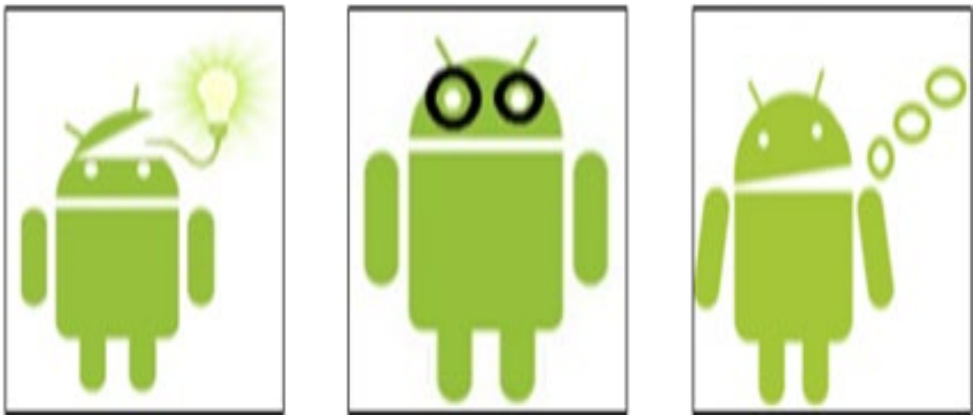
ELECTRONIC FORUM ON ANDROID SYSTEM

Supervised by : Dr.Ebrahim Elhenawy

Graduation Project Year 2013



Electronic forum on android system

Supervised by : Dr.Ebrahim Elhenawy

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Acknowledgement:

Praise Allah firstly and finally for giving us the powerful to go on this. We would like to acknowledge the advice and guidance of **Dr.Ibrahim El Henawy**, project supervisor without whose knowledge and assistance this project would not have been successful. We also thank E**ng. Mahmoud Mahdy** for his guidance and suggestions .We appreciates **eng.: Abd El Wahed Khamis** for his support. We would like to thank our family members ,Without our family's encouragement, We would not have finished the work .Thanks to Graduation Project , it gave us the chance not only to learn self depending but also to live the experience of team working which we learnt a lot from .

Learned Skills:

These words we wrote about personal experience that we gained in small life.

- Learn how to work with team before starting our career.
- Being able to face even the most pressing crises with your wits about you and in the most productive way is possibly the most important thing on this list.
- You don’t have to know everything – but you should be able to quickly and painlessly find out what you need to know. There is always time ..!

Abstract:

Given rapid technological development has become the fastest smartphone way to follow events and communicate with each other.

Let's think in communication with the primary source of knowledge that our college and communicate with faculty students and staff to ease the burden in the search for information.

Table of Contents

Chapter 1

Introduction

Idea

The idea is to connect mobile database for students on the Web page.

And the emergence of these data through the mobile interface. Enters the students via e-mail and password of their own.

Where it displays the events of interest to the student activities and schedules of lectures.

Advantages

This application is characterized by rapid communication with teachers and teaching assistants and open discussion groups to increase scientific knowledge on the topics of materials and linked to the Internet even students benefit.

Chapter 2

Background

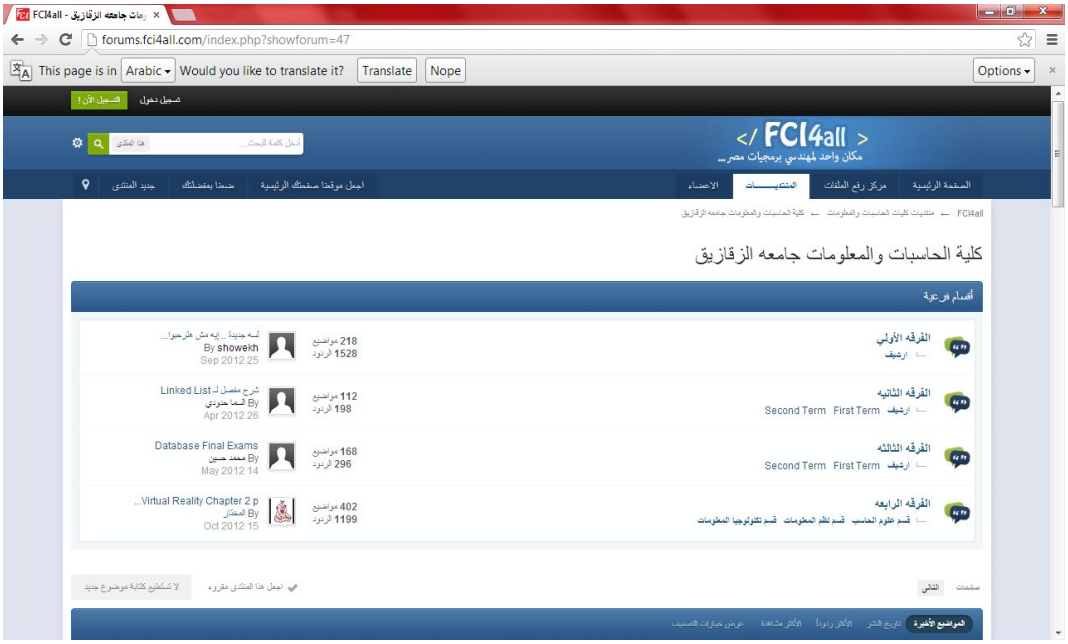
Similars Applications

Web University

fci zu Site helps College of Computing and Information students easy access to information direct them know schedules exams and time and helps all four teams on the convergence towards the exchange of activities and information, the site college to facilitate the students enrolled to find out the new college and its goals and About Faculty and sports and cultural activities practiced by the more news and informationTenet

-more support visit site :

http://forums.fci4all.com/index.php?showforum=47



SMS

The messaging service to send everything new college of events, dates and exams to make it easier for student time searching. The increasing and almost universal use of mobile phones has opened up a new avenue of opportunity for communication between the University and its students. This page sets out the ways in which the University uses the EduText SMS text messaging system to communicate important information to our students. The use of SMS messaging is intended to sit alongside other existing forms of communications such as letters, email, and the web. The immediate delivery of SMS messages gives it an advantage over other forms of communication: most students have their phones with them all the time and the message is likely to be received much sooner.

The Disadvantage:

Despite the popularity of SMS service but there are some criticisms, such as:

- The speed of the arrival of the message is not guaranteed, it may take during the periods of time in the Highway Traffic minutes and even hours before it reaches its target.

It is dedicated solely to send text messages, SMS does not support sending pictures and video and do not even music files.this page sets out the ways in which the University uses the EduText SMS text messaging system to communicate important information to our students.

The use of SMS messaging is intended to sit alongside other existing forms of communications such as letters, email, and the web. The immediate delivery of SMS messages gives it an advantage over other forms of communication: most students have their phones with them all the time and the message is likely to be received much sooner.

Text messaging has wide accessibility. Most people who are blind or visually impaired use mobile phones (the phones have speech and therefore the individual can listen to the text message.

Technologies

Android

Android is a Linux-based operating system designed primarily for touchscreen mobile devices such as smartphones and tablet computers. Initially developed by Android, Inc., which Google backed financially and later bought in 2005, Android was unveiled in 2007 along with the founding of the Open Handset Alliance: a consortium of hardware, software, and telecommunication companies devoted to advancing open standards for mobile devices. The first Android-powered phone was sold in October 2008.

Android is open source and Google releases the code under the Apache License. This open source code and permissive licensing allows the software to be freely modified and distributed by device manufacturers, wireless carriers and enthusiast developers. Additionally, Android has a large community of developers writing applications ("apps") that extend the functionality of devices, written primarily in a customized version of the Java programming language. In October 2012, there were approximately 700,000 apps available for Android, and the estimated number of applications downloaded from Google Play, Android's primary app store, was 25 billion.

These factors have contributed towards making Android the world's most widely used smartphone platform, overtaking Symbian in the fourth quarter of 2010, and the software of choice for technology companies who require a low-cost, customizable, lightweight operating system for high tech devices without developing one from scratch. As a result, despite being primarily designed for phones and tablets, it has seen additional applications on televisions, games consoles, digital cameras and other electronics. Android's open nature has further encouraged a large community of developers and enthusiasts to use the open source code as a foundation for community-driven projects, which add new features for advanced users or bring Android to devices which were officially released running other operating systems.

A report in July 2013 stated that Android's share of the global smartphone market, led by Samsung products, was 64% in March 2013. The operating system's success has made it a target for patent litigation as part of the so-called "smartphone wars" between technology companies. As of May 2013, a total of 900 million Android devices have been activated and 48 billion apps have been installed from the Google Play store.

PHP

PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. PHP is now installed on more than 244 million websites and 2.1 million web servers

it now stands for PHP: Hypertext Preprocessor, a recursive acronym.

PHP code is interpreted by a web server with a PHP processor module which generates the resulting web page: PHP commands can be embedded directly into an HTML source document rather than calling an external file to process data. It has also evolved to include a command-line interface capability and can be used in standalone graphical applications.

PHP is free software released under the PHP License, which is incompatible with the GNU General Public License (GPL) due to restrictions on the usage of the term PHP.[7] PHP can be deployed on most web servers and also as a standalone shell on almost every operating system and platform

- PHP files can contain text, HTML tags and scripts
- PHP files are returned to the browser as plain HTML
- PHP files have a file extension of ".php", ".php3", or ".phtml"

MYSQL

MySQL is the most popular Open Source Relational SQL database management system. MySQL is one of the best RDBMS being used for developing web based software applications.

If you are willing to compile and execute SQL programs with SQLite DBMS but you do not have a setup for the same, then do not worry. The compileonline.com is available on a high end dedciated server giving you real programming experience with a comfort of single click execution

- MySQL is ideal for both small and large applications
- MySQL is very fast, reliable, and easy to use
- MySQL supports standard SQL
- MySQL compiles on a number of platforms
- MySQL is free to download and use
- MySQL is developed, distributed, and supported by Oracle Corporation
- MySQL is named after co-founder Monty Widenius's daughter: My

The data in MySQL is stored in tables. A table is a collection of related data, and it consists of columns and rows.

Databases are useful when storing information categorically

Php & MySQL

PHP combined with MySQL are cross-platform (you can develop in Windows and serve on a Unix platform)

Connecting to a MySQL Database

Before you can access and work with data in a database, you must create a connection to the database.

In PHP, this is done with the mysql_connect() function.

Syntax

```
mysql_connect(servername,username,password);
```

System Technology

PHP

Design and administration pages through which data will be adjusted and is controlled at the forum and connect to database

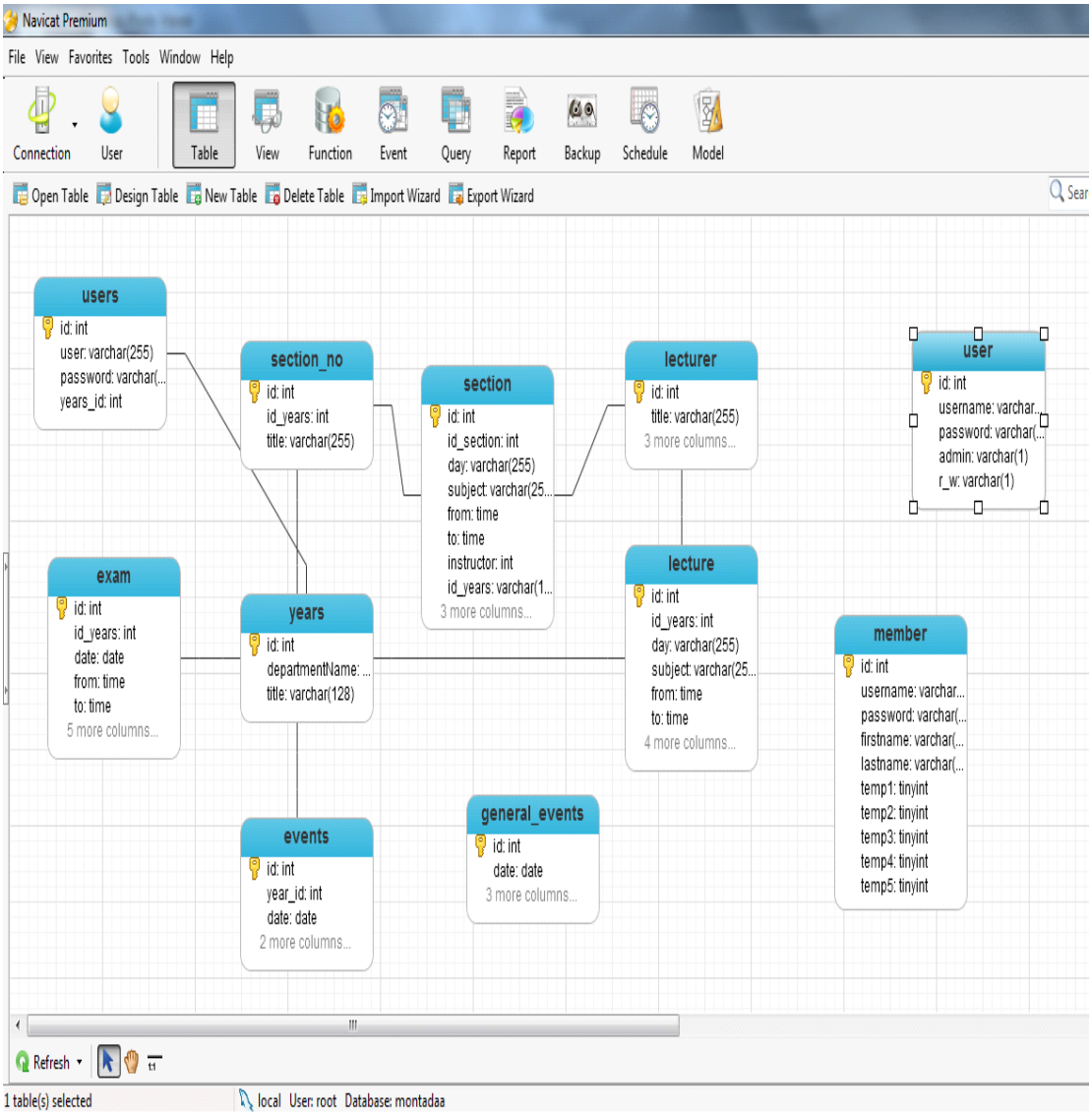
Android

Design the main system interface for mobile application Which deals with the user and the create the activitie sand connect to php pages

Chapter 3

System Analysis

Database design



- Extracting data from operational systems;
- Moving it into data warehouse structures;
- Reorganizing and structuring the data for analysis purposes; and

- Moving it into reporting structures called data marts.

Data warehouse database design is based on two key design concepts:

- Relational database design; and Beginning schema design.

Conceptual data model is created at the information management strategy stage;

Enterprise data model is an entity relationship diagram which builds on the conceptual data model and adds additional details;

Logical data model is a fully attributed entity relationship diagram (ERD), which shows each entity, its relationship to other entitles and specifies the applicable business rules;

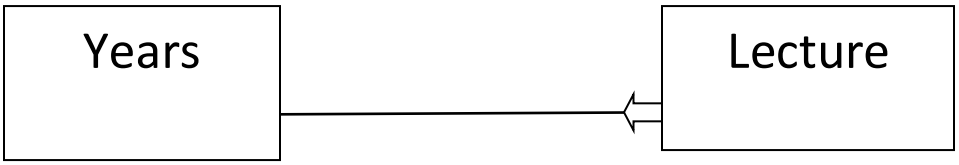
Physical data model is the final representation of the relational database design structures that will be generated from the model.

A conceptual data model should be a one page diagram identifying key entities. Documentation required to support this model is generally produced by the data model tool and should include:
Entity name; and Entity definition.

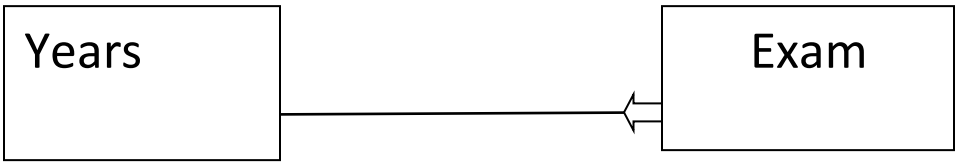
Relationship

Relationship definition and verb phrase e.g. each table may own one or many fields; and each field must be owned by one and only one table.

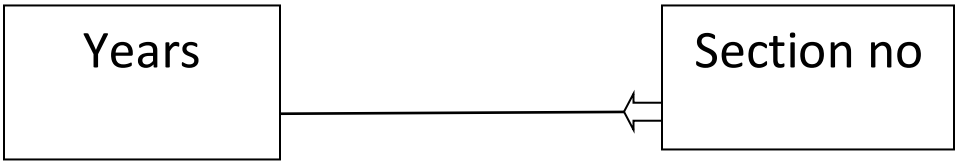
Relationship between Years & Lecture:



Relationship between Years & Exam:

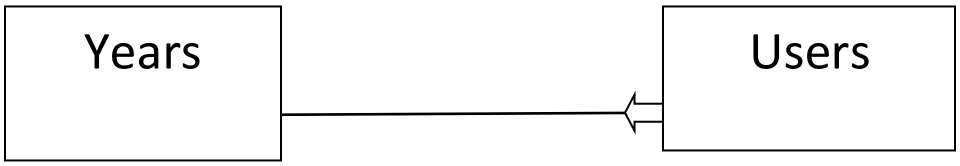


Relationship between Years & section no:

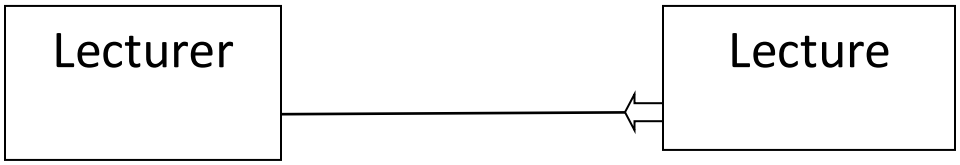


Relationship between Years &Events:

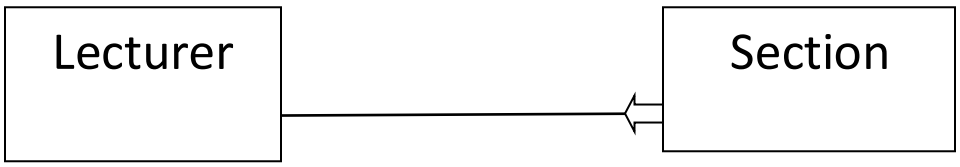
Relationship between Years &Users:



Relationship between Lecturer & Lecture:



Relationship between Lecturer & Section:



Table

Years

Consists of a section name and a description of the year. This table is one of the most important tables due to be used as a foreign key in most database tables as table exams, lectures, and users.

Exam

Consists of a department Title and the date and time and the name of the subject It stores all records of exam. For all departments

Lecture

Consists of a department title and the day and Time and the name of subject and the doctor name It stores all records lecture for all departments

Section

Consists of section title and the day and time and the name of the subject and the Engineer name It stores all records of sections for all years

Event

Consists of department, Date and event fields. It stores all events for all years and the date

General event

Consist of event and the date Store all general event and date

Lecturer

Contain the name of lecturer such as doctors and engineers

Queries

A query is a question or a request. We can query a database for specific information and have a recordset returned.

Exam(year#):

```
SELECT    exam.date    ,exam.`from`    ,exam.`to`,
exam.`subject` ,years.departmentName

from exam ,years

WHERE exam.id_years= year#&&years.id= year#
```

It show the exam table for specific year

Lecture(year#,day):

```
SELECT        lecture.`day`         ,lecture.`from`
,lecture.`to`,                    lecture.`subject`
,years.departmentName,lecturer.title

from lecture ,years,lecturer

WHERE      lecture.id_years=      year#&&years.id=
year#&&lecture.`day`='day'
&&lecturer.id=lecture.doctor
```

It show the lecture table for specific year and day

Event (year # ,#):

```
 SELECT  `events`.`events`,`events`.date

from `events`

where `events`.year_id=year#&&ROW_COUNT()<#
```

it show the specific number of event for specific year

general events (#)

```
SELECT
`general_events`.`events`,`general_events`.dat
e

from `general_events`

WHERE ROW_COUNT()<#
```

It show specific # of general event

Section (section#,day)

```
SELECT        section.`day`         ,section.`from`
,section.`to`,                    section.`subject`
,section_no.title,lecturer.title

from section ,section_no,lecturer
```

```
WHERE                    section.id_section=section#
&&section_no.id=section#&&section.`day`='day'&
&lecturer.id=section.instructor
```

It show the secyin table for specific year and day

Chapter 4

System Design

System Components

The System consist of three main components

- MySQL Database
- PHP Server API Pages
- PHP Admin Pages
- Android Mobile Application

MySQL Database

- Contains the database of forums and registers users.

PHP Server API Pages

- Accepting requests by GET/POST methods
- Interact with PHP classes to get data from database or store in database
- Finally will give output in JSON format

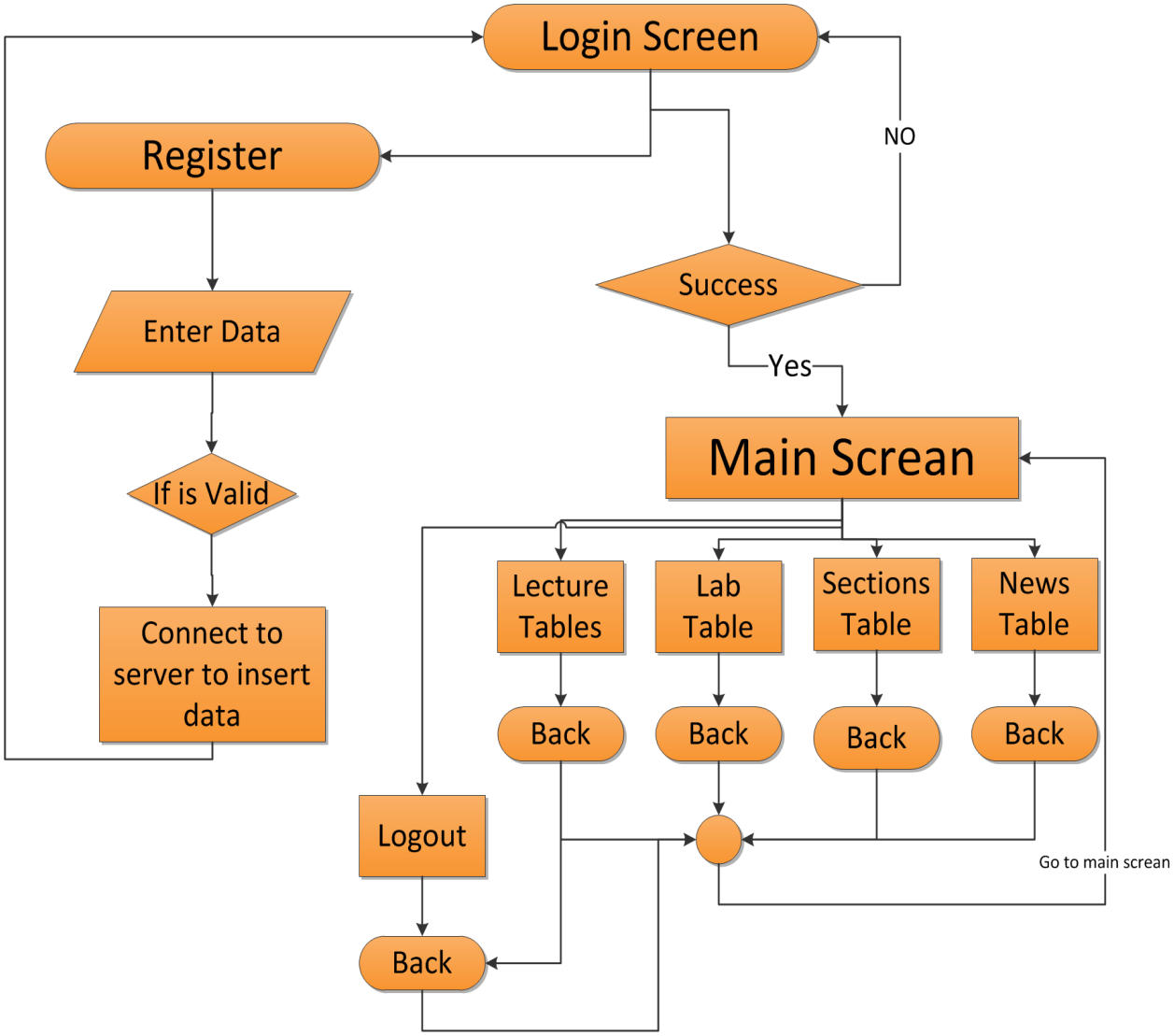
PHP Admin Pages

- Database interface to admin to direct manipulate data and queries

Android Mobile Application

- Handle user interface and connection to web server database
- Interact with server to get data from PHP pages
- Finally will give output in JSON format

Android Application



Login Screen

To do login screen Success, you should passing to this function

- Connect to server function: this function use to confirm your login and go to login screen to insert data.

- Upon completing the registration phase, you can go to Main Screen

Register Screen

Enter Data: fill your data in this function like your name, password and Email, after that, valued your data if it true, go to connect to server function.

Main Screen

The main screen and contain the multi functions to retrieve data from PHP API data server, a BACK function use to back to main screen.

- Lecture Table
- Lab Table
- Section Table
- News
- Lecturer

Mobile Library Function

Database Handler

Database Handler to handler SQL data in mobile which save user information. Contain the following function

- **Database Handler**: this function uses to create table.
- **On Upgrade:** this function uses to Drop older table if existed and create tables again.
- **Add User**: this function uses to Storing user details in database.
- **Get user details**: this function uses to Getting user data from database.
- **Get Row Count:** this function uses to Getting user login status and return true if rows are there in table.
- **Reset Tables**: this function uses to Re crate database and Delete all tables and create them again.

JSON Parser.

To Pars data from PHP pages to applications.

- Get JSON from URL. Interface of data handler function. Contain the following:
    1. JSON Object gets JSON from URL: this function Making HTTP request.

User Functions.

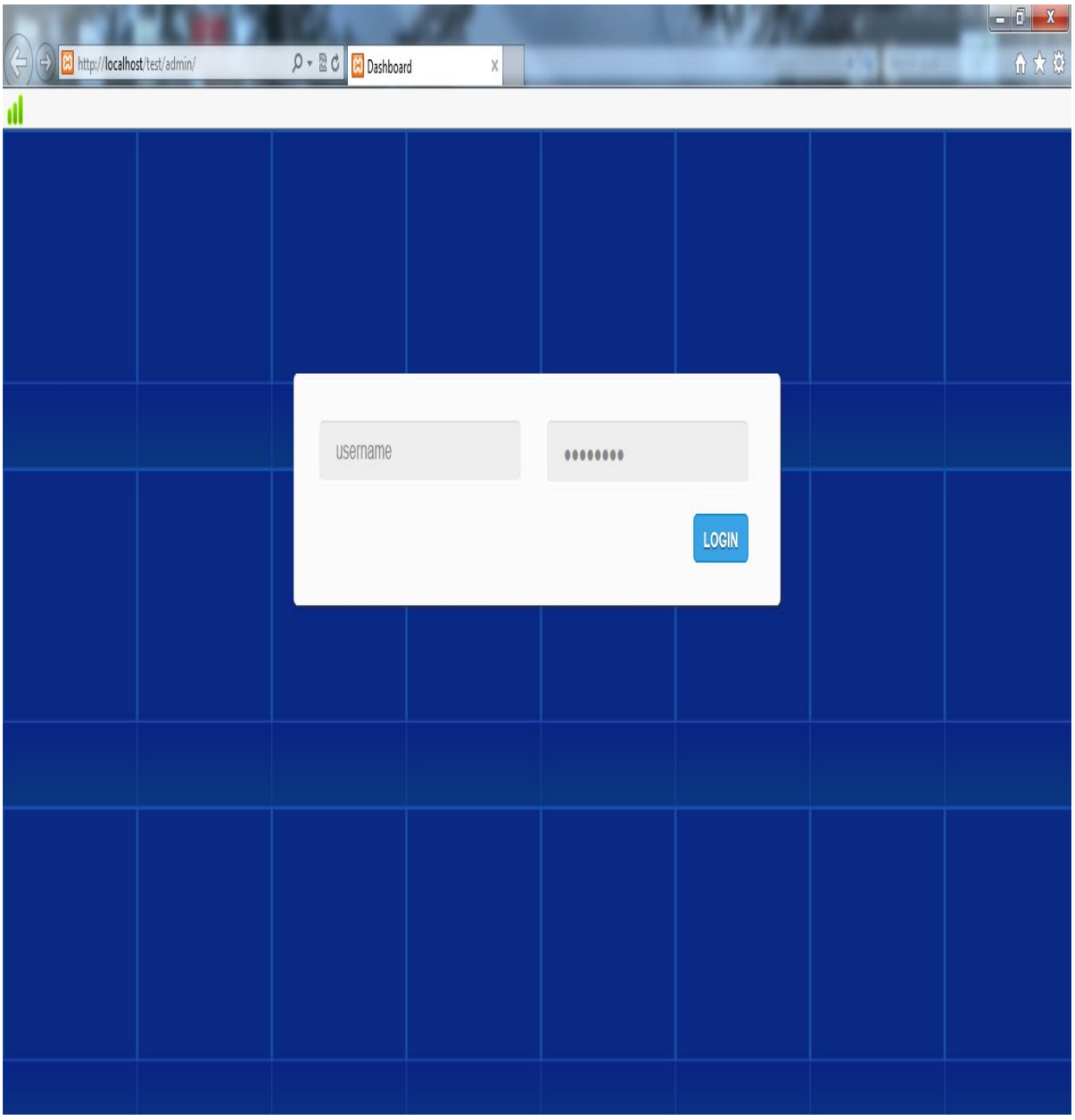
1. **Login User: its** function uses to make Login Request.
2. **Register User**: its function uses to save User.
3. **Get Exam Table**: its function uses to return Exam table.
4. **Is User Logged** In: its function uses to
5. **Logout User:** its function uses to logout user from application.
6. **Lecture Table**: its function uses to return lecture.
7. **Lab Table**: its function uses to return Lab.
8. **Section Table**: its function uses to return Section.
9. **News**: its function uses to return News.

Chapter 5

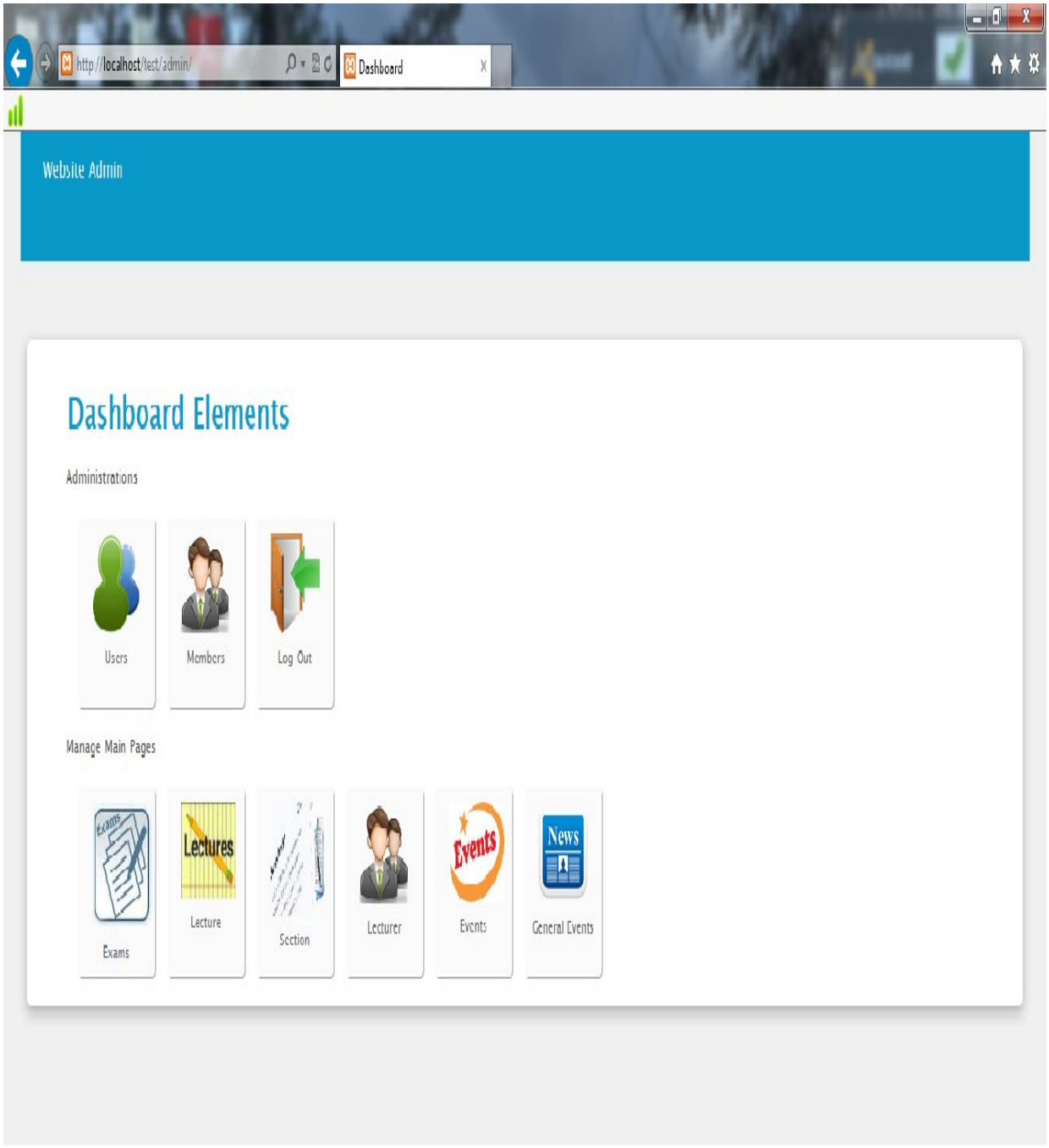
Implementation

Web Admin page

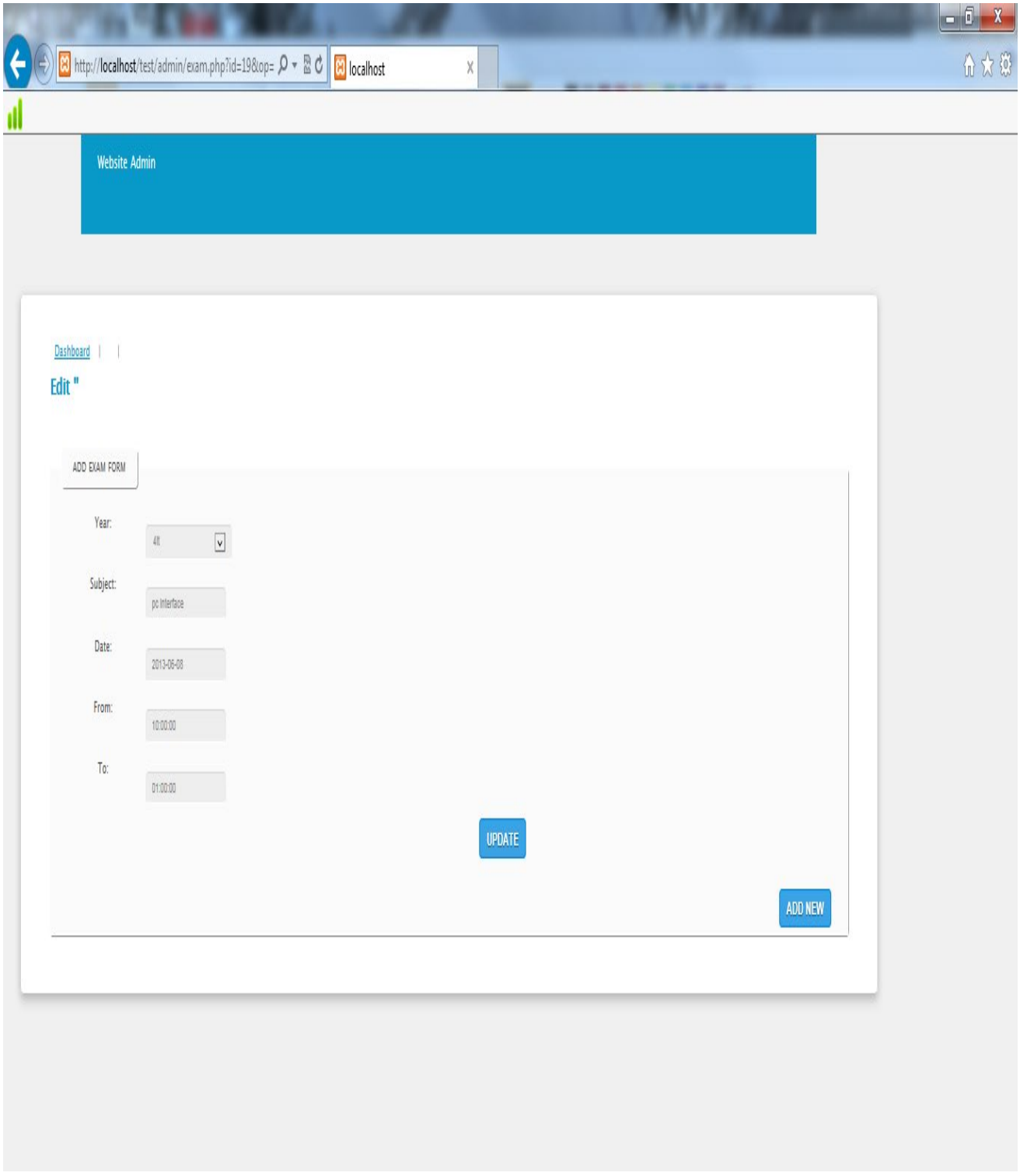
Log in page



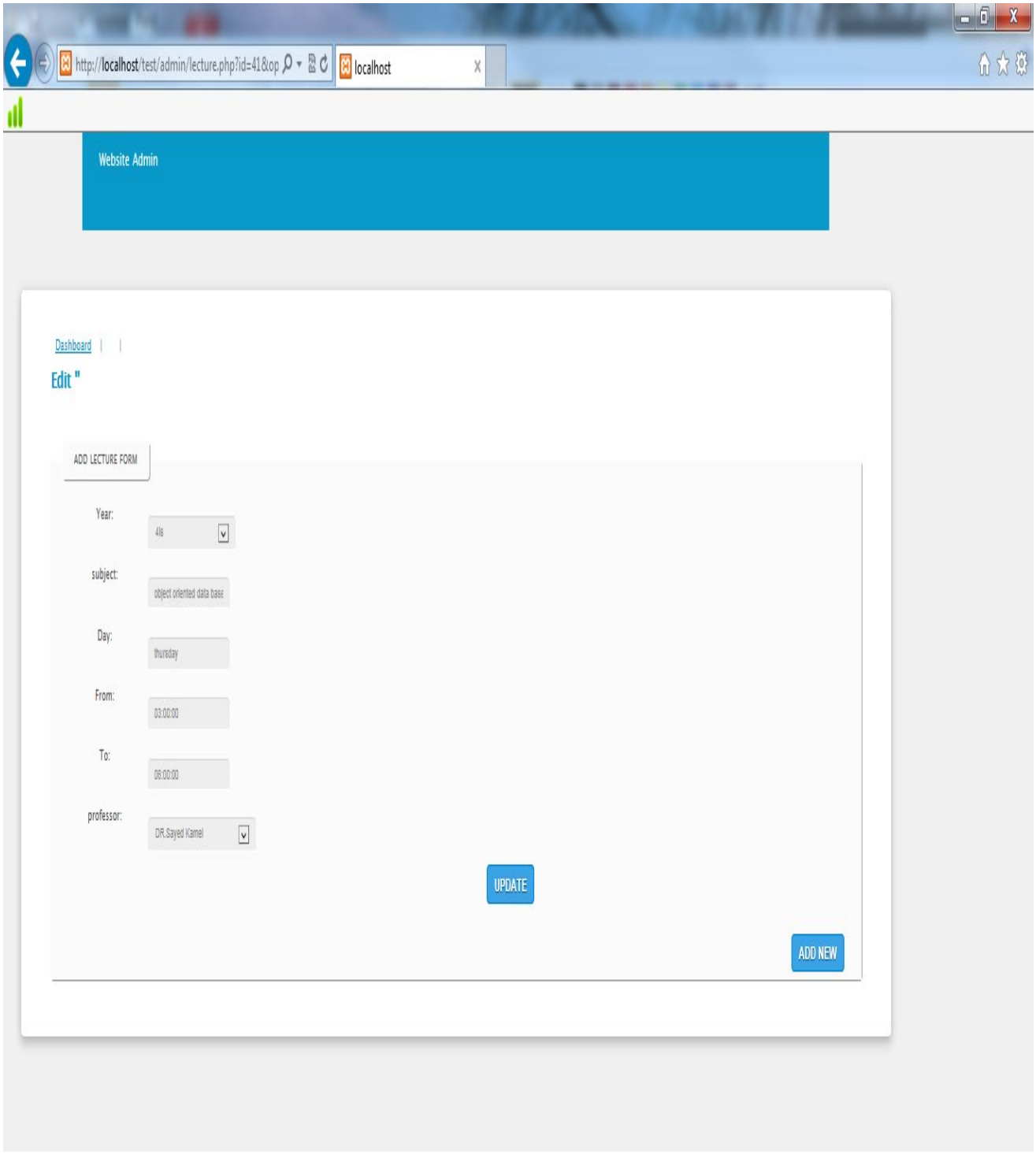
The main page



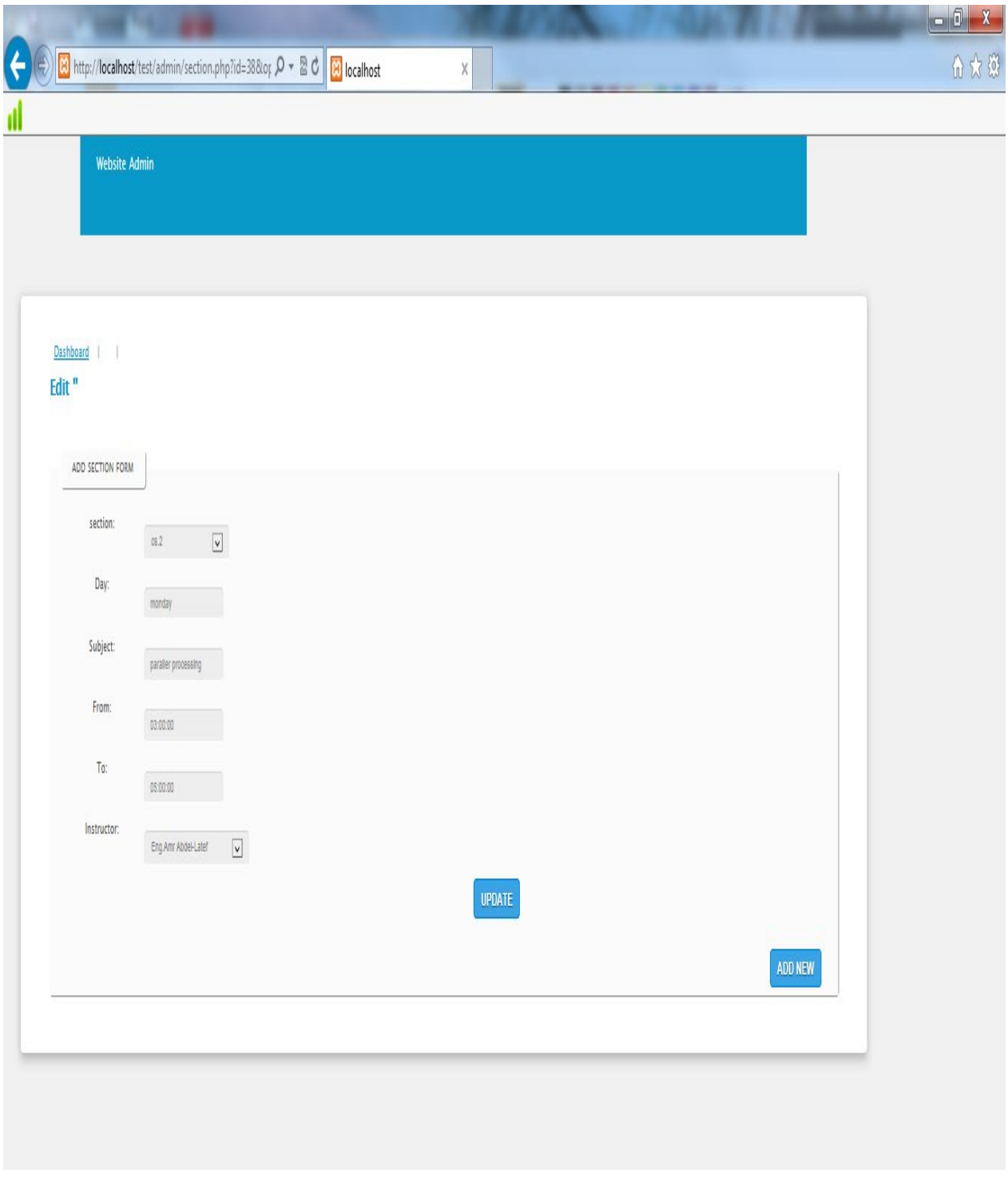
The exam page



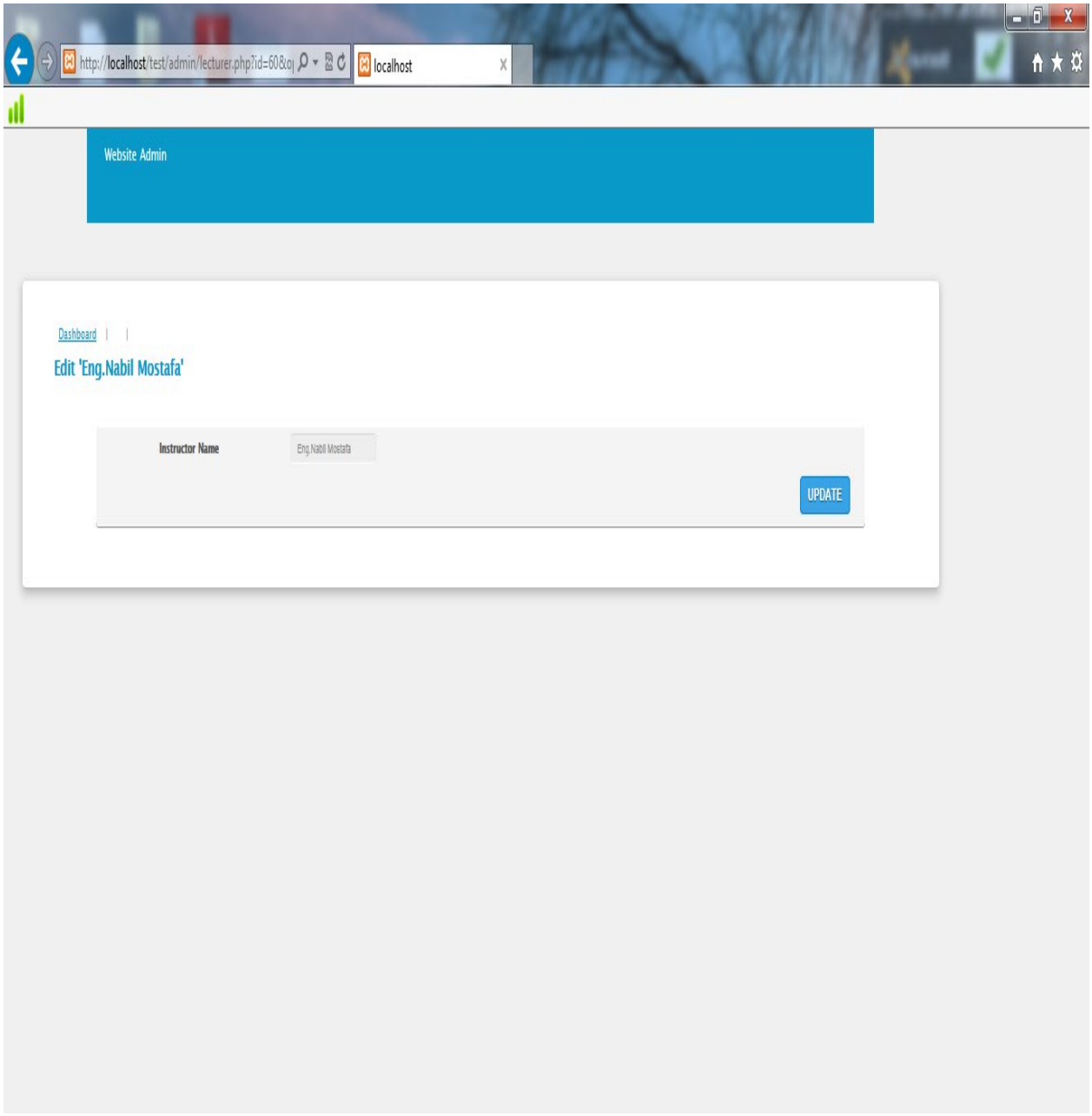
The lecture page



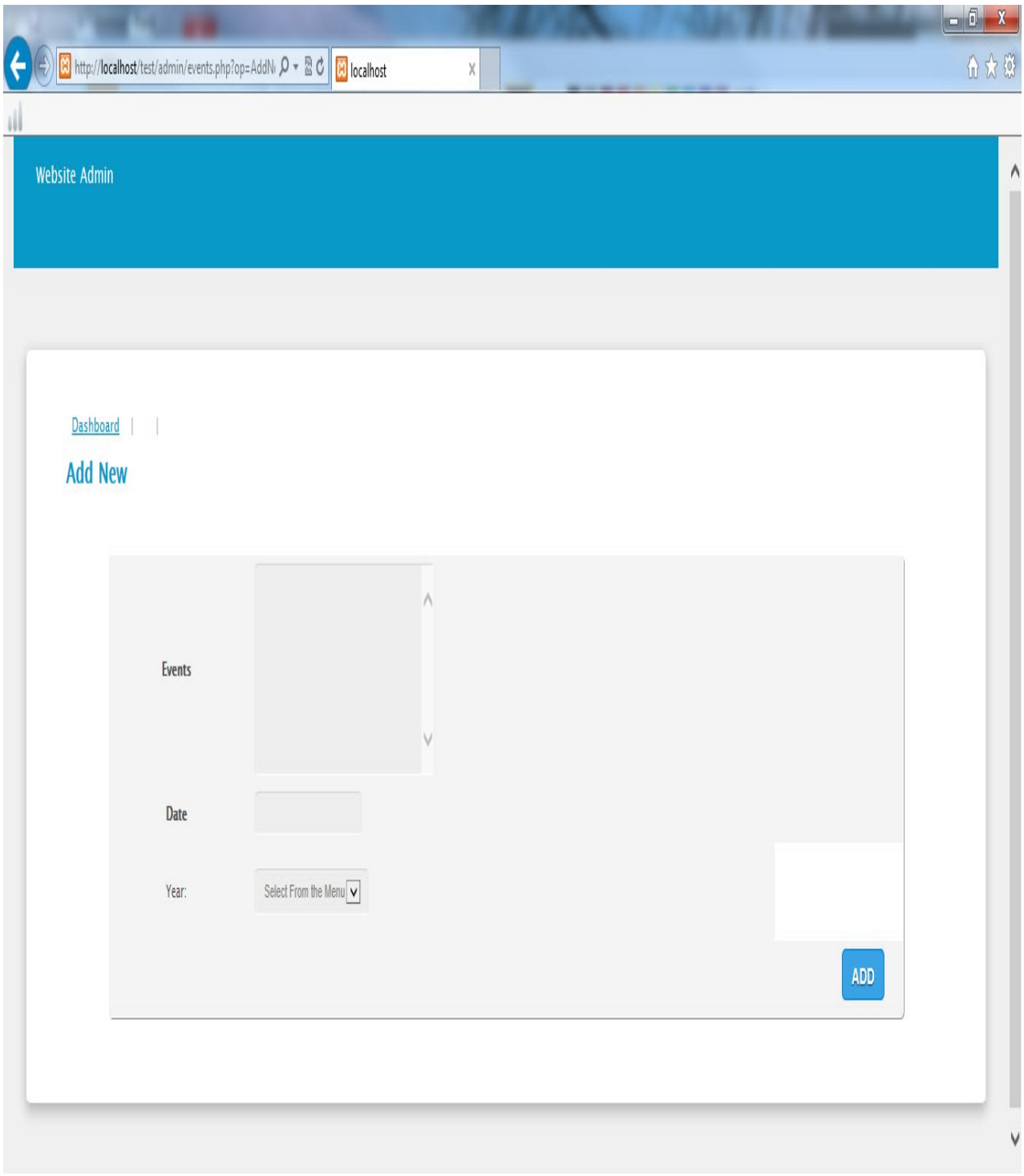
The section page



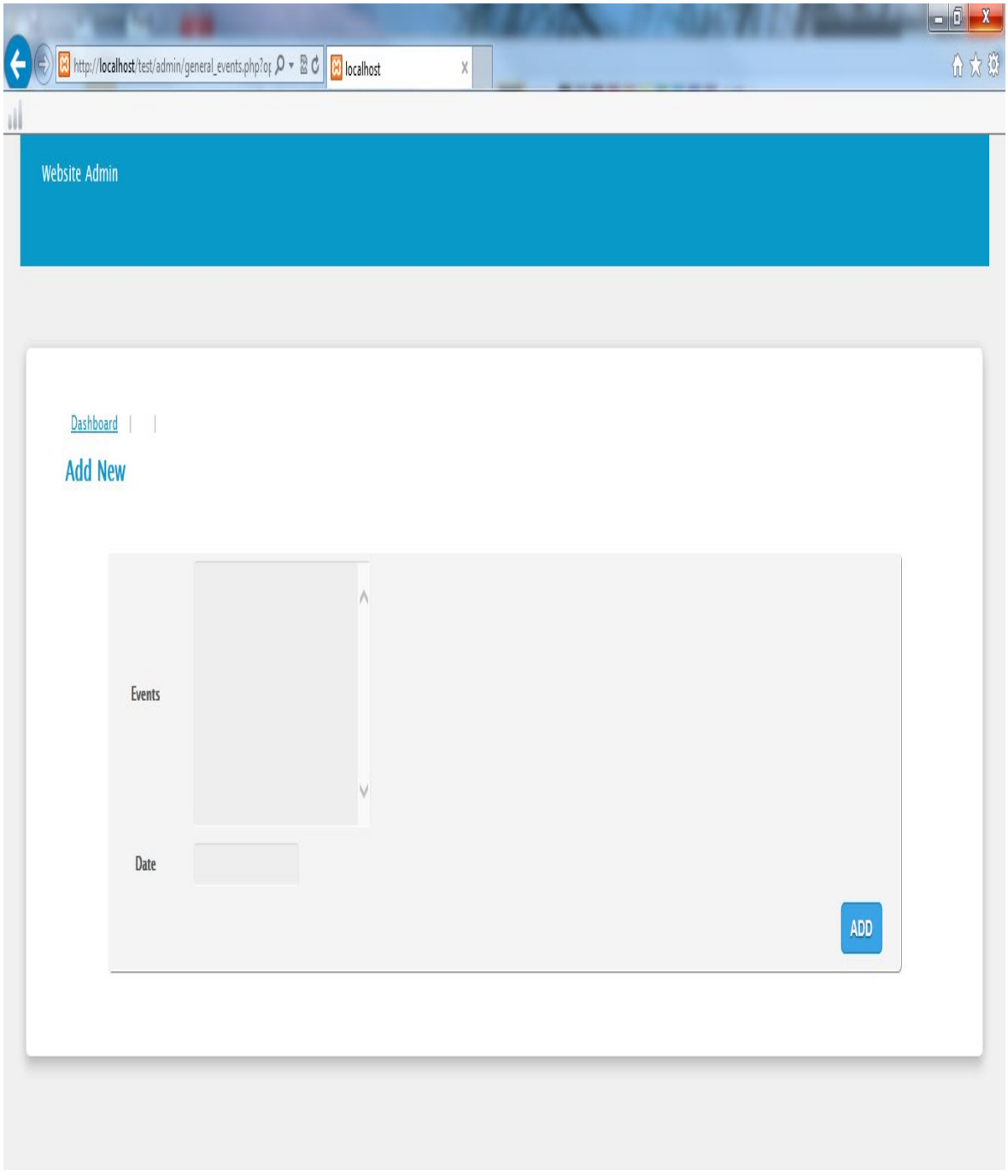
The lecturer page



The event page

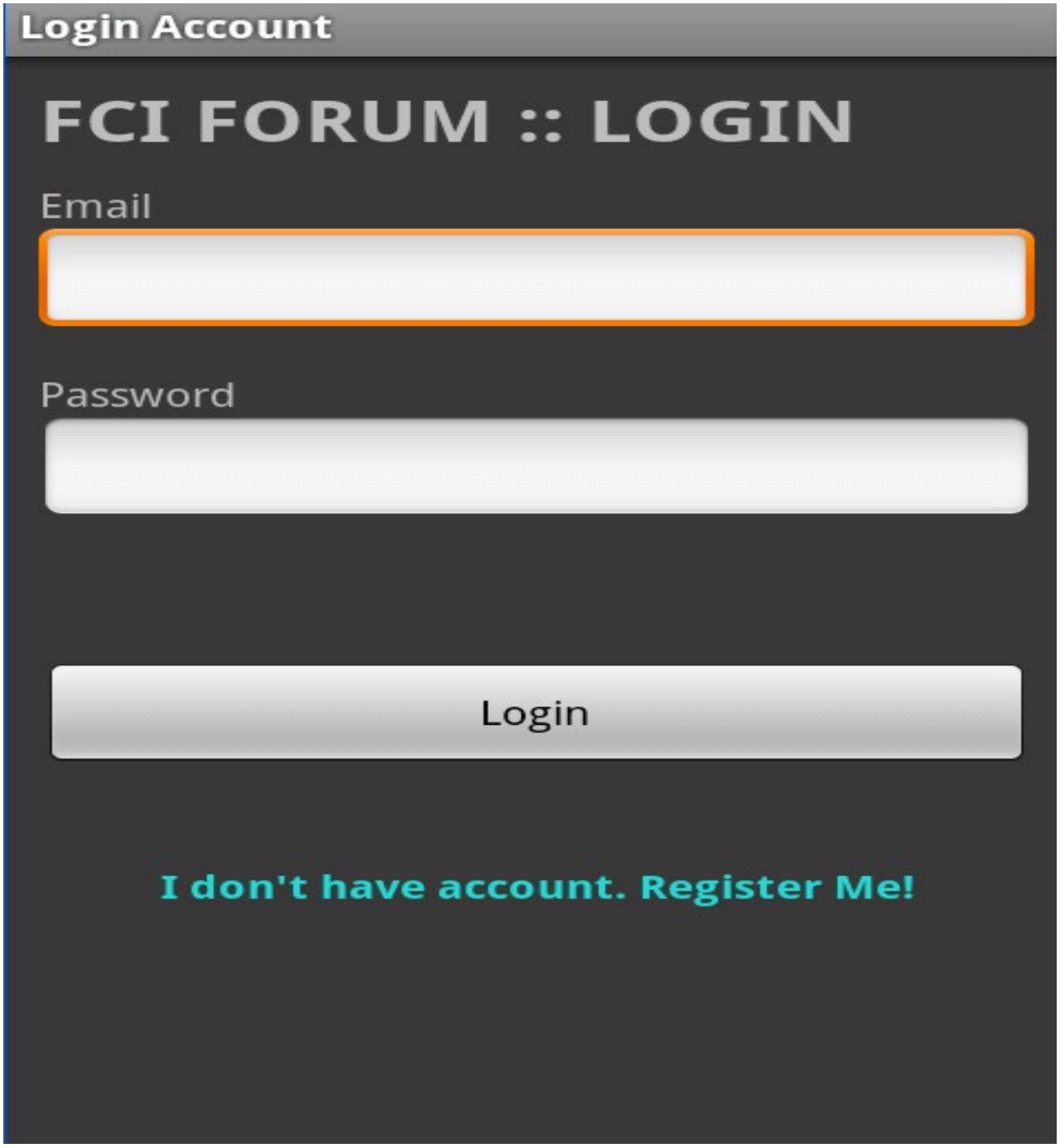


The general event page

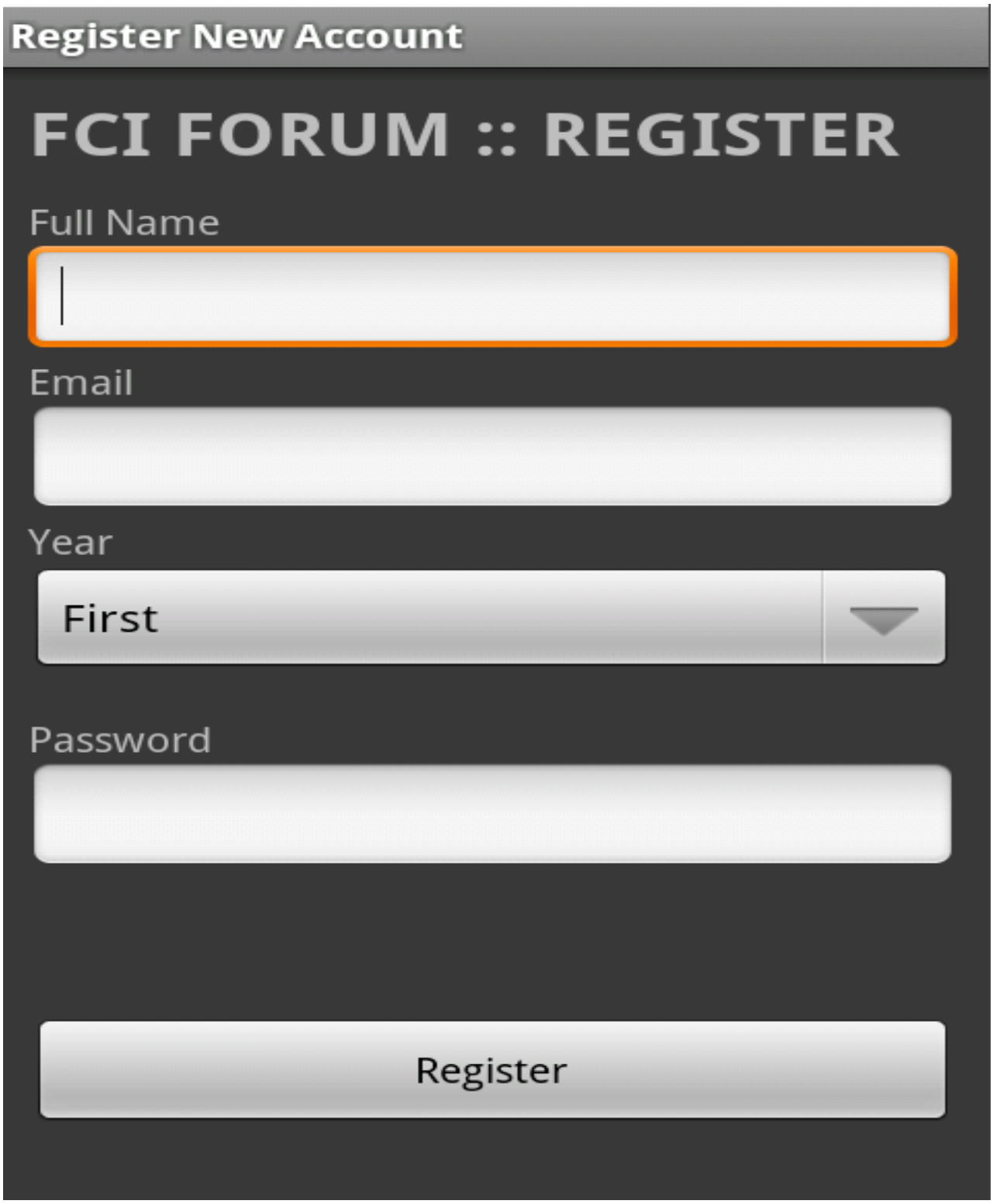


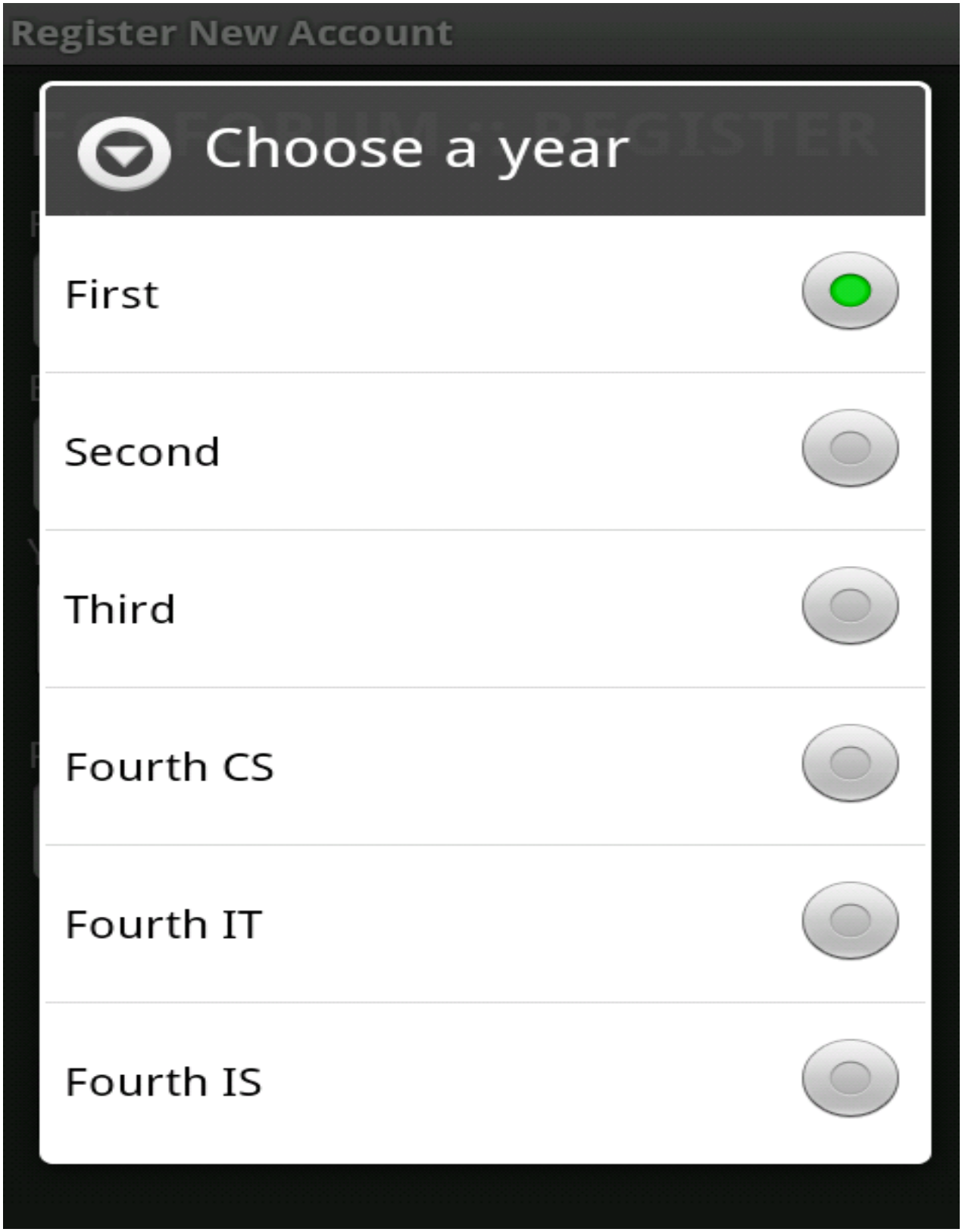
Android GUI

Login Screen



Register Screen




Register New Account
Choose a year
First
Second
Third
Fourth CS
Fourth IT
Fourth IS

Main Screen


FCI Forum
WELCOME TO FCI FORUM
My Lectures
My Labs
My Sections
News
Faculty News
Lecturers List
Logout Me

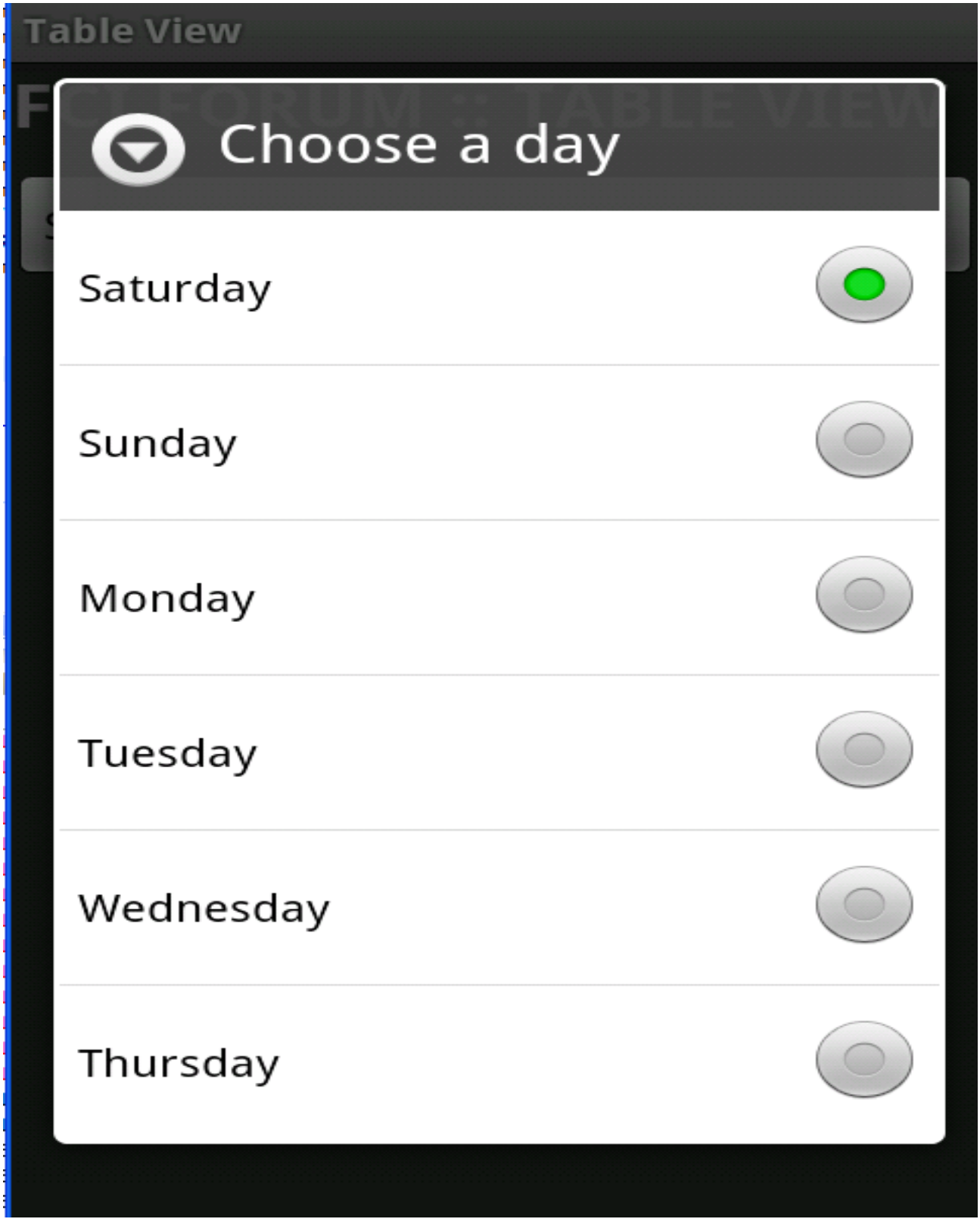


Table View
Choose a day
Saturday
Sunday
Monday
Tuesday
Wednesday
Thursday

Data Screen

Chapter 6

Future Work

You can use the bar code machine for each student by giving IDI each student Isttih the through record attendance and record Automatic on the main server

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- **http://developer.android.com/guide/basics/what-is-android.html**
- **http://developer.android.com/guide/topics/fundamentals.html**
- **http://developer.android.com/sdk/installing.html**
- **http://www.wisegeek.com/what-is-android-technology.htm**