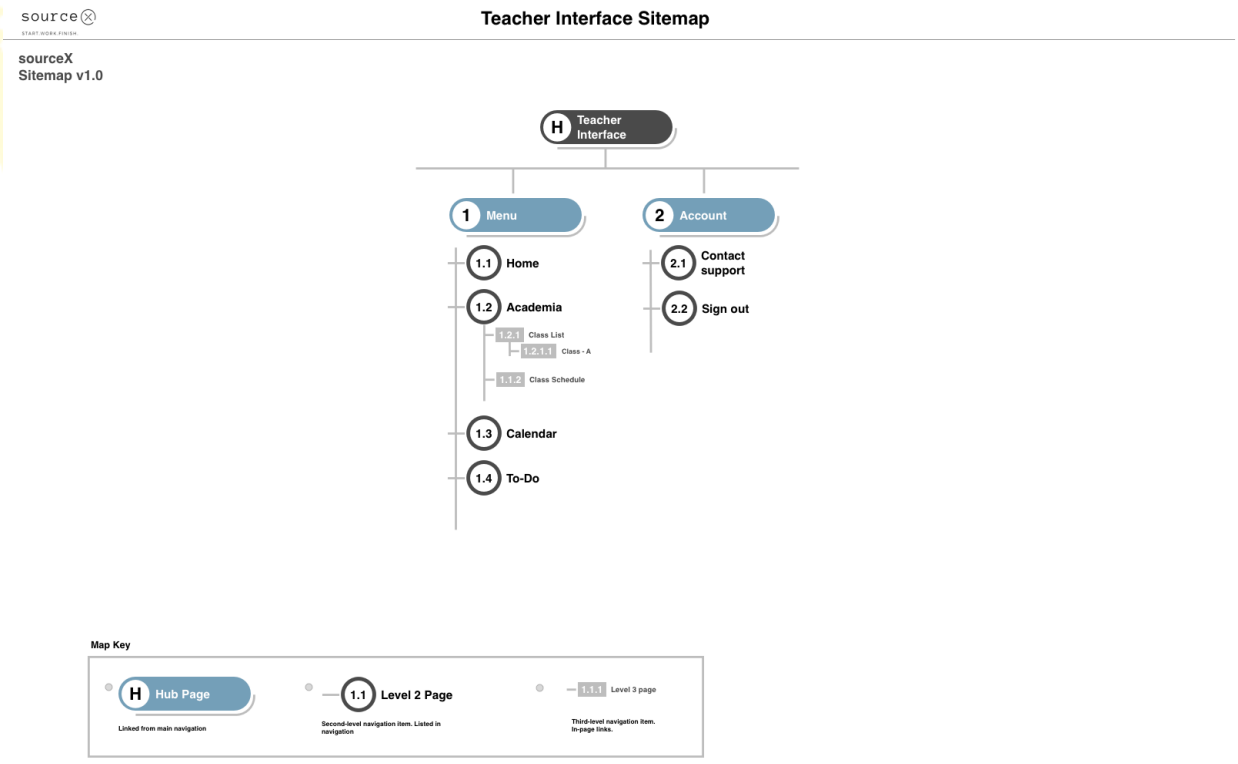



**Figure 6.3. Teacher feed site map**

# CHAPTER 7

## 7. SAMPLE CODE

```
<body>
<?php
    session_start();
    $id = $_SESSION['id'];
    $fname = $_SESSION['fname'];
    $lname = $_SESSION['lname'];
    $dept = $_SESSION['dept'];
?>
  <div id="page">
   <div class="header"> <a href="#menu"> <span> </span> </a>Teacher
Interface</div>
   <iframe id="content"
src="https://drive.google.com/embeddedfolderview?id=1DnpMjIKrmp1sU0kCnN8C
qdW8r7IUdzhl#grid" style="width:95%; height: 575px; border:0; margin-left:5%;
overflow-x: hidden;"></iframe>
   <div class="schedule">
        <iframe name="Framename" src="teacherschedule.html" width="98%"
height="750px"
        frameborder="0" class="frame-area">
        </iframe>
   </div>
   <nav id="menu">
      <div id="panel-menu">
        <ul>
              <li><a href="#/">Home</a></li>
              <li><span>Academia</span>
        <ul>
              <li><span>Class List</span>
        <ul>
              <li><span>Class - A</span>
```

```
        <ul><iframe src="https://drive.google.com/embeddedfolderview?id=1r8AO-
JU5BhZCqv4hnOqZg2YYL2C57INI#list" width="100%" height="600"
frameborder="0">Loading...</iframe></ul></li>
                <li><a href="#/">Class - B</a></li>
                <li><a href="#/">Class - C</a></li>
        </ul>
                </li>
                <li><a href="#/"><span id="cs">Class
Schedule</span><span><button id="close">x</button></span></a></li>
                <li class="Divider"></li>
                <li><a href="calendar.php">Calendar</a></li>
                <li><a href="todoui.php">To-do</a></li>
</div>


<?php
  if(isset($_POST['submit'])) {
    $givenid = $_POST['id'];
    $fname = $lname = $dept = $year = $section = "";
    $givenpassword = $_POST['password'];
    $status = 1;
    $user = 'aruna';
    $pass = '2048';
    $db = new PDO( 'mysql:host=localhost;dbname=users', $user,
         $pass );
    $sql = "SELECT * FROM students";
    $result = $db->query( $sql );
    foreach( $result as $row ){
      if($givenid == $row['id'] && $givenpassword ==
          $row['password']) {
        $status = 0;
        session_start();
        $_SESSION['id']  = $givenid;
        $_SESSION['fname'] = $row['fname'];
```

```
        $_SESSION['lname'] = $row['lname'];
        $_SESSION['dept'] = $row['dept'];
        $_SESSION['year'] = $row['year'];
        $_SESSION['section'] = $row['section'];
        header("Location: studentfeed.php");
        exit;
      } else if($given == $row['id'] && $givenpassword !=
                $row['password']) {
        $status = 2;
        break;
      }
    }
    if($status == 1){
      echo "<p style='color: red; position: absolute; top:
                68%; left: 70%; '>Incorrect ID!</p>";
    } else if($status == 2){
      echo "<p style='color: red; position: absolute; top:
                68%; left: 70%; '>Incorrect Password!</p>";
    }
}
?>
```

# CHAPTER 8

## 8. WEB PAGES

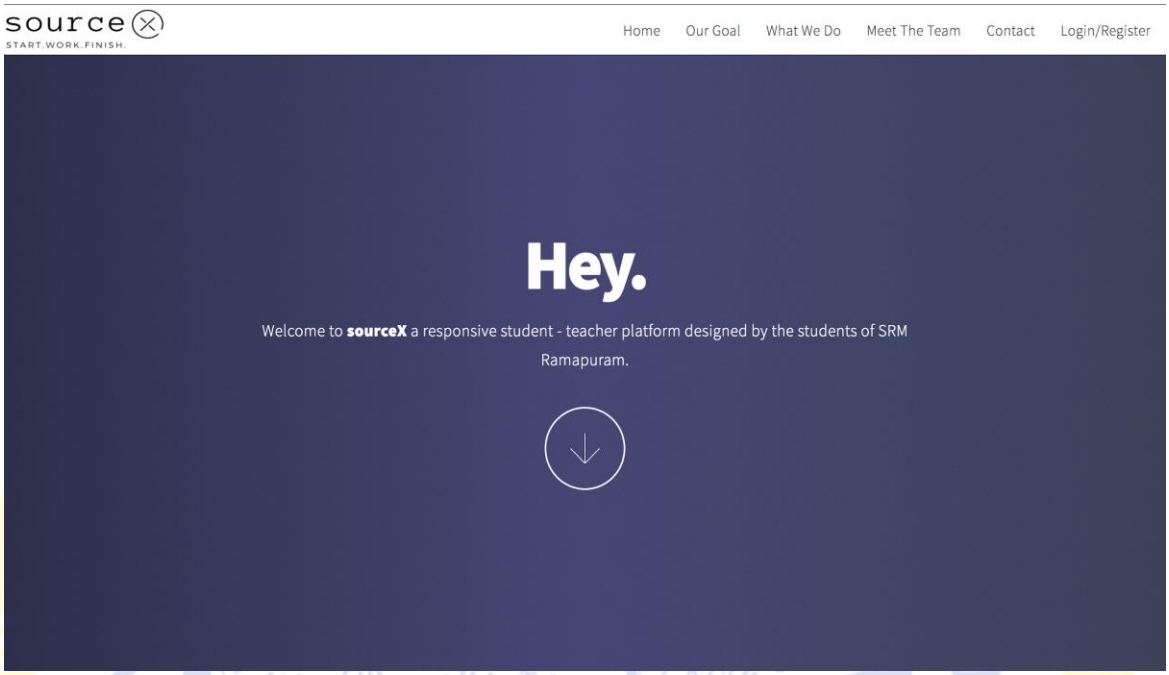



**Figure 8.1. Homepage Layout**

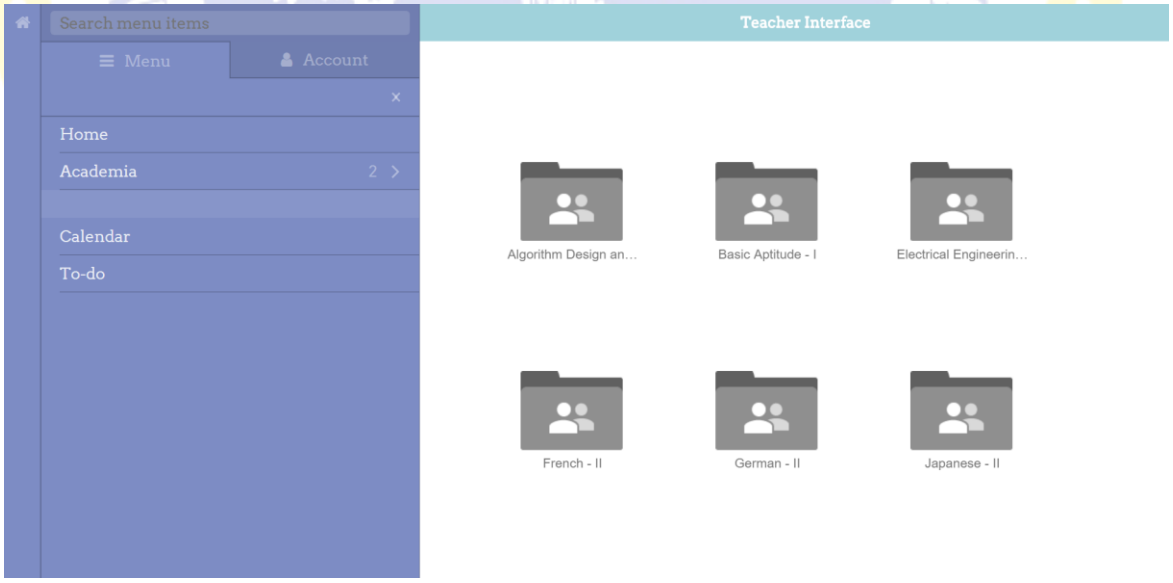



**Figure 8.2. Teacher Interface**

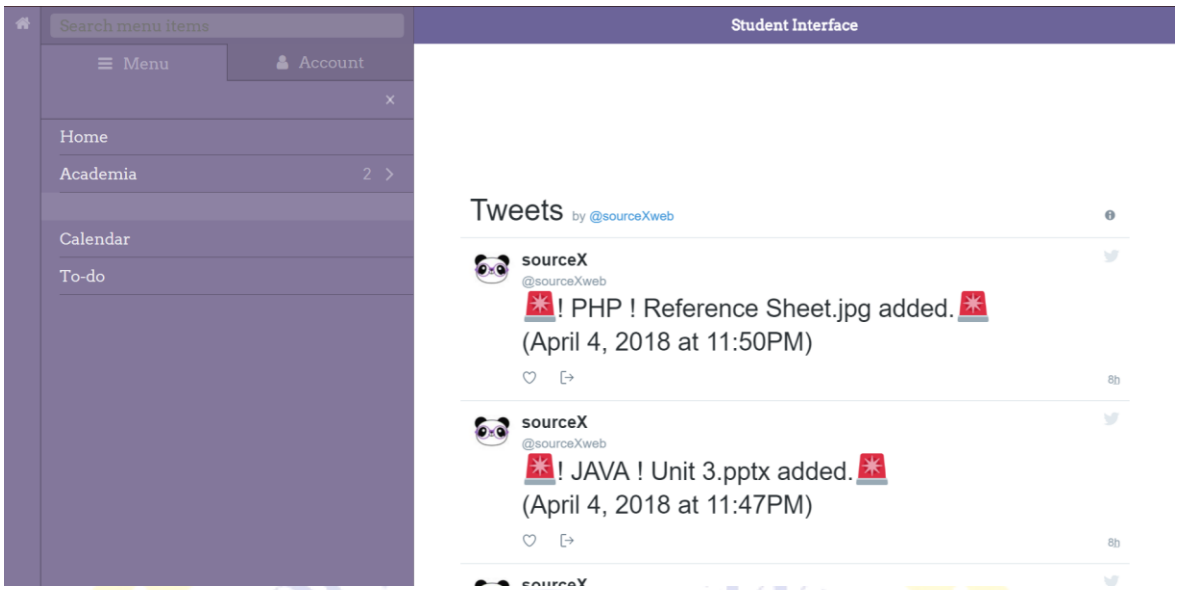



**Figure 8.3. Student Interface**

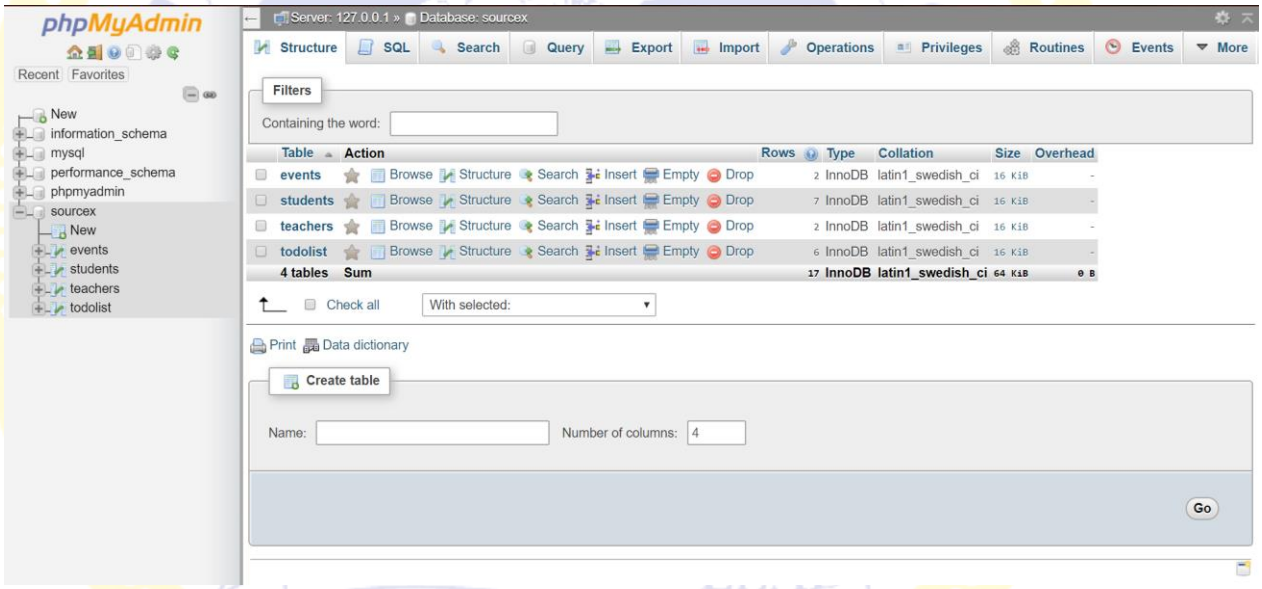



**Figure 8.4. Database of sourceX**

# CHAPTER 9

## 9. DATABASE

A *database*-management system (DBMS) is a computer-software application that interacts with end-users, other applications, and the *database* itself to capture and analyze data. A general-purpose DBMS allows the definition, creation, querying, update, and administration of *databases*.

sourceX makes use of *four* tables from the database. It is used to store information from the user (during registration) and check the user's information during login. Additional information triggers various activities.

### 9.1 Students Table

| # | Name | Type | Collation | Attributes | Null | Default | Comments | Extra | Action |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **fname** | varchar(50) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 2 | **lname** | varchar(50) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 3 | **dob** | date | | | No | *None* | | | Change Drop Primary Unique Index More |
| 4 | **dept** | varchar(3) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 5 | **year** | int(11) | | | No | *None* | | | Change Drop Primary Unique Index More |
| 6 | **section** | char(1) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 7 | **cgpa** | float | | | No | *None* | | | Change Drop Primary Unique Index More |
| 8 | **id** | varchar(30) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 9 | **email** | varchar(50) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 10 | **mobi** | varchar(10) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 11 | **pswd** | varchar(30) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |

**Figure 9.1. 'students' Table Structure**

This is the table wherein the students' details are stored upon registration. Apart from the date of birth field, everything else is of type *varchar.* The same table is called upon during login, but only the id and pswd fields are checked against the user entered fields.

A sample of the data present can be seen below:

Showing rows 0 - 6 (7 total, Query took 0.0010 seconds.)

```
SELECT * FROM `students`
```

Profiling [Edit inline] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Show all | Number of rows: 25 Filter rows: Search this table

+ Options

| fname | lname | dob | dept | year | section | cgpa | id | email | mobi | pswd |
|---|---|---|---|---|---|---|---|---|---|---|
| Aruna | Parameswaran | 1998-10-18 | CSE | 2 | A | 9.2 | RA1611003020048 | p.aruna1998@gmail.com | 8056801341 | aruna |
| Gayathri | Ramesh | 1998-05-31 | CSE | 2 | A | 9.5 | RA1611003020023 | thinkdeepoceanroars@gmail.com | 9003217791 | gayathri |
| Aswathy | Gopalakrishnan | 1998-07-04 | CSE | 2 | C | 8.2 | RA1611003020186 | ash74g@gmail.com | 9003277185 | aswathy |
| Anupreetha | S | 1998-09-21 | ECE | 2 | C | 8.5 | RA1613003020164 | anu.cricrox@gmail.com | 9444852440 | anupreetha |
| Rupam | Halder | 1998-01-01 | CSE | 2 | A | 8 | RA1611003020013 | whocares@gmail.com | 9876543210 | rupam |
| Siddharth | Shankar | 1998-11-29 | CSE | 2 | A | 8 | RA1611003020007 | siddharthshankar2000@gmail.com | 7979832645 | siddharth |
| Ayushi | Agarwal | 1998-12-12 | IT | 1 | B | 9.2 | RA1611002020048 | ayushi2634@gmail.com | 8024614513 | ayushi |

**Figure 9.2. Sample data present in the Database**

## 9.2 'teachers' table

| # | Name | Type | Collation | Attributes | Null | Default | Comments | Extra | Action |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **fname** | varchar(50) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index Spatial More |
| 2 | **lname** | varchar(50) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index Spatial More |
| 3 | **dob** | date | | | No | *None* | | | Change Drop Primary Unique Index Spatial More |
| 4 | **dept** | varchar(3) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index Spatial More |
| 5 | **id** | varchar(30) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index Spatial More |
| 6 | **email** | varchar(50) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index Spatial More |
| 7 | **mobi** | varchar(10) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index Spatial More |
| 8 | **pswd** | varchar(30) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index Spatial More |

**Figure 9.3. 'teachers' Table Structure**

Almost similar to the student table, this is the table wherein the teachers' details are stored upon registration. Its functionality matches that of the student table in every respect. Details such as CGPA and Section are naturally omitted.

## 9.3 'Events' table

| # | Name | Type | Collation | Attributes | Null | Default | Comments | Extra | Action |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **id** | varchar(30) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 2 | **description** | text | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 3 | **date** | date | | | No | *None* | | | Change Drop Primary Unique Index More |

**Figure 9.4. 'events' Table Structure**

In this table, we can add a date and a description which is the event name. The ID of the person adding the date is implemented such that only that person will be able to see the changes in the calendar.

### 9.4 To-Do List table

| # | Name | Type | Collation | Attributes | Null | Default | Comments | Extra | Action |
|---|---|---|---|---|---|---|---|---|---|
| 1 | **id** | varchar(30) | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 2 | **task_id** | int(11) | | | No | *None* | | | Change Drop Primary Unique Index More |
| 3 | **title** | text | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |
| 4 | **description** | text | latin1_swedish_ci | | No | *None* | | | Change Drop Primary Unique Index More |

**Figure 9.5. 'todolist' Table Structure**

In this table, we can add the title of the task we want to add as well as its description. *task_id* is nothing but a status number. For example, if the task id is 0, it means that the task has been completed by the user. Priority can be assigned using the *task_id* as well; that is, a task with a bigger id will have bigger priority and will appear on the top of the list.

# CHAPTER 10

## 10. FUTURE EXPANSION WORK

Our proposed solution to bridge the gap between students and teachers using the web interface sourceX has a lot of useful features, but there is always room for improvement. The project is far from complete. Constant development and update rollouts may just increase the scope of the project as well as expand its user-base. Although the work presented in this thesis has yielded some significant improvement, these topics still present avenues of research that are worthy of further pursuit.

Below, we highlight some potential improvements that we consider to be relevant for the work presented in this project:

- ✓ Linking the existing sourceX student accounts to the ERP provided by SRM University to access information such as grades, test scores, attendance percentile, CGPA etc. It makes sense to have a single platform to provide all the necessary information to students. This ensures that all students will be willing to migrate to sourceX.

- ✓ Actual implementation of incorporating several sections and departments across the University. For this project demo, we only had the Providing facilities and resources to students of several sections instead of just one

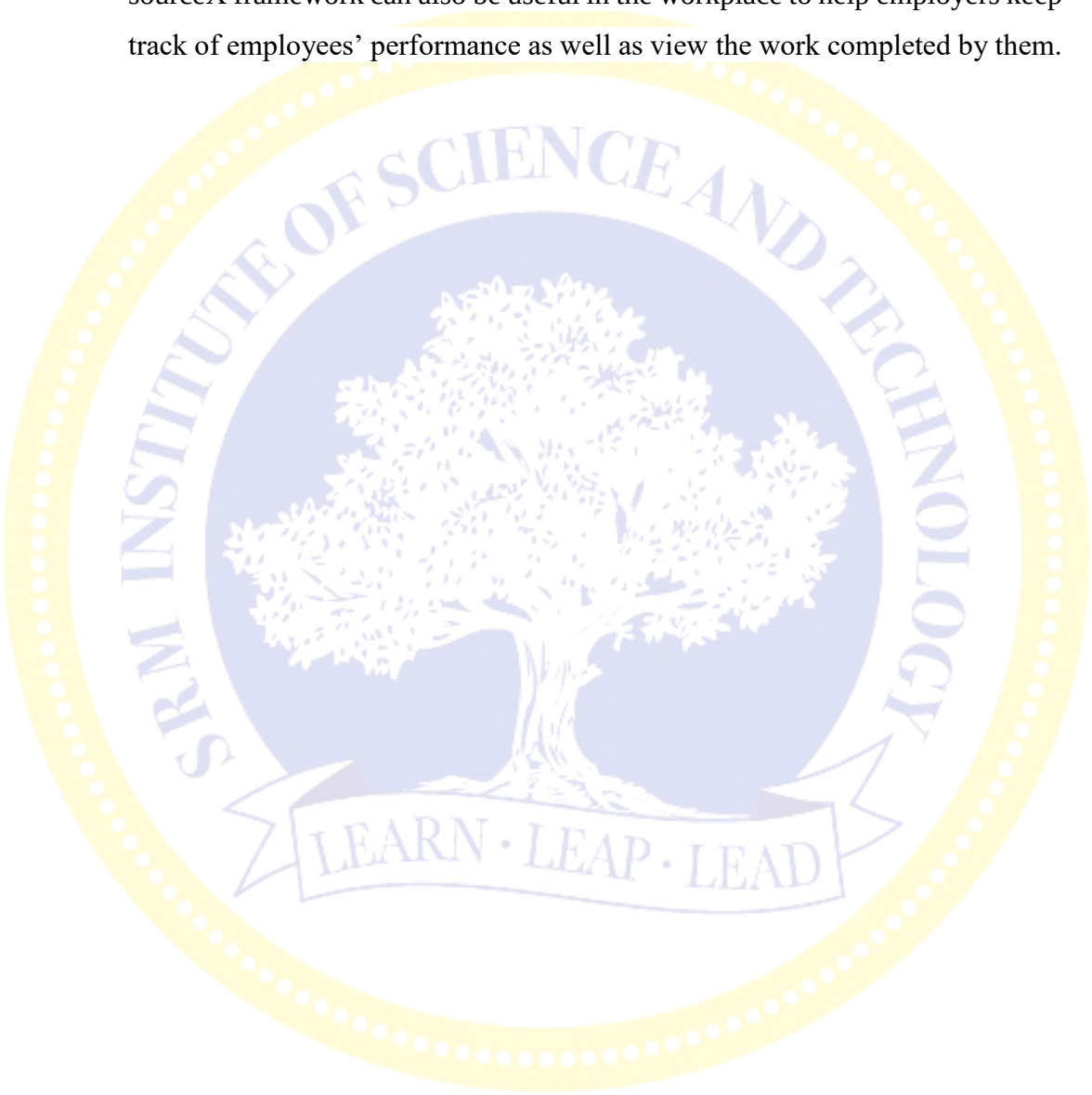
- ✓ Students being able to check their results simply by logging into their accounts

- ✓ A messaging board where teachers can send reminders and notifications to the students regarding tests, assignments. It can also be used personally between students and teachers to clarify doubts and extend the learning beyond the classroom scope.

- ✓ On a global scale, sourceX's framework can be extended to be incorporated by various other institutions such as hospitals. The significant advantage here is that the communication becomes personal between the doctor and patient.

Patients can upload their documents to the cloud and give special access to the specific doctors to view them. The doctors, in turn, can also send the patients back their test reports. The intent is not to completely erase the physical file sharing process, but rather to make it easier. Besides, having a backup copy in the cloud is always safer as it provides anytime access.

- ✓ sourceX framework can also be useful in the workplace to help employers keep track of employees' performance as well as view the work completed by them.



# CHAPTER 11

## 11. CONCLUSION

The problem of bridging the resource gap between students and teachers can be eliminated. The primary goal of this project is to implement an initiative in order to foster a responsive interface where all faculty and students get access to their information in an organized manner. To that end, sourceX provides a complete solution by integrating a database and the cloud uploaded documents into its site.

The only real drawback of sourceX is that in place of an actual feed (RSS), a Twitter feed is used instead. One might argue that the student might get distracted through Twitter and may engage in social media instead of studying. This can be overcome over time by actually implementing the Google Drive API in place of the Twitter feed. Due to lack of time and experience in making API calls, the use of this technology has been omitted.

sourceX can inevitably evolve only if the larger university community begins to embrace the platform. The goals of sourceX can only be realized through continuing dialogue among all members of the campus community. Moreover, sourceX can be deemed a success only if students migrate to the site, and embrace its features.

# CHAPTER 12

## 12. REFERENCES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