EAST WEST UNIVERSITY

Teacher Student Portal（TSP）

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The project has been submitted to the Department of the Computer Science & Engineering at East West University in the partial fulfillment of the requirement for the degree of Bachelor of Science in Computer Science and Engineering.

January, 2016

DECLARATION

The project has been submitted to the Department of the Computer Science & Engineering. East West University in the partial fulfillment of the requirement for the degree of Bachelor of Science in CSE performed by us under supervision of Associate Professor Dr.Md. Nawab Yousuf Ali, Department of CSE at East West University. This is also needed to certify that, the project work under the course **'Project Work (CSE-499)'. I**, hereby, declare that this project has not been submitted elsewhere for the requirement of any degree or diploma or any other purposes.

Signature of the candidate

Shovon Rahman Shuvo

2011-1-60-005

Letter of Acceptance

The Project entitled **Teacher Student Portal** submitted by **Shovon Rahman Shuvo** ID: **2011-1-60-005** to the department of computer Science and Engineering, East West University, Dhaka Bangladesh is accepted as satisfactory for the partial fulfillment of the of the requirement for the degree of Bachelor of Science in Computer Science and Engineeringon January 14, 2016.

Board of Examiners

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Abstract

In this project, I develop a web-portal that is kind of creating virtual relation between teachers and students. It is an effort so that student can contact with theory teachers virtually. I named this website Teacher Student Portal in short TSP. I have used HTML5, CSS3, JavaScript and jQuery, Bootstrap for front end and PHP for server end and MySQL for the database. And also I am hoping to make the site smarter in future.

Acknowledgement

First of all, I would like to convey our thanks and gratitude to Almighty Allah, for His immeasurable grace and profound kindness. Today I am successful in completing my works.

I am heartily grateful to my supervisor Dr. Md. Nawab Yousuf Ali, Department of Computer Science and Engineering, East West University for his continuous support and inspiration and also thankful for his kindness to complete proper report.

I am also grateful to my parents. Without their love, courage and support I would not had achieved this far.

I am also thankful to the teachers and faculty member of Computer science and Engineering Department of, East West University for their valuable advice and my project comes true for their guidelines.

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Chapter 1: Introduction

A **web portal** is most often one specially designed web site that brings information together from diverse sources in a uniform way. Usually, each information source gets its dedicated area on the page for displaying information. A portal website is that kind of website where you can find information you need TSP is that kind of portal where students can get their course related information. They can ask question to others. Not only teachers but also other students can view those. Students can answer those questions if they want. Teachers can also share their answers. Teachers can share their thoughts with their students through the blog section. It is platform where interaction between teachers and student happen in virtual world.
There is an admin panel where admin can view how many students are registered.
Admin can create faculty accounts but not student's accounts. Student have that privilege to create their own account.

1.1 Motivation:

For our project I consider to develop this portal for the following reason

1. There are many websites but they don't have that potential of connecting teachers and students more closely.
2. There is no website I found where student can ask question and teachers can answer as well as other student can answer those questions.

1.2 Purpose of the project:

Create more interaction between teachers and students to develop their relation.

1.3 Objective:

A portal where student can ask question, enroll subject, can read what their teachers are sharing with them, teacher share their thoughts with their students, provide course material etc.

1.4 Outline:

- Introduction
- The system
- Design Specification
- Code Specification
- Future Work
- Conclusion

Chapter 2: The System

2.1 User Activities:
There are three kinds of user of this system.

1. Admin account.
2. Teacher account.
3. Student account.

2.2 Admin account:

1. They can create faculty account.
2. They can view how many students are registered in the system.
3. They can create faculty account.
4. They can delete faculty account.

2.3 Teachers Account:

1. They can create courses.
2. They can post regular updates in their courses.
3. They can post notices.
4. They can post in their blogs.
5. They can see what student are asking.
6. They can answer those question.

2.4 Student Account:

1. They can enroll courses.
2. They can view regular updates in their courses.
3. They can post question in the question and answer section.
4. They can see what other student are asking.
5. They can answer those question.
6. They can view notices.

Chapter 3: Requirement Analysis

The website required the following requirement. There are mainly three actors. The teachers, students and the admin.

3.1: Data Requirement

During the requirement analysis the following data have been identified as data requirement.

- Teachers can read any post on the site.

- Teachers can view question posted by the students.
- The teachers can answer the question posted by the students.
- Students can view the blog post of their faculties.
- Students can view question posted by the students.
- Students can answer the questions.
- They can enroll courses.
- They can view regular updates in their courses.
- They can post question in the question and answer section.
- They can see what other student are asking.
- Admin will login to the admin panel to manage user accounts.
- He can see how many faculties are registered.
- He can create new faculty account.

3.2: Physical Design

The physical design relates to the actual input and output processes of the system. This is laid down in terms of how data is input into a system, how it is verified or authenticated, how it is processed, and how it is displayed as In Physical design; the following requirements about the system are decided.

- Input requirements
- Output requirements
- Storage requirement
- Processing Requirement

3.3 Use case Diagram:

A use case diagram is a graphic depiction of the interactions among the elements of a system.

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. In this context, the term "system" refers to something being developed or operated, such as a mail-order product sales and service Web site. Use case diagrams are employed in UML (Unified Modeling Language), a standard notation for the modeling of real-world objects and systems.

System objectives can include planning overall requirements, validating a hardware design, testing and debugging a software product under development, creating an online help reference, or performing a consumer-service-oriented task. For example, use cases in a product sales environment

would include item ordering, catalog updating, payment processing, and customer relations. A use case diagram contains four components.

- The boundary, which defines the system of interest in relation to the world around it.
- The actors, usually individuals involved with the system defined according to their roles.
- The use cases, which the specific roles are played by the actors within and around the system.
- The relationships between and among the actors and the use cases.

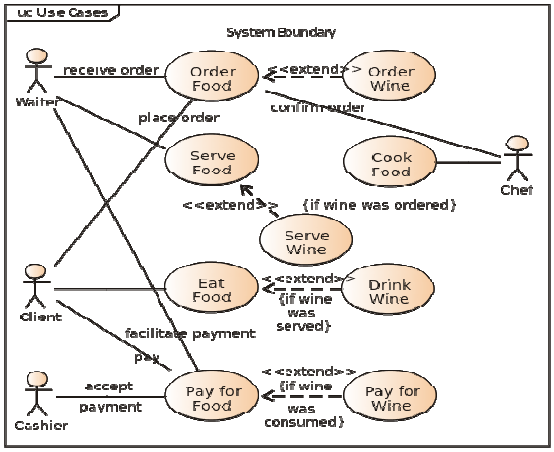

Fig 3.1: Use Case Diagram

3.3.1 Use Case Diagram for TSP:

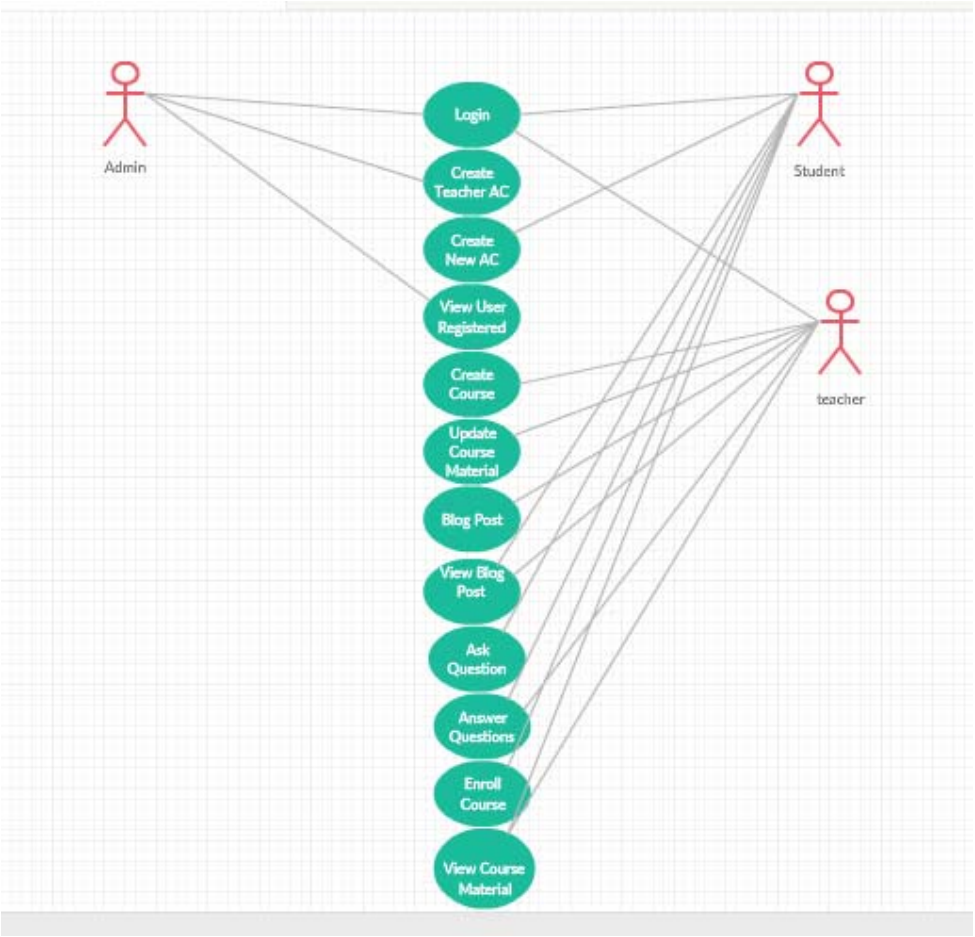

Fig 3.2: Use Case Diagram for TSP

Description: This is the Use Case Diagram of the whole TSP system. This diagram shows the interaction between all the user and the site.

- ❖ **Home:** Users can go to home page and can see all contents of the homepage.
- ❖ **Search:** Using search option user can find any of his/her desired post.
- ❖ **Categories:** By using categorical post Users can find post by category. User doesn't need to go through all posts.
- ❖ **Notice:** Users can see the notice which would have posted by admin.
- ❖ **Sign up:** To become a registered member Users have to be registered.
- ❖ **Sign-in:** To write a new review or put a comment on someone posts, user has to be logged in. Here is a Uses use case included where base case is depending on the Uses use case. Without Uses use case the base can't go through the sign in.

- **Own Posts:** So far you have been posted review on our site you can see those posts but you have to be registered member of this site. Therefore, uses use case is included here.
- **Write new question:** Users can write a new review for the site. Here is included another use case name is Extend use case which is depend on the base case. It is opposite to Uses use case.
- **Comment:** Users can put comment on the posts but User has to be logged in.
- **Sign-out:** If you are not logged in how can you sign out from the system. Therefore, base case is depending on the Uses use case.
- **Blog post:** Teacher can post new post in the blog section.Students and teachers can view those post.
- **Question and answer:** Student can ask question to others. Students can the question as well as the teachers.
- **Course Enroll:** Student can enroll for the course they want.
- **Course material:** Teachers can update course material.
- **Create account and view:** Admin can create new faculty accounts on request. They can also view the registered number of student in the portal.

3.4 Activity Diagrams

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams are intended to model both computational and organizational processes (i.e. workflows). Activity diagrams show the overall flow of control.

- **Initial node**. The filled in circle is the starting point of the diagram. An initial node isn't required although it does make it significantly easier to read the diagram.

- **Activity final node**. The filled circle with a border is the ending point. An activity diagram can have zero or more activity final nodes.

- **Activity**. The rounded rectangles represent activities that occur.

- **Flow/edge**. The arrows on the diagram. Although there is a subtle difference between flows and edges I have never seen a practical purpose for the difference although I have no doubt one exists. I'll use the term flow.

- **Fork**. A black bar with one flow going into it and several leaving it. This denotes the beginning of parallel activity.

- **Join**. A black bar with several flows entering it and one leaving it. All flows going into the join must reach it before processing may continue. This denotes the end of parallel processing.

- **Decision**. A diamond with one flow entering and several leaving. The flows leaving include conditions although some modelers will not indicate the conditions if it is obvious.

- **Merge**. A diamond with several flows entering and one leaving. The implication is that one or more incoming flows must reach this point until processing continues, based on any guards on the outgoing flow.

3.4.1 Activity Diagram for Student.

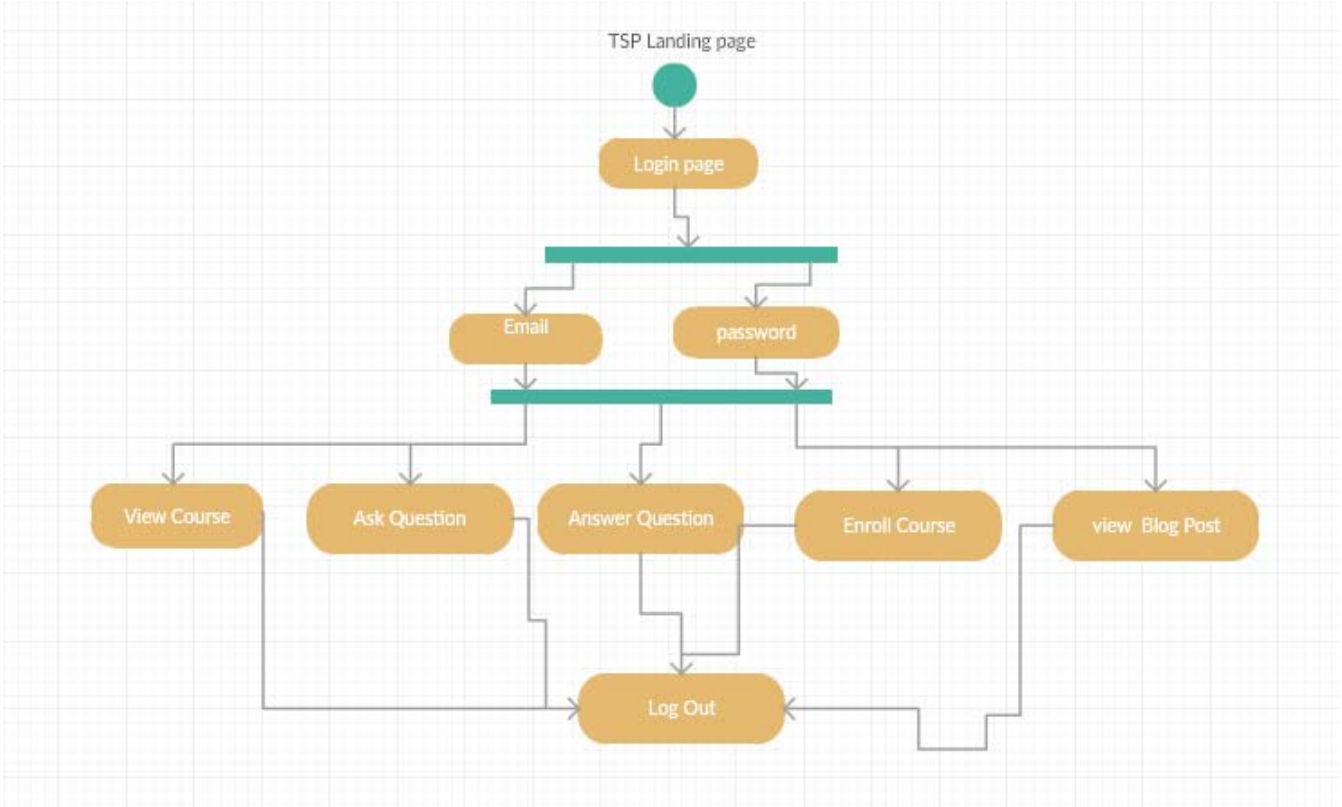

Fig 3.3: Activity Diagram for Student Activities.

Description:
This is the Activity Diagram of a student. Here we have showed some activities about student users. They need to log in to view all the material. After login they will be directed to the home page. They can view the courses they enroll. They can view the questions posted by the students. They can give answer to those questions. They can view the post that is posted by their teachers in the blog. They can have logged out from the system after completing their task.

3.4.2 Activity Diagram for Admin:

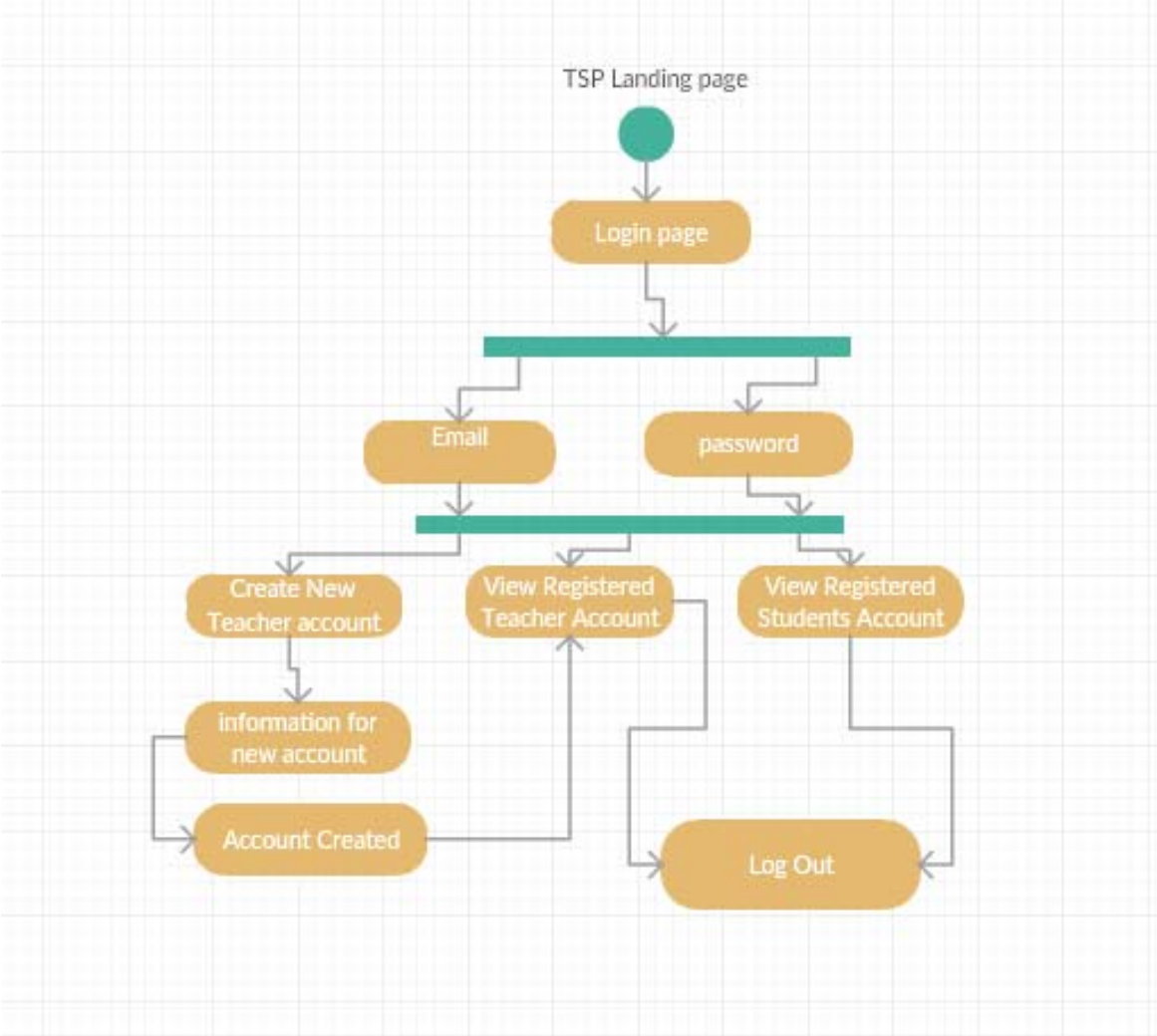

Fig 3.4: Activity Diagram for Admin Activities.

Description:
This Activity diagram shows how the admin interact with different activities and how they jump one step to another step additionally come back to home page and sign out from the system. They can create new faculty account. They can view how many students are registered in the system. They can delete existing faculty accounts. After finishing the task, they can log out so that no one can access o breach the security.

3.5 Software Requirement:
To implement this web application any technologies that are used are open sources. We are discussing about them below.

3.5.1 HTML:
Html is a markup language for describing the web documents. In our website we use HTML5. Every web page you see on the Internet, including this one contains HTML code that helps format and show text and images in an easy to read format. Without HTML a browser would not know how to format a page and would only display plain text with no formatting that contained no links.

3.5.2 CSS:
We use CSS3 to give our HTML a shape. CSS stands for cascading style sheet.

3.5.3 BOOTSTRAP [Version: 3]:
Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web. Bootstrap makes front-end web development faster and easier. It's made for folks of all skill levels, devices of all shapes, and projects of all sizes.

3.5.4 JavaScript:
JavaScript is the programming language of HTML and the Web Programming makes computers do what you want them to do. We use JavaScript for our dropdown menu using bootstrap.

3.5.5 JQuery:
We used jQuery for our subcategories dropdown form. It is a framework of core JavaScript.

3.5.6 PHP [Version: 5.4.16]:
PHP is probably the most popular scripting language on the web. It is used to enhance web pages. With PHP, you can do things like create username and password login pages, check details from a form, create forums, picture

galleries, surveys, and a whole lot more. If you've come across a web page that ends in PHP, Then the author has written some programming code to liven up the plain, old HTML. PHP is known as a server-sided language. That's because the PHP doesn't get executed on your computer. But on the computer you requested the page from. The results are then handed over to you, and displayed in your browser.

3.5.8 Apache Server (XAMPP) [Version: 1.8.2]:

The Apache HTTP Server, commonly referred to as Apache is a web server application notable for playing a key role in the initial growth of the World Wide Web. Apache is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation. Most commonly used on a Unix-like system, the software is available for a wide variety of operating systems, including Unix, FreeBSD, Linux, Solaris, Novell NetWare, OS X, Microsoft Windows, OS/2, TPF, OpenVMS and eComStation. Released under the Apache License, Apache is open-source software.

3.5.9 Text-Editor (Sublime Text) [Version: 2.0.2]:

Sublime Text is the web development tool that lets you efficiently design, develop and maintain standards-based websites and applications. Sublime text provides a powerful combination of visual layout tools, application development features, and code editing support.

3.5.10 MySQL [Version: 5.6.16]:

MySQL is an open-sourcerelational database management system（RDBMS）. In July 2013, it was the world's second mostwidely used RDBMS, and the most widely used open-source client–server RDBMS. It is named after co-founder Wideness's daughter, my. The SQL acronym stands for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. We used MySQL for our database management system.

3.6 Database Design:

Database design is the process of producing a detailed data model of a **database**. This data model contains all the needed logical and physical **design** choices and physical storage parameters needed to generate a **design** in a data definition language, which can then be used to create a **database**.

My database name is tsp that is stands for teacher students portal.

3.7 Database Tables:

In relational **databases** and flat file **databases**, a **table** is a set of data elements (values) using a model of vertical columns (identifiable by name) and horizontal rows, the cell being the unit where a row and column intersect. A **table** has a specified number of columns, but can have any number of rows.

I have total of 8 tables. They are

- answer
- blog
- course
- course_material
- enroll
- notice
- question
- user

3.7.1 List of All Tables:

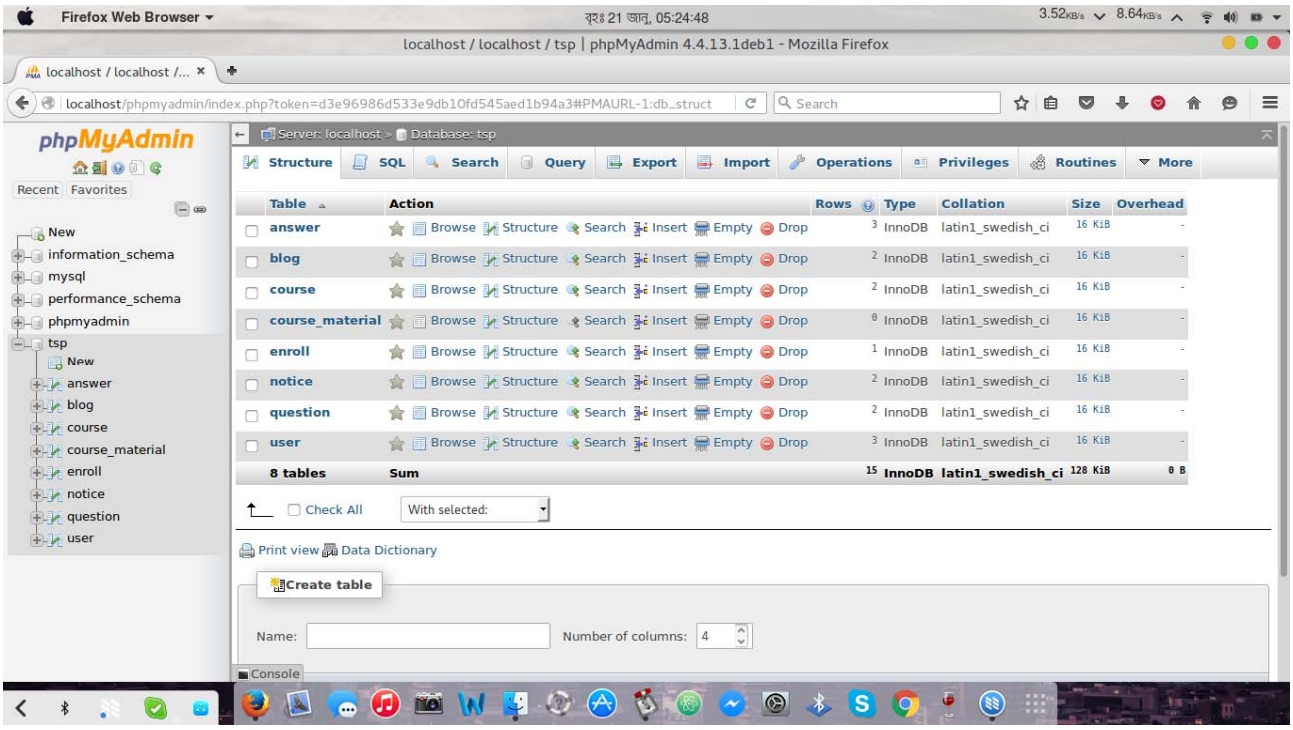

Fig 3.5: List of all Tables

3.7.2 Answer Table

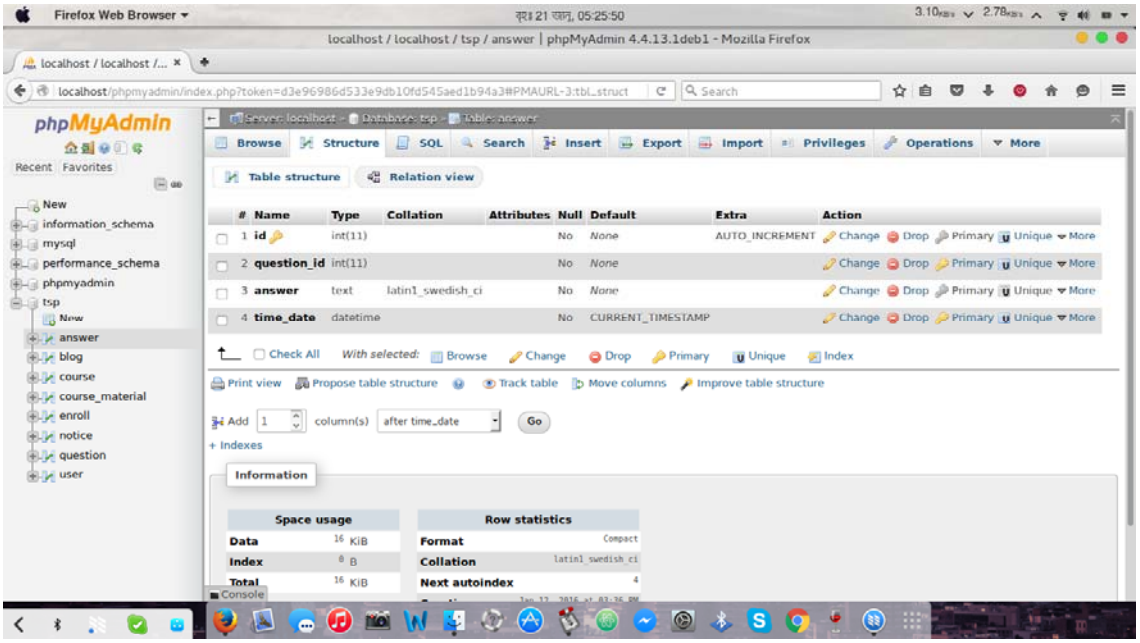

Fig 3.6: Answer Table

3.7.3 Blog table

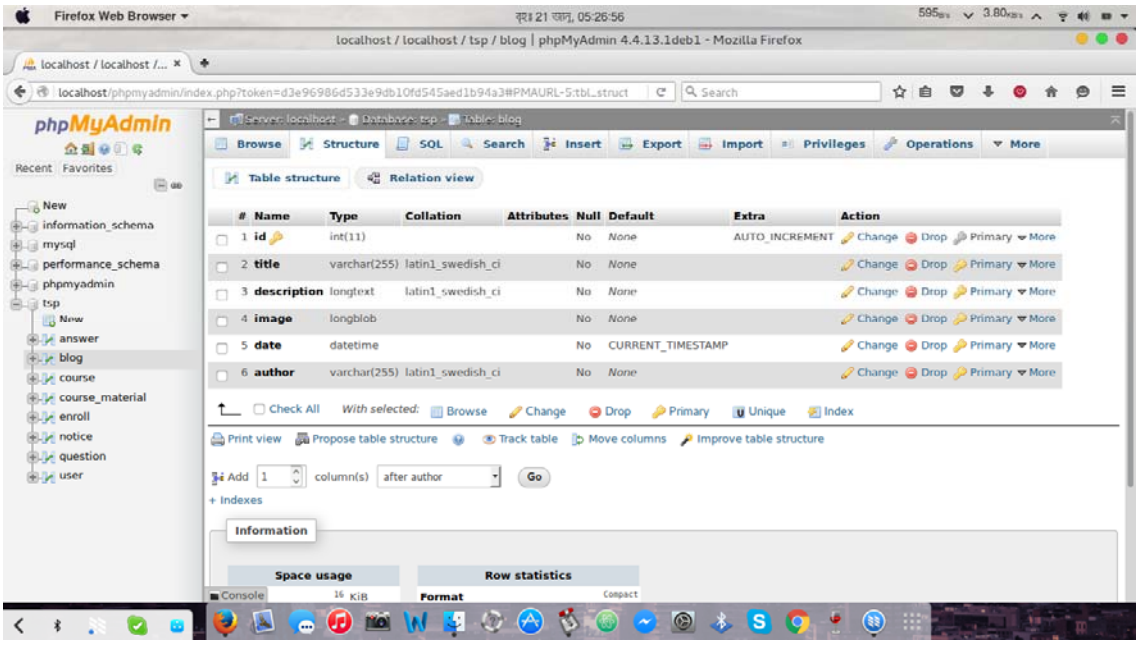

Fig 3.7: Blog Table

3.7.4 Course Table

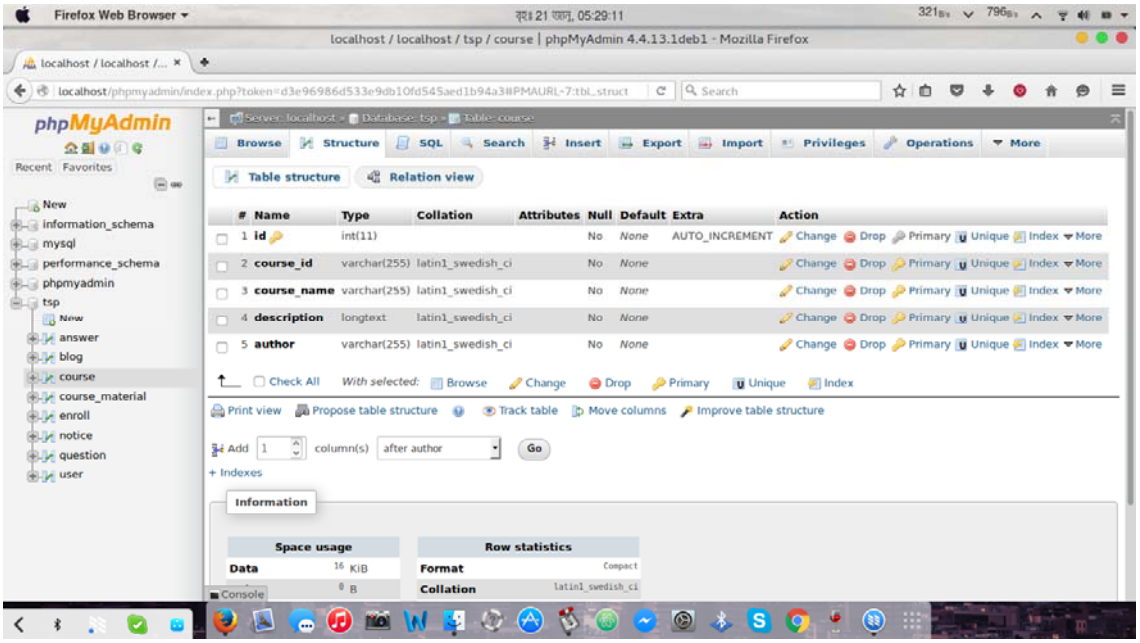

Fig 3.8: Course Table

3.7.5 Course Material Table

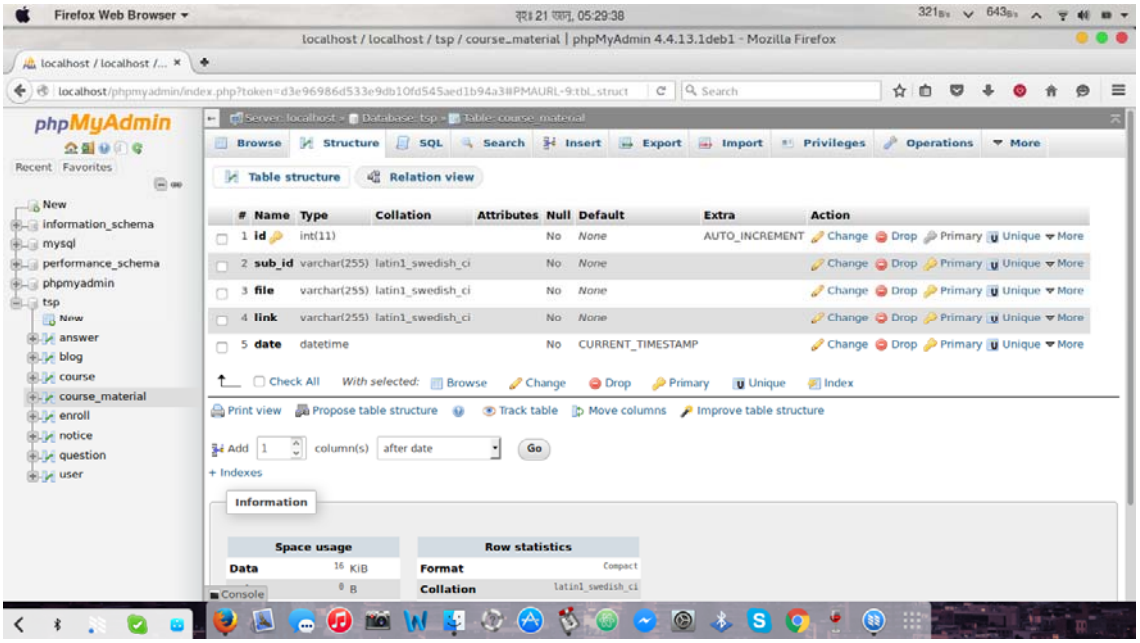

Fig 3.9: Course Material Table

3.7.6 Enroll Table

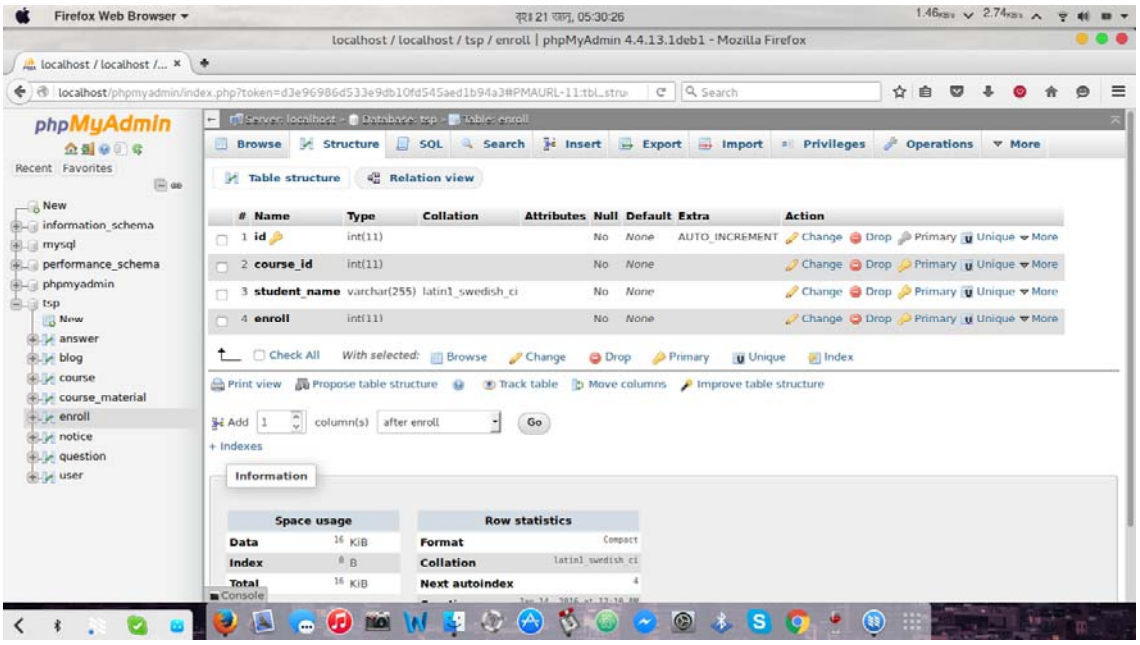

Fig 3.10: Enroll Table

3.7.7 Notice Table

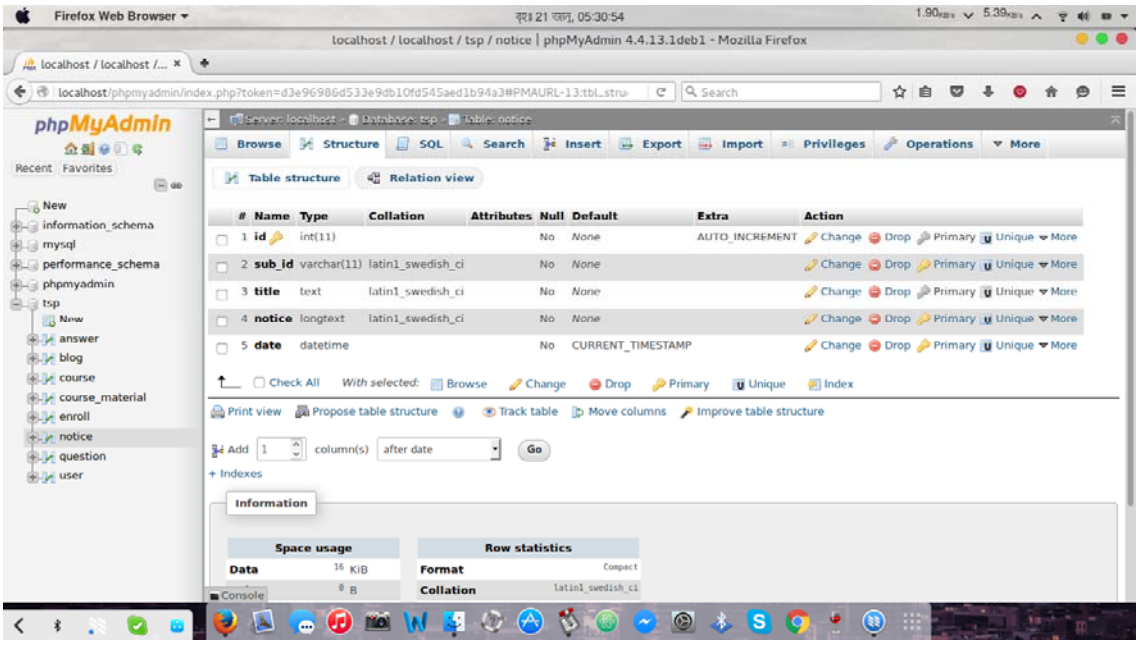

Fig 3.11:Notice Table

3.7.8 Question Table

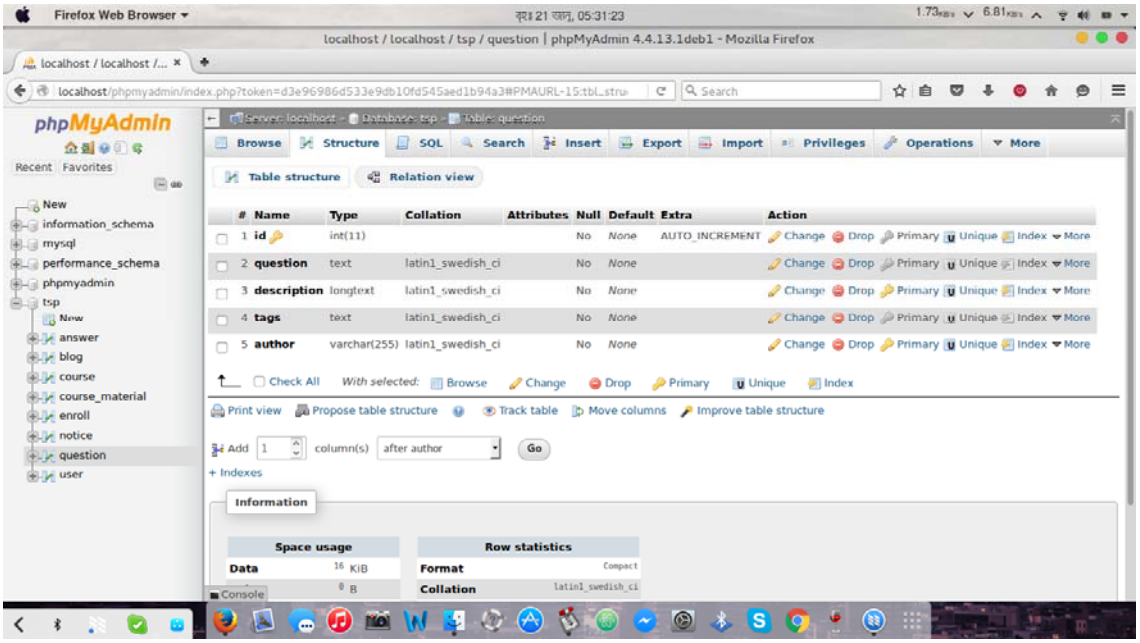

Fig 3.12: Question Table

3.7.9 User Table

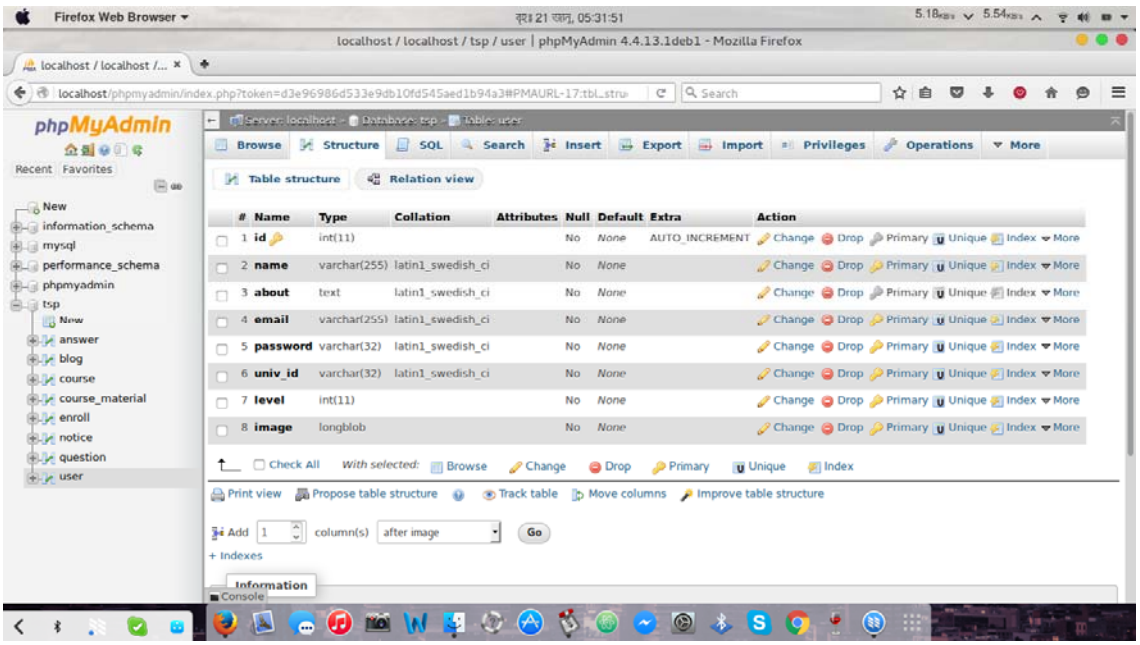

Fig 3.13: User Table

Chapter 4: Design Specification

4.1 Interface:

In information technology, the user interface（UI） is everything designed into an information device with which a human being may interact. We design our website user friendly. This website is fully responsive for mobile users.

User experience design (UXD or UED) is the process of enhancing customer satisfaction and loyalty by improving the usability, ease of use, and pleasure provided in the interaction between the customer and the product.

4.1.1 Admin User Panel

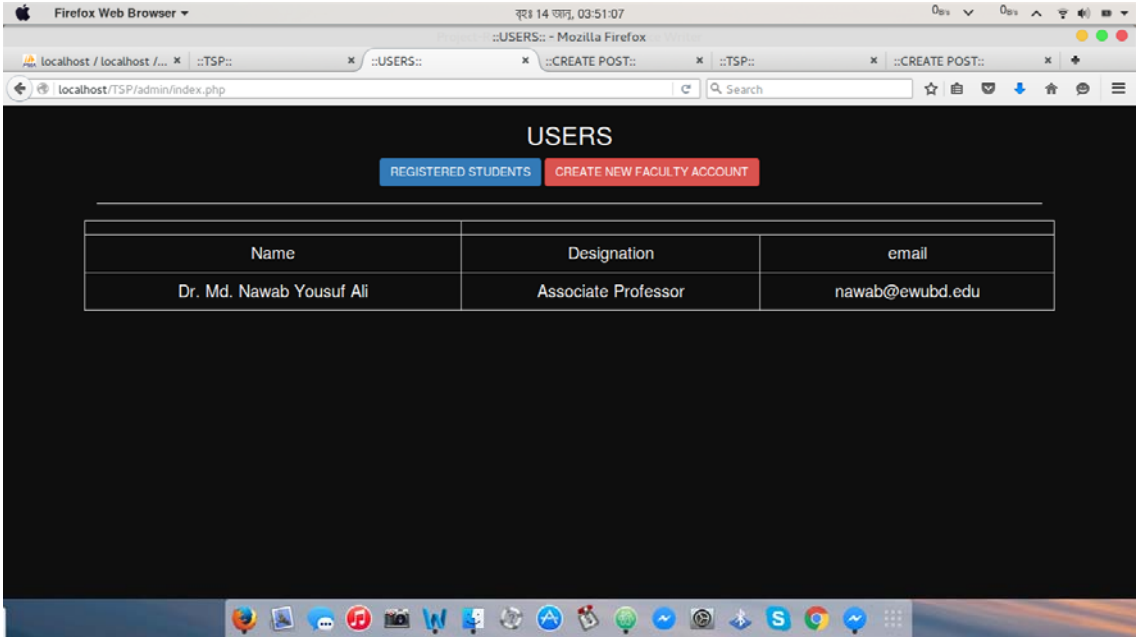

Fig 4.1: Admin User View Panel

4.1.2 Login page

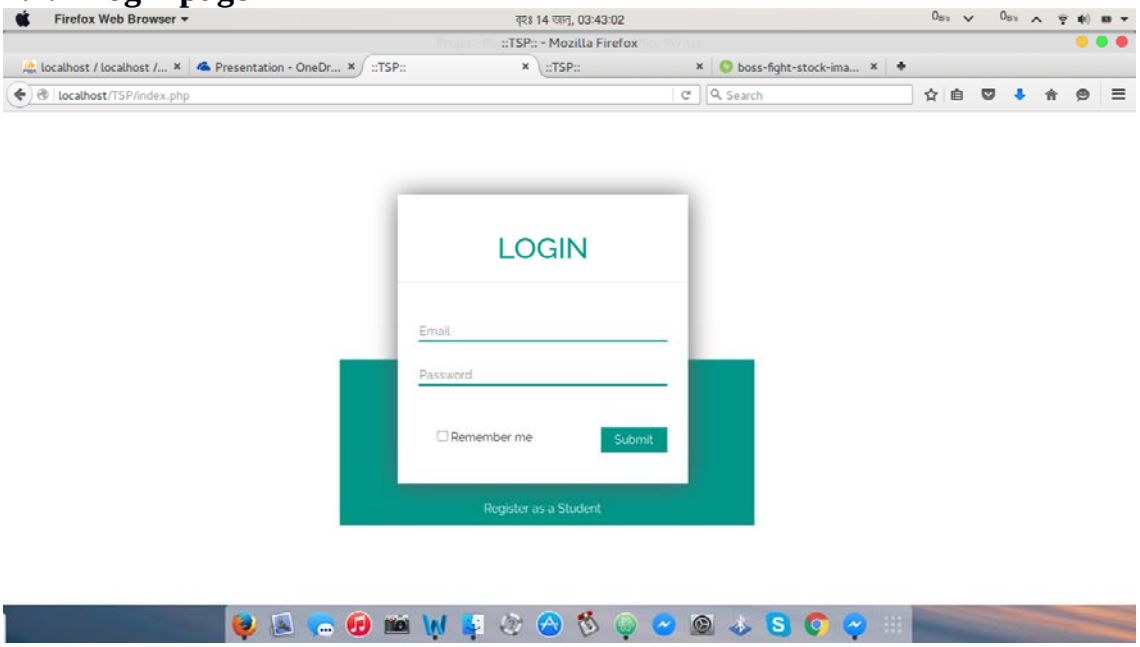

Fig 4.2: Login page

4.1.3 Registration Page

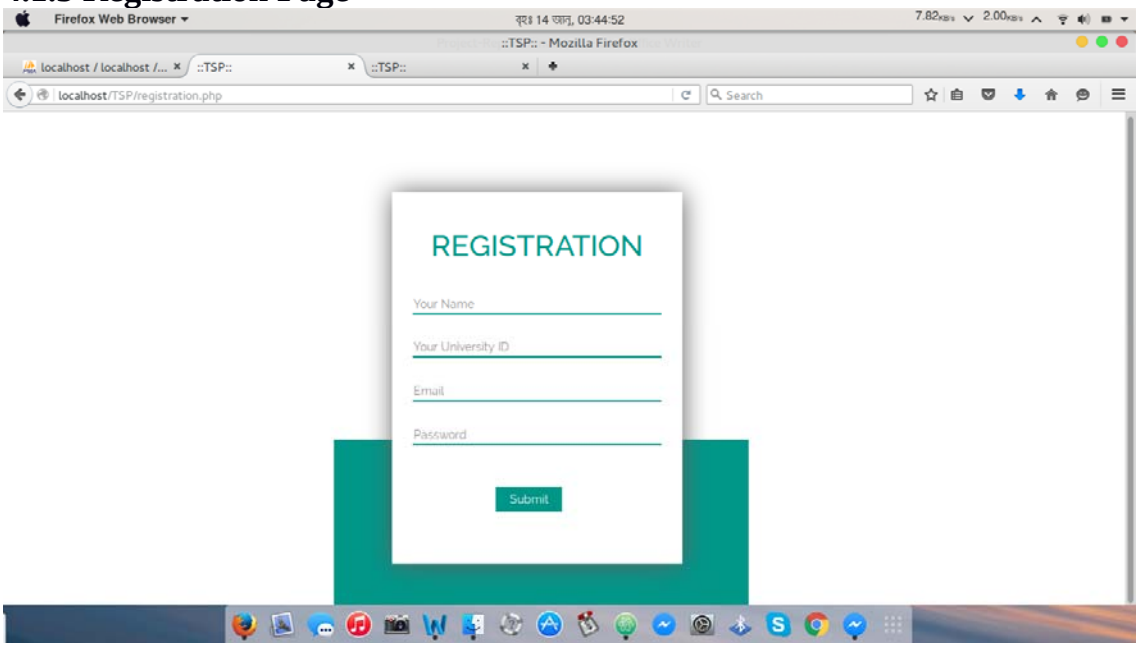

Fig 4.3: Registration Page

4.1.4 Students Landing page

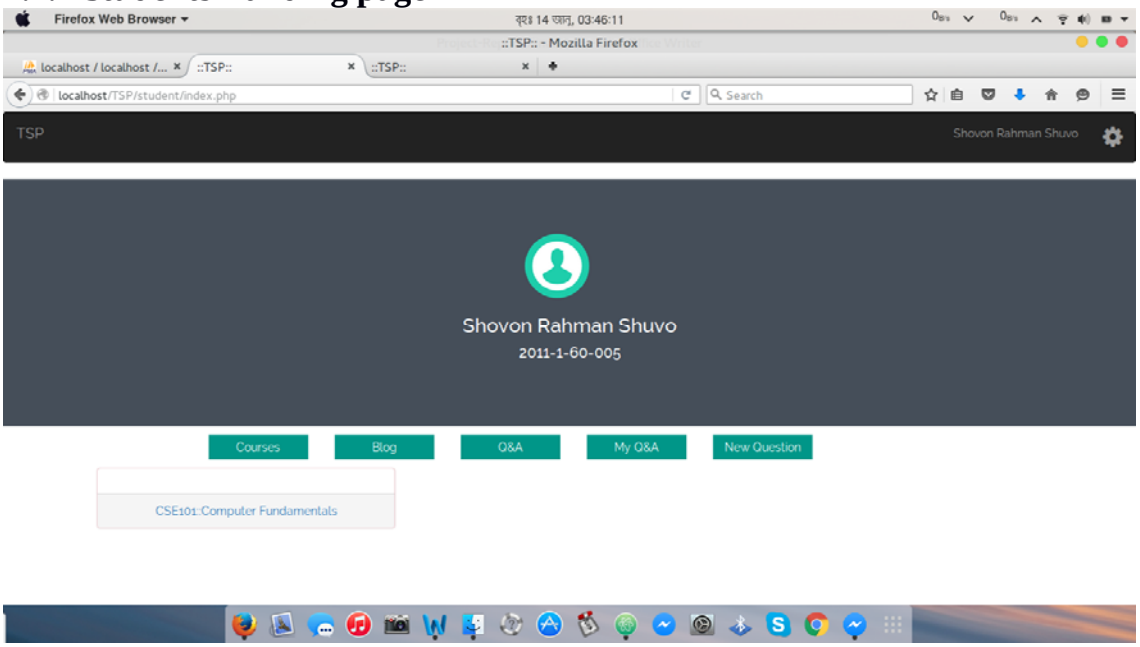

Fig 4.4: Student Landing Page

4.1.5 Teacher Landing Page

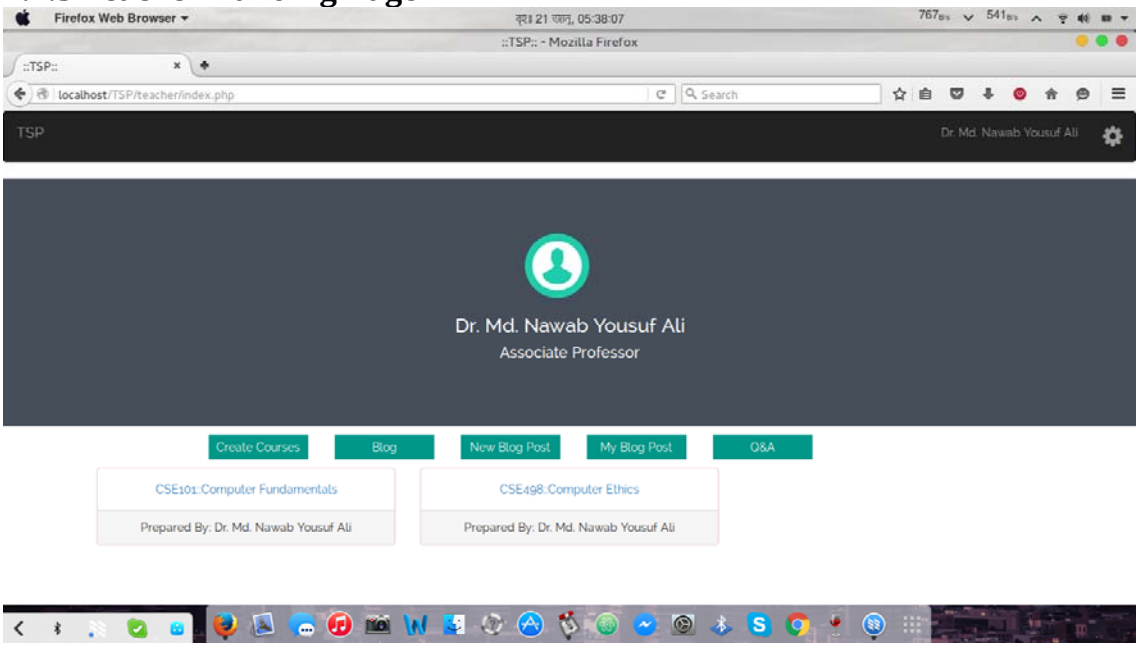

Fig 4.5: Teacher Landing Page

4.1.6 Question Posting page

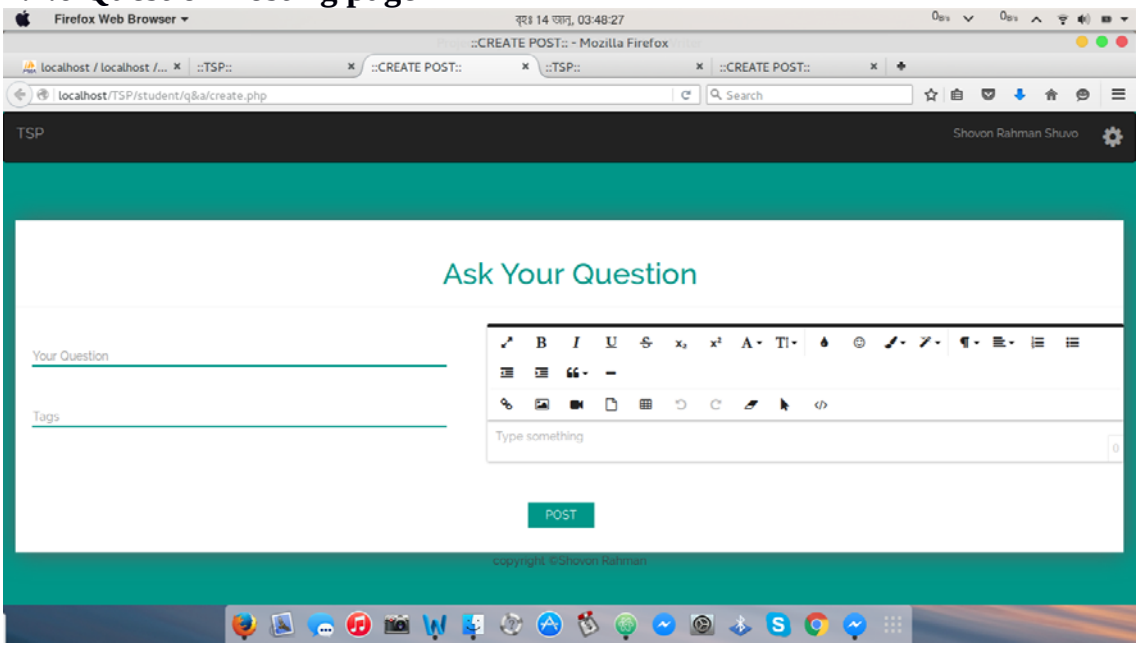

Fig 4.6:Question Posting Page

4.1.7 Answer Page

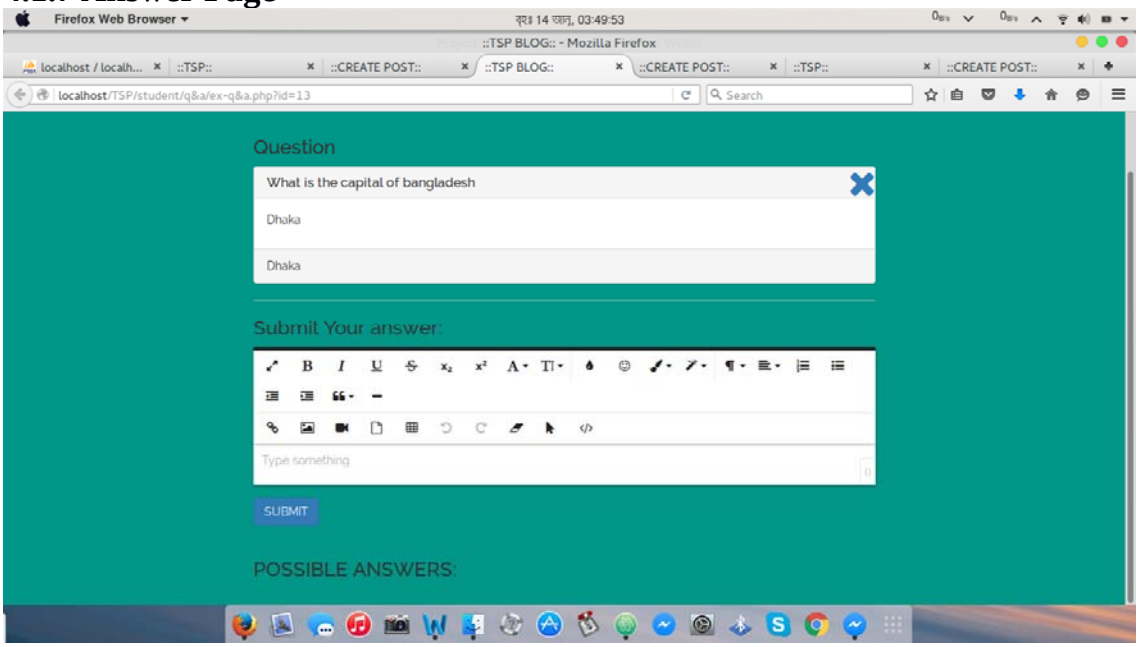

Fig 4.7:Answer Page

4.1.8 Blog Posting Page

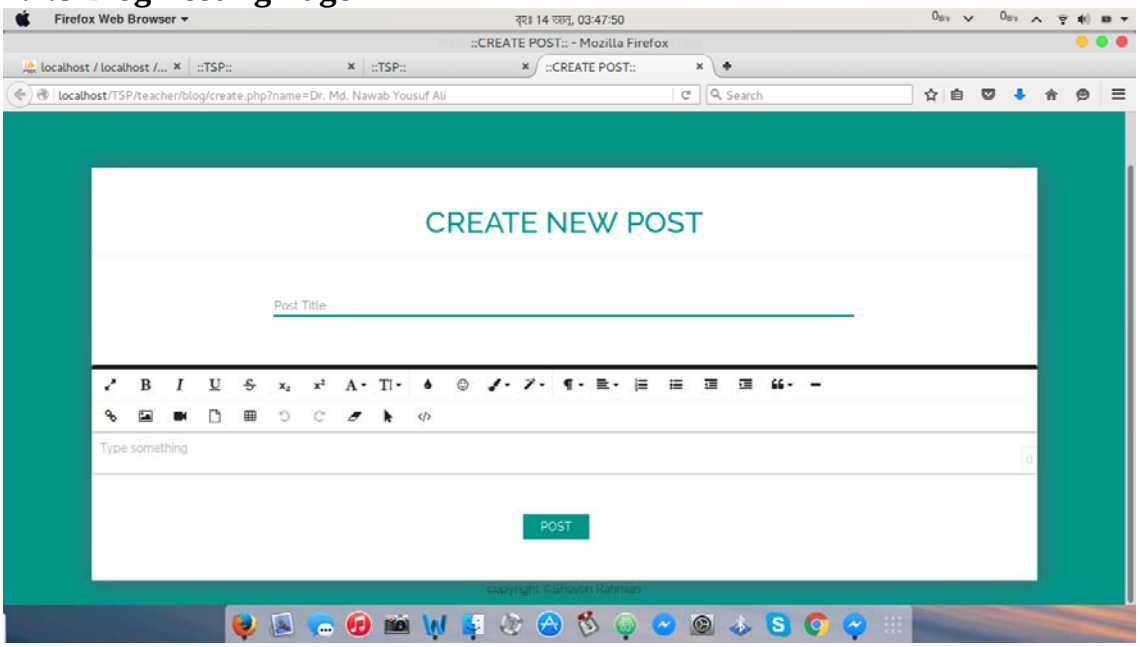

Fig 4.8: Blog Posting Page

4.1.9 Notice Posting page

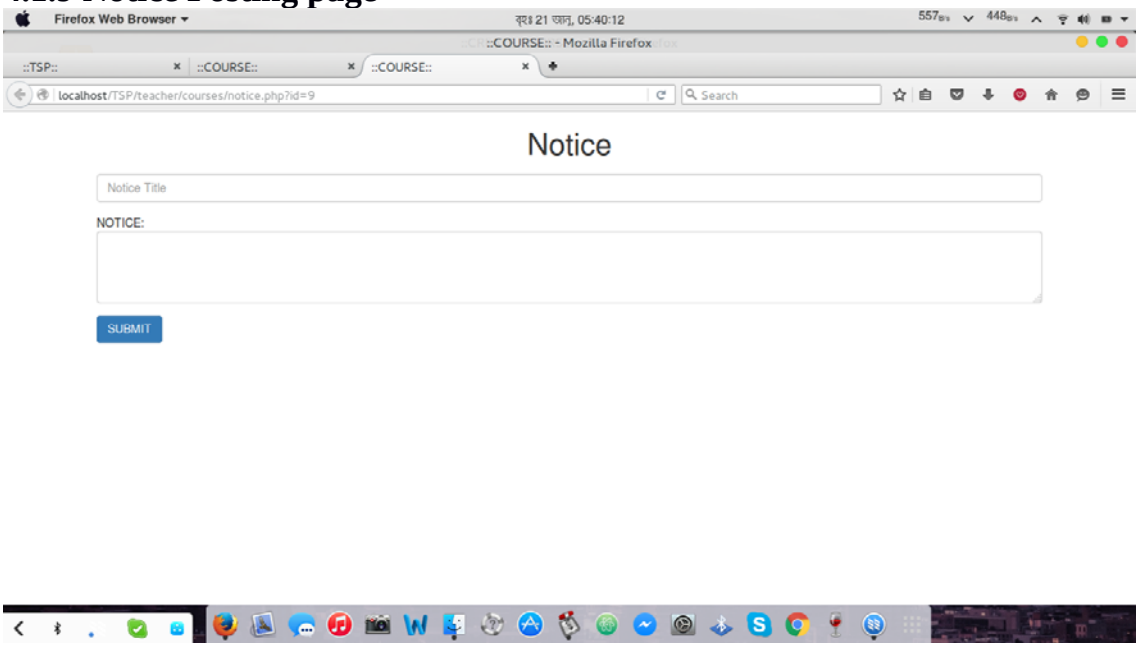

Fig 4.9:Notice Posting Page

4.1.10 Create Course Page

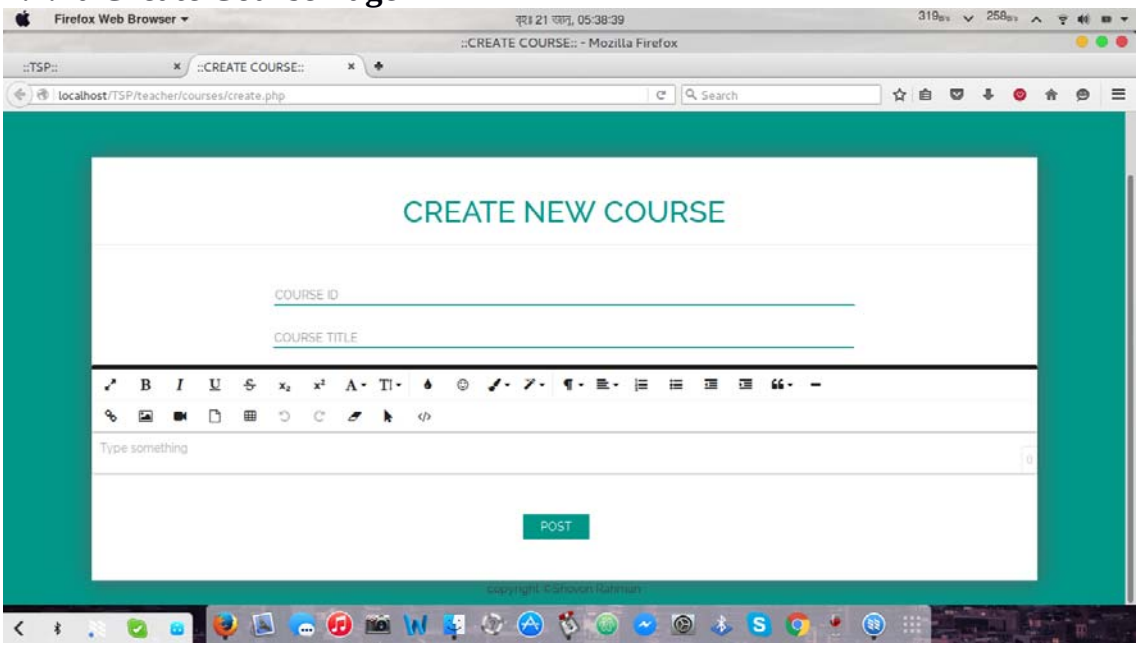

Fig 4.10: Create New Course Page

4.1.11 Course Page

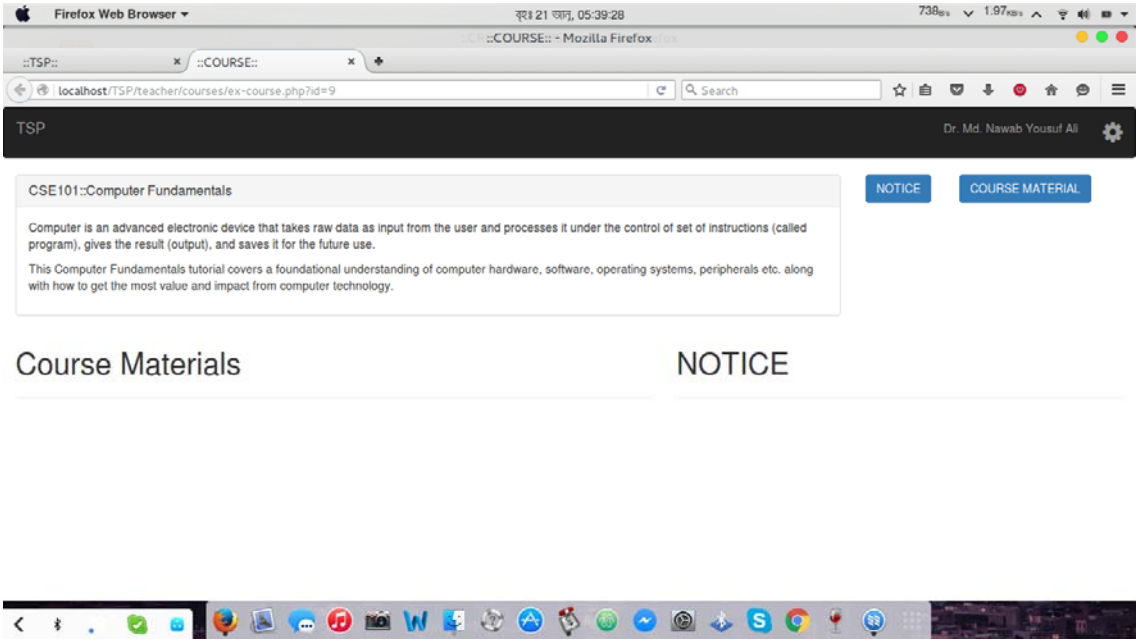

Fig 4.11: Course Page

4.1.12 Question Page

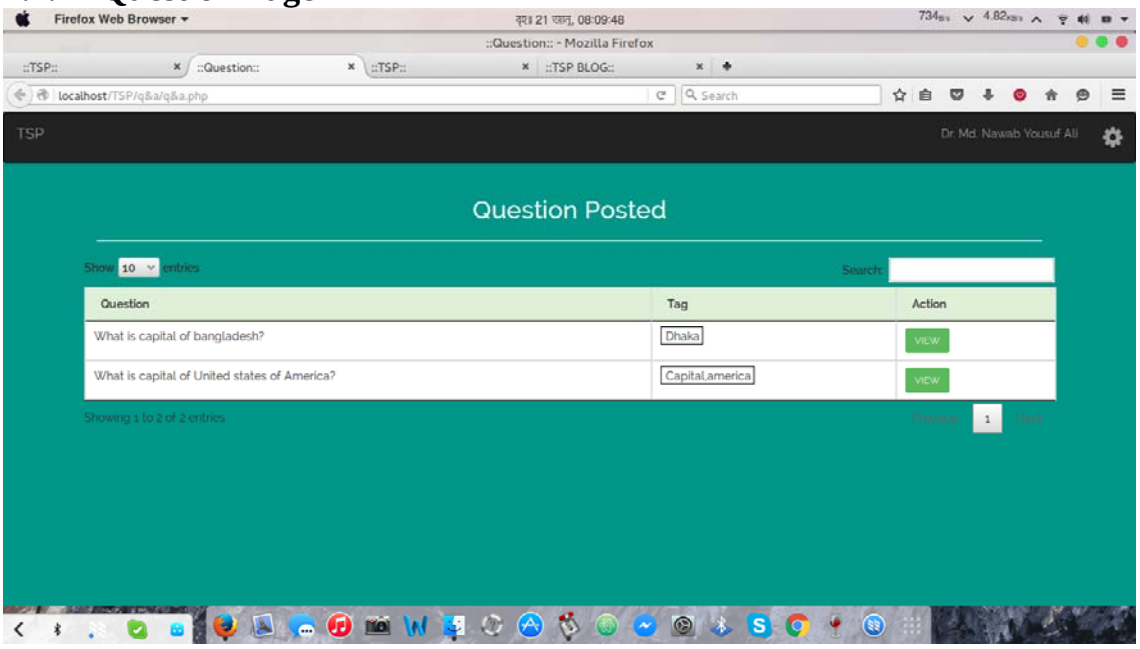

Fig 4.12: Question Page

4.1.13 Student View Blog

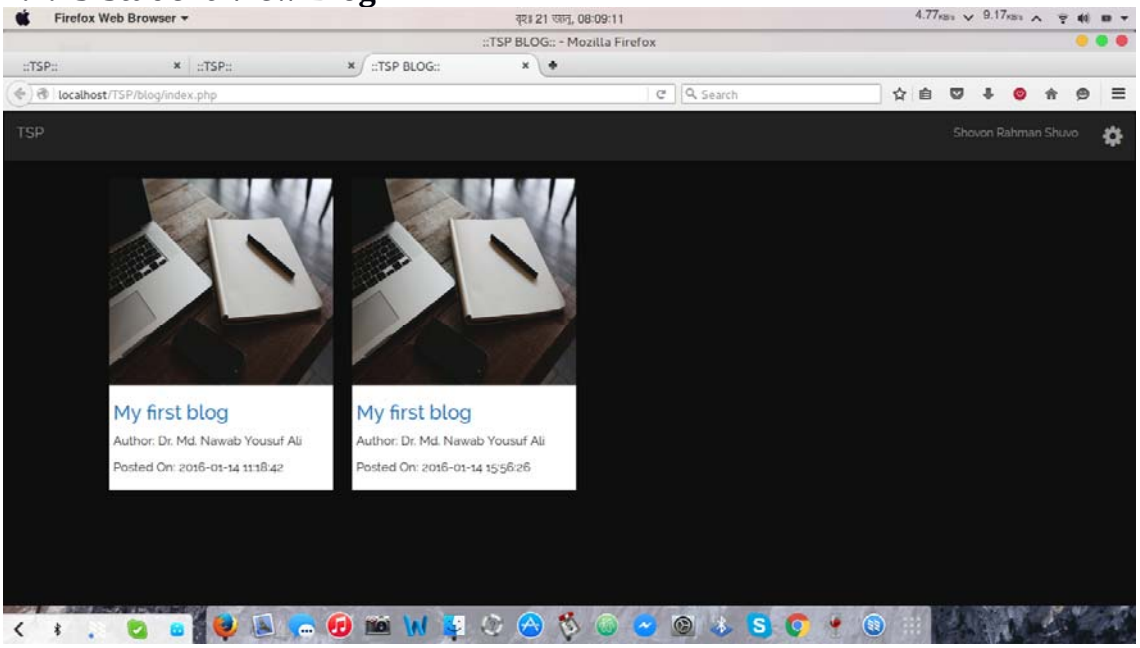

Fig 4.13:Student View Blog

4.1.14 Student Course View

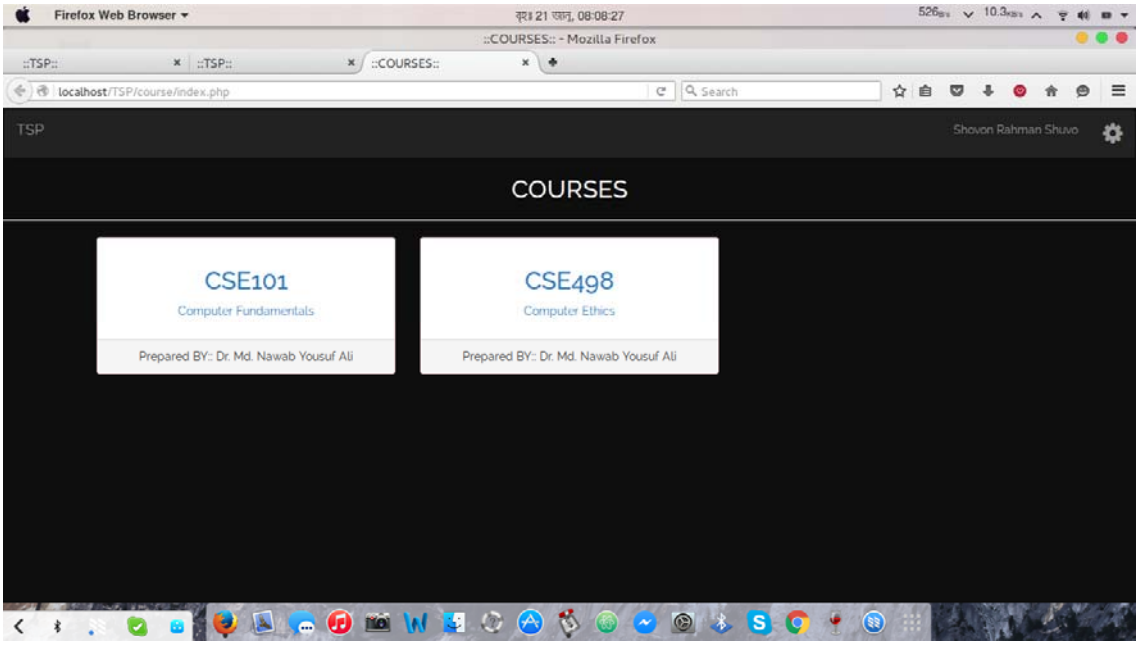

Fig 4.14:Student Course View

Chapter 5: Conclusion

Bangladesh is a developing country. There are no online facilities where students can interact with their teachers. To fulfill that that I made this project. So that students can interact with their teacher very easily. Teacher will be able to share more knowledge, reading materials with their student. Student can ask and get questions answer very easily within a very short time.

Chapter 6: Future Work

I will include lots of more categories based on user demands like book review and so on. Currently our database is not that dynamic, I will make it more efficient. However, we will include email account verification. Because of 'localhost' SMTP protocol error, the email system is not working. We will include own rating system instead of **Facebook like API** so that we can use that to understand the user behavior using the data mining process. We will also build a monitoring system to see if a post is fraud or not.

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