Coaching Management System (Desktop Application)

CSE 404 – Software Engineering

Group ID: 05

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Abstract

Coaching Management System can be used by coaching institutes to maintain the records of students easily. Achieving this objective is difficult using a manual system as the information is scattered, can be redundant and collecting relevant information may be very time consuming. All these problems are solved using this project.

Name of the Project: Coaching Management System (Desktop Application)

Objectives

- Maintenance of student records
- Searching student records

Users Views

- Administrator

Introduction

"XYZ" is a Coaching Center. It has 3 Branches: Motijheel, Farmgate and Dhanmondi. There is one computer for the management of all 3 branches. The manager of XYZ manages this computer.

A database that contains the required details of students who get themselves admitted in any of the branches. These details must include Student ID, Name, Father's Name, College and Phone Number, Student bills, student courses.

The manager will give the entry of a new student, selecting the branch the student wants to study in.Student information can be deleted from the database as well, if a student goes out of XYZ.

For each branch a list of current students will be displayed automatically in the software. This list will be made from the database. When the manager clicks on a student in this list, detail information of that student will be available in the screen.

There is a search option for any student as well. The manager will be asked to enter the Phone Number. The system will then match this data with the students' database of the current students and show the result.

There will be an option for old students. Those students who go out of XYZ after completing their course (or for any reason) will be listed in this option. All deleted students should be automatically listed as old students.

In this software we consider about user authentication only at the home page of the software. It means, when the user will open the software, it will ask for a login frame (username -password) only once at the beginning.

Implementation

The technology selected for implementing Coaching Management System is:

Operating Systems: operating system with a **Java** virtual machine

Technologies Used

Programming language: *Java*

Framework: *Java Swing*

Reason behind choice

Desktop Java technologies can be used to create rich client applications and applets that are fast, secure, and portable. Most of the technologies are included as part of Java SE (also known as the JRE, or Java Runtime Environment), which is pre-installed on over 90% of all desktop systems on a wide range of operating systems. Other Desktop Java technologies are available as either separate downloadable Java extensions, or as open source projects on java.net.

Database

MySQL

MySQL is a relational database management system (RDBMS) that runs as a server providing multi-user access to a number of databases. MySQL is a popular choice of database for use in web applications and is an open source product. The process of setting up a MySQL database varies from host to host, however we will end up with a database name, a user name and a password. Before using our database, we must create a table. A table is a section of the database for storing related information. In a table we will set up the different fields which will be used in that table. Creating a table in phpMyAdmin is simple, we just type the name, select the number of fields and click the 'go' button. we will then be taken to a setup screen where you must create the fields for the database.Another way of creating databases and tables in phpMyAdmin is by executing simple SQL statements. We have used this method in order to create our database and tables.

Apache

The Apache HTTP Server is a web server software notable for playing a key role in the initial growth of the World Wide Web. In 2009 it became the first web server software to surpass the 100 million web site milestone. Apache is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation. Since April 1996 Apache has been the most popular HTTP server software in use. As of November 2010 Apache served over 59.36% of all websites and over 66.56% of the first one million busiest websites.

XAMPP

XAMPP is a small and light Apache distribution containing the most common web development technologies in a single package. Its contents, small size, and portability make it the ideal tool for students developing and testing applications in PHP and MySQL. XAMPP is available as a free download in two specific packages: full and lite. While the full package download provides a wide array of development tools, XAMPP Lite contains the necessary technologies that meet the Ontario Skills Competition standards.The light version is a small package containing Apache HTTP Server, PHP, MySQL, phpMyAdmin, Openssl, and SQLite.
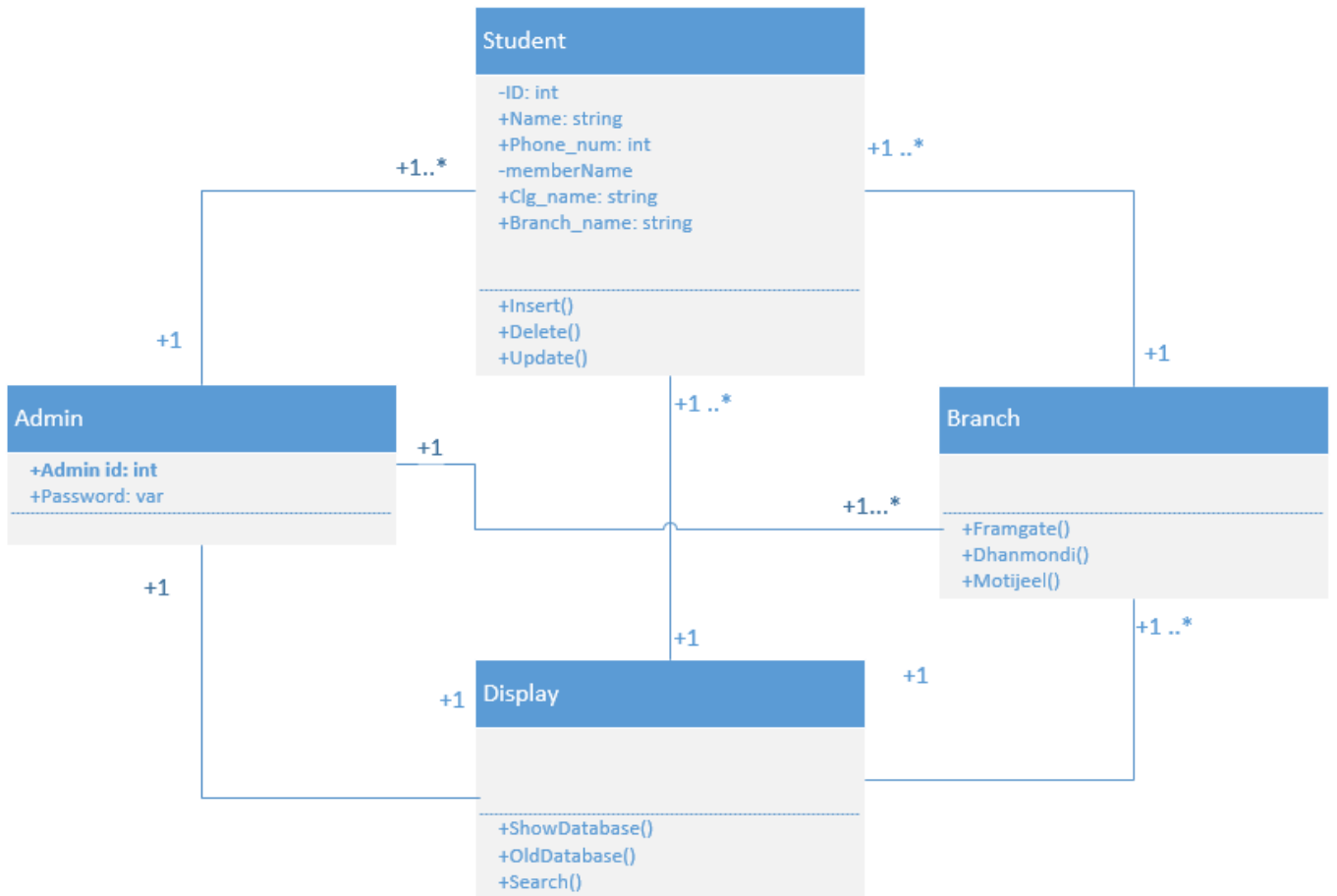
Description of database tables

Admin_login :

- user_id : Stores user id of administrator(s).
- password : Stores password of the administrator(s).

Student_information :

- student_id : Stores user id of the student(s)
- student _name : Stores first name of the student(s)
- phone_no : Stores the contact number of the student(s).
- college_name : Stores student(s) college name.
- branch_name : Stores branch_name of the student(s) where admitted.

Class Diagram

Student

-ID: int
+Name: string
+Phone_num: int
-memberName
+Clg_name: string
+Branch_name: string

- - - - - - - - - - - - - - - - - - - -

+Insert()
+Delete()
+Update()

Admin

+Admin id: int
+Password: var

Branch

- - - - - - - - - - - - - - - - - - - -

+Framgate()
+Dhanmondi()
+Motijeel()

Display

- - - - - - - - - - - - - - - - - - - -

+ShowDatabase()
+OldDatabase()
+Search()

+1..*   +1 ..*   +1   +1   +1..*   +1...*   +1 ..*   +1 ..*   +1   +1   +1   +1

Step by step implementation details

At the very beginning we add the Login panel for admin, then we code for displaying Manu, then we added the insert and search interface form where admin can add student's info and search students by using their phone number. Then we connect the database with the interface. Then we code and design the modify and delete info option form the database using GUI. After the unit testing all the units successfully we integrate the system.

User Guide

The features that are available to the user(Administrator) are:

An Administrator can login into the system and perform any of the

- available operations. Can enable/disable student.

- Can edit student information to the database.

- Can make search for a specific student.

- Can access all the details of the student.

- Can view his/her personal details.

- Can edit his/her personal details
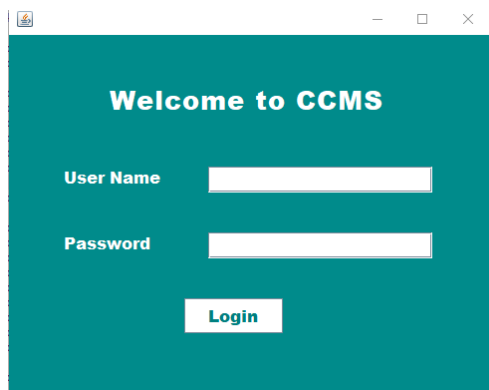
CCMS

All Student   Old Student

Search

Student id

Name

College N...

Phone No

Branch Name

INSERT   DELETE   MODIFY

CCMS

All Student   Old Student

Search

Student id   123

Name   Abedin

College N...   hhh

Phone No   876

Branch Name   Dhanmondi

INSERT   DELETE   MODIFY

Message ×

(i)   insert successfully

OK

CCMS

All Student   Old Student

Search

Student id   12

Name   hjfdh

College N...   asd

Phone No   123

Branch Name   dhanmondi

INSERT   DELETE   MODIFY

1	q	q	2	c
2	s	s	4	framgate
3	d	d	2	f
12	hjfdh	asd	123	dhanmondi
33	s	a	5	dhanmondi
44	s	s	2	bbb
123	Abedin	hhh	876	Dhanmondi

Challenges

We faced some problems in designing graphical interface at initial stage then we used java windows builder (GUI designer plugin) to solve those problems. Our project Coaching Management System was developed by all three of us. We, a team of three persons took a step by step approach in order to reach our goal. We applied the knowledge we gained during our semister period at Software Engineering course, and developed this project "COACHING MANAGEMENT SYSTEM".

Scope of the project

❖ The Coaching Management System (CMS) can be enhanced to
   include some other functionality like marks,attendance management.

❖ Talent management of students based on their performance evaluation
   can be added.

❖ networking can also be added wherein students can interact with each other.

❖ Online class functionality can be added.

❖ Can evolve as an online institution.

❖ Functionality of chat and messages can be added.

❖ Online exam functionality can be added.

Conclusion

Coaching management system lead to a better organization structure since the information management of the students is well structured and also lead to better as well as efficient utilization of resources. Coaching Management System can be used by Coaching institutes to maintain the records of students easily. Achieving this objective is difficult using a manual system as the information is scattered, can be redundant and collecting relevant information may be very time consuming. All these problems are solved using this project.