College of Computer Technology

3rd Year Project Proposal 2016-17

Web Development Certifications

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Abstract

In this proposal we proposed a website to be developed for the Students and users who are looking to prepare themselves for certification in web Development field, This website will help them to get the information about web development certification courses. User will get the opportunity to practice their skills in an actual exam environment as well.
Initially we are just providing HTML, JavaScript and PHP.

Purpose of this document

In this document, we provide the overall description of our Web Development Website Designing Project. This document contains the description of designing and development phase .We also add the description of the experience gained from this project. development phase.

Acknowledgment

We acknowledge the efforts and supervision of our group supervisor, Professor Michael Weiss.

We must emphasize that Michael Weiss has guided us through the whole semester and till the completion of the project. We Personally acknowledge that Michel Weiss is enthusiastic, patient, wise and so humble, He has begun to teach us that it is possible to appreciate the big picture and the minute details of a complex problem at the same time. Without his unique set of attributes, we have no doubt that we would not have lasted long in statistical group project.

As a Group Leader (Usman Haidar) On a more personal level, I must thank the efforts and understanding of my friends and group members, who have put up effort to work together and collectively analyses and concentration on the project to complete it in time. We have learned a lot by working together as a group and individual, no surprise that we can achieve more working as team and as group.

We acknowledge College of Computer Technology, (CCT) and QQI Ireland for giving us an opportunity to work as a group and a team under the teachers supervision to put work and effort together to achieve something and we must emphasize that, this means a lot for us and we have learn a lot by practicing on the skills which we have learned from beginning of this course and experience.

Project Structure

The Structure of the project is divided into five chapters.

Chapter 1: Introduction and Overview

This chapter describes the problem and defines the requirements which need to be considered during the design development.

Chapter 2: Design and Planning:

This phase planned and design the basic structure and Blue print of the Website, it includes UML Diagrams and websites Map.

Chapter 3: Tool & Technologies

This chapter defines the tools and technologies which will be used to build the separate blocks of the complete system and why we will use these technologies in our system.

- HTML
- CSS
- JavaScript
- PHP

Chapter 4: Database Design:

This chapter describes the Database design and explain the use of different queries.

CHAPTER 1: introduction

This is a Group project proposal in which we discussed and agreed to develop a web development Website for the users who are interested to promote their skills and make progress in their career.
This Website will help them to get information and tips about the web development Languages Like PHP, JavaScript and HTML and they will get to know about the actual exam environment as well.

This website can only support those who have already good knowledge on web development languages and wants to get certification in the field but they don't know what type of questions will be in the certification exams. So this platform will contain the quizzes on above languages which can support and give users a brief idea and progression in their actual exam.

Problem Overview

Why Choosing Certifications Project?

Certification are as important as degrees but certifications are more practical and focused in the gaining skills and bridging the gap between education and the certifications are skills needed perform a real job responsibilities. [1]

Project Group & Responsibilities

Name	Responsibility
Usman Haidar	Group Leader : Analysis , Implementation, Coding and Software Diagrams
Sajid Jatoi	Member: Analysis , implementation, DB Design, coding and Documentation
Usama Ashraf	Member: Implementation, Documentation, Gathering Data, DB Design

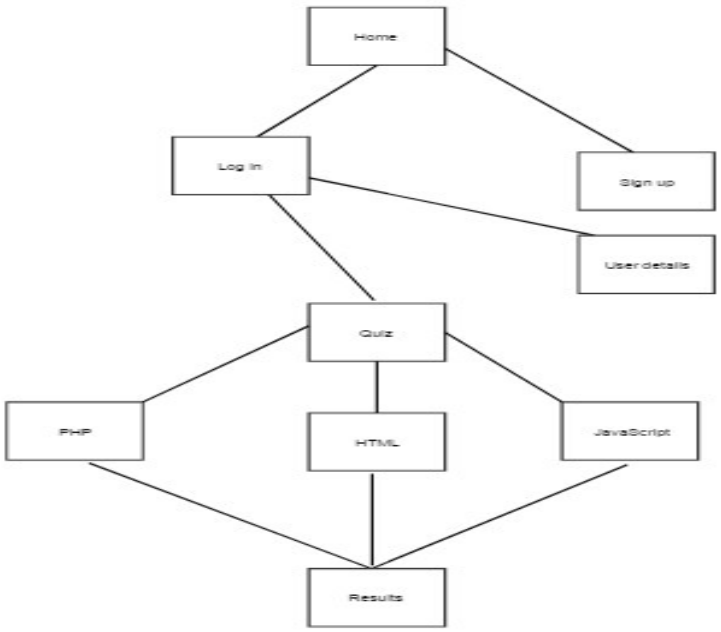
Supervisor

Name	Responsibility
Michael Weiss	Supervision, checking work flow, meetings every week and tips to make work more easy for us.

CHAPTER 2: Design and Planning Phase

Site Map:

Site map are used to show the all pages of website accessible to the user (Wikipedia).
We use the site map notion to plan and design the basic structure and crawling path of our website for the user.



UML Diagrams:

UML Stands for Unified Modeling Language. It's a rich language to model software solutions, application structure, system behavior and business process. (http://creately.com).
We use different UML diagrams in this project to model the structure of the website and to show the functionality of the its different components.

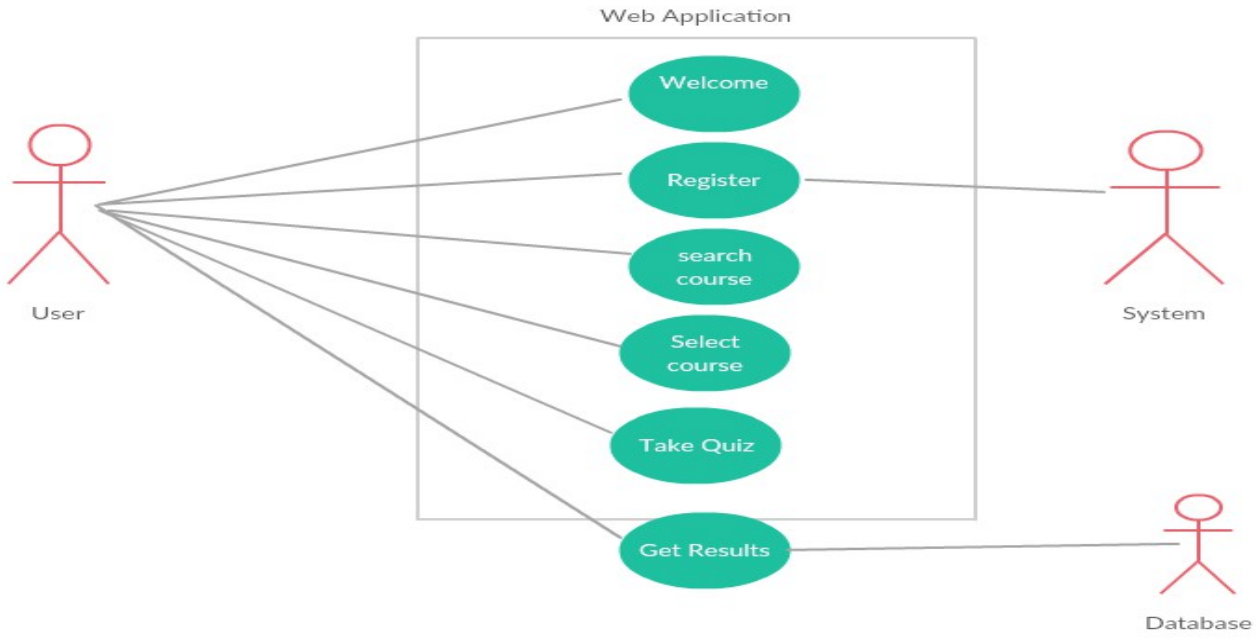
USE CASE DIAGRAM:

Use case diagrams are used to show the interaction between a actor (user) and a role (system) to achieve a specific goal (task).
We use a simple use case diagram to illustrate the interaction between user and the system.

Explanation of Use case diagram:
Primary actor in our use case is the "user" which interact with the system to perform the different tasks like login, search, take quiz.

User Role: User

User Functionality: a) Register
b) Login
c) search courses
d) Take quiz.

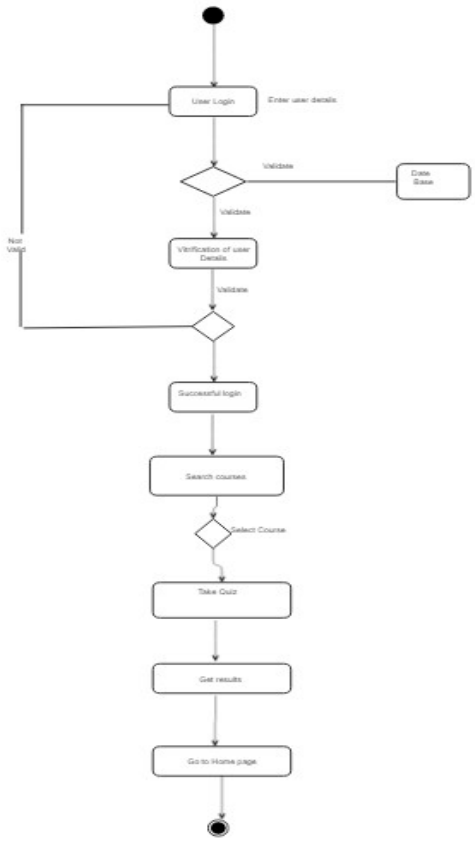

Web Application
Welcome
Register
search course
Select course
Take Quiz
Get Results
User
System
Database

Activity DIAGRAM:

Activity diagrams is a technique for showing the workflow of each activity and action step by step. this diagram helps to show the overall workflow of the system.

Explanation of our Activity diagram:

The user logs in to the system using his user name and password. system validates the user's details and allow him to access the resources. User search for the courses and take quiz after selecting the course. System will return the quiz results to the user for review.

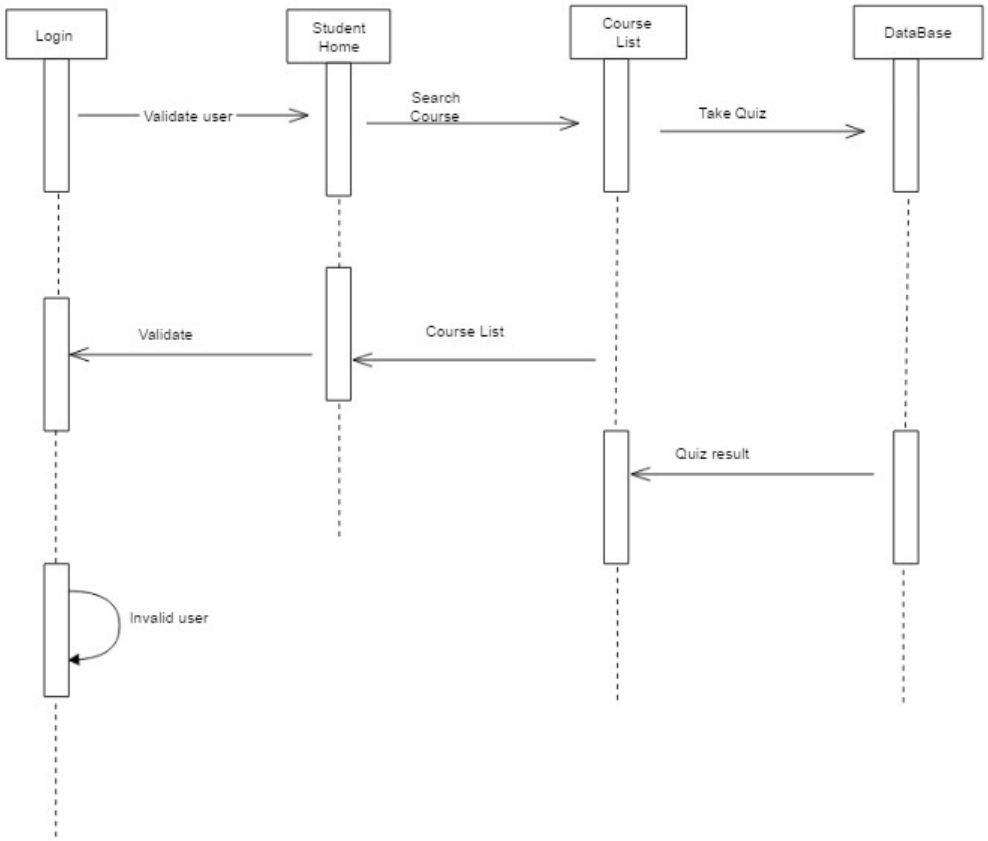


Sequence Diagram:

Sequence Diagram shows how different components interacts with each other and in which order these interactions occurs.

Explanation of Sequence Diagram:

Our Sequence diagram explain the occurrence of different tasks and the way they react with system components in a specific scenario.



Chapter 3: Tools & Technologies
Front-End

Introduction:

This chapter provides all information about technologies and tools which are used in proposed project “Web Development Certifications” .The tools and technologies which are used in the project are mentioned below:

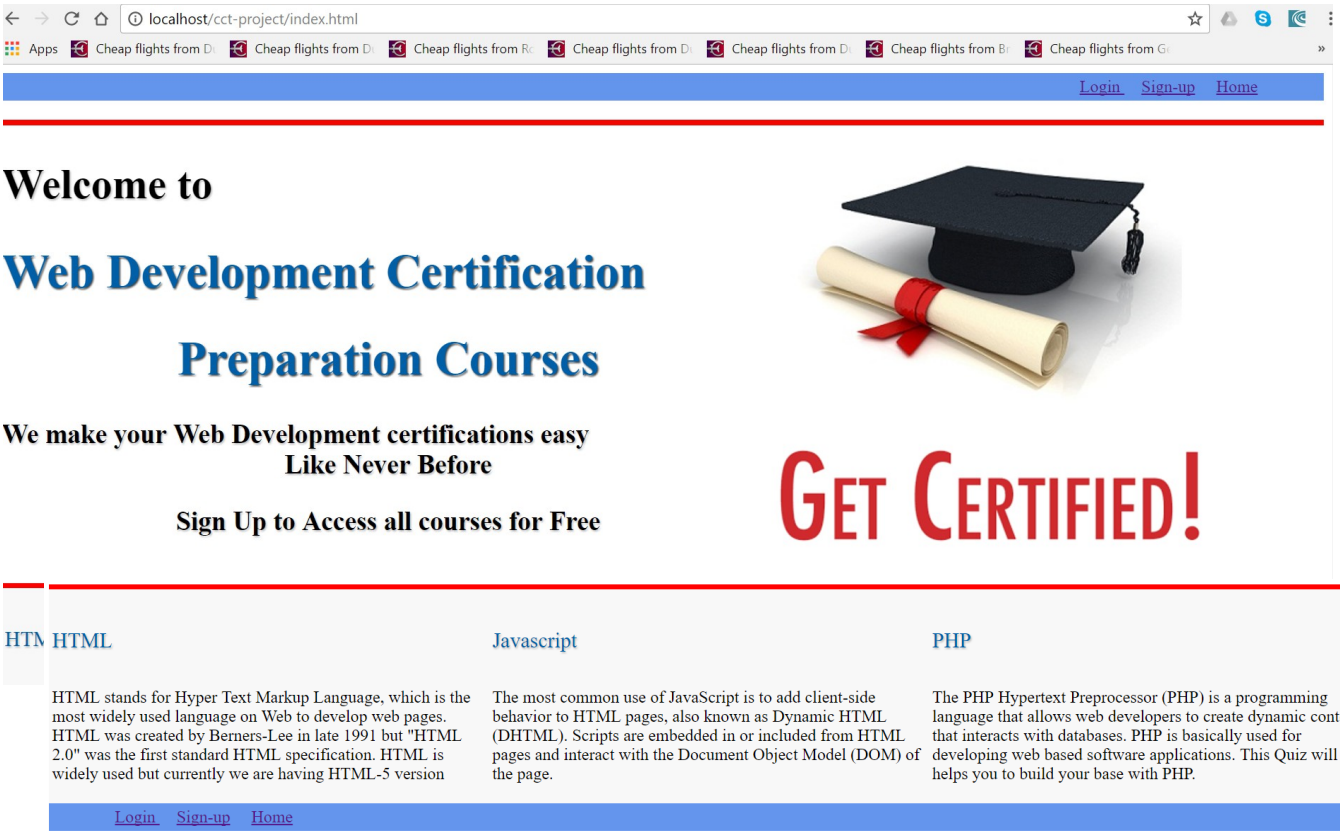
- HTML
- CSS
- Javascript
- PHP

HTML :

Hypertext Markup Language, a standardized system for tagging text files to achieve font, color, graphic, and hyperlink effects on World Wide Web pages. In our project, we have designed all web pages in Html and CSS. The Html code is defined below which is used in the main pages.

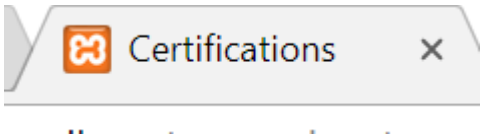
- Index Page
- Title
- File attachment Links (CSS, Fonts, Icons)
- Web Page Header
- Web Page Footer
- Hyperlinks
- Form Designs
- Buttons

Index Page:



- Title:

Title is used for the Heading of the Web Page which is normally used domain name but we have used for our web page “Certifications”.
The title shows in the tab of the Browser and for our project web page tab tile



shows:

- File attachment Links

We have used some of the external file links in the project while developing the website, those external files includes CSS Style sheet file, images, Php code files, css

- Web Page Header

Web Page header is the area at the top which used for designing web page.

- web Page Footer

Web Page footer is used for designing at the bottom of the web page. Its a part of designing layout of the web page.

- Hyperlinks

Hyperlinks are used to connect web pages to each other and images as well. We have defined few of them links below which are used in our web development project.

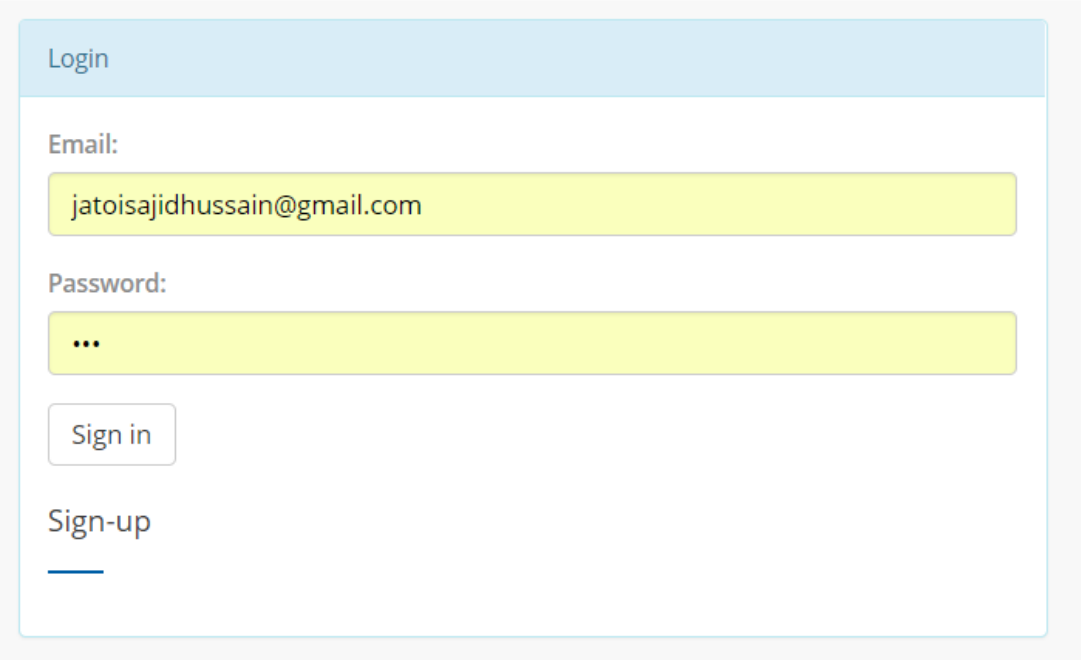
Hyperlinks between web pages:

```
<a href="signup.php"> Sign Up </a>
<a href="login.php"> Login   </a>
```

Hyperlinks of Images:

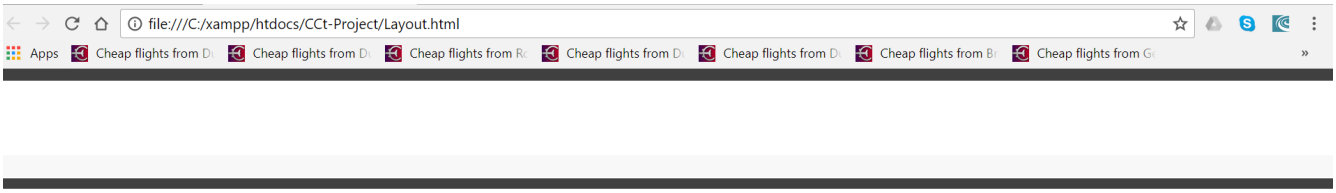
```
<img src="img\logo.jpg">
<img src="img\cert.png">
```

- Form Design


Login
Email:
jatoisajidhussain@gmail.com
Password:
•••
Sign in
Sign-up

➢ CSS: Cascading Style Sheets

CSS is a style sheet language used for describing the presentation of a document written in a markup language. Designing for our page from scratch in initial stage :



In our project we have used 1 CSS external file

- ➢ Styles.css

This external file we have divided in few different sections and there sections are mentioned below:

- Body Style
- Headings Style
- Fonts Style
- Background-color Style
- Padding
- Header Style
- Footer Style
- Boxes in the Middle Style
- Buttons Style
- Table Styles
- Table Border Style
- Width & Height Margins

All above code is mentioned and described in separate code file.

- **Javascript**

The most common use of Javascript is to add client-side behavior to HTML pages, also known as Dynamic HTML (DHTML). Scripts are embedded in or included from HTML pages and interact with the Document Object Model (DOM) of the page. The main usage of Javascript in our project is timer countdown which we have used in quizzes.

All above java script codes are mentioned in the separate code files.

PHP: Hypertext Processor

The PHP Hypertext Processor (PHP) is a programming language that allows web developers to create dynamic content that interacts with databases. PHP is basically used for developing web based software applications. The main usage of PHP in our project is defined below:

- Database Connection
- Session Queries
- Local-host
- Sign in Queries
- Sign up Queries
- User Profile Data Queries
- Quiz Questions Queries
- Forget Password Queries
- Quiz Category Queries
- Answers Queries
- URL Queries
- Score Queries
- Round Function

All above Queries codes are mentioned in the separate code files.

CHAPTER 4: Database (Mysql & Xamp)

We have used Xamp and Mysql Database to store the data of Users for Login & Registration System and storing the data of Quizzes. The data that we have stored in the database in the shape of questions and answers has been collected from different sources for our quiz courses and their all reference are mentioned in the reference list. To store all that above mentioned data requires Tables and Schema.

Tables and Schema

We have defined three tables in our Mysql Database.

- Category
- Questions
- Signup

Schema for Table Category:

```
CREATE TABLE `category` (
  `id` int(4) NOT NULL,
  `cat_name` varchar(40) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

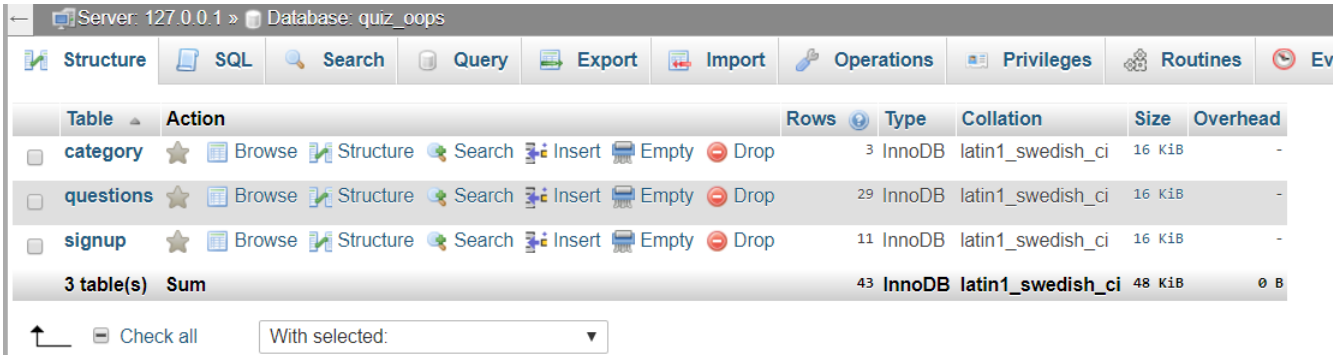
Schema for Table Signup

```
--
-- Table structure for table `signup`
--

CREATE TABLE `signup` (
  `id` int(11) NOT NULL,
  `name` varchar(30) NOT NULL,
  `email` varchar(30) NOT NULL,
  `pass` varchar(255) NOT NULL,
  `img` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

Schema for Table Questions

```sql
--
-- Table structure for table `questions`
--

CREATE TABLE `questions` (
  `id` int(11) NOT NULL,
  `question` varchar(100) NOT NULL,
  `ans1` varchar(80) NOT NULL,
  `ans2` varchar(80) NOT NULL,
  `ans3` varchar(80) NOT NULL,
  `ans4` varchar(80) NOT NULL,
  `ans` int(4) NOT NULL,
  `cat_id` int(4) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

Database Tables and Schema



Database Integrity Constraints

```
-- Indexes for table `category`
--
ALTER TABLE `category`
  ADD PRIMARY KEY (`id`);

--
-- Indexes for table `questions`
--
ALTER TABLE `questions`
  ADD PRIMARY KEY (`id`);

--
-- Indexes for table `signup`
--
ALTER TABLE `signup`
  ADD PRIMARY KEY (`id`);
```

Above screenshots showing the Primary key details of all three tables which are used in the database. The main purpose of using id functions as primary key that user do not put duplicate information in the database.

References:

1. URL: https://www.radiochemistry.org/certifications/overview.html accessed on 12/12/16
2. URL: https://vwo.com/blog/10-reasons-mobile-apps-are-better/ accessed on 12/12/16
3. URL https://www.tutorialspoint.com/dbms/dbms_data_schemas.htm
   Accessed on 20/12/16
4. URL: https://www.w3schools.com/howto/howto_js_countdown.asp
5. URL:https://www.w3schools.com/html/html_attributes.asp