TECH 3740/2021Fall   Database System Concepts and Applications – Project

Student name: _____   Score: _____   Date: _____
- **Total 150 points Due date: 11:59pm 11/27/2021. Late penalty: 20 points off/week.**
- **No resubmission after receiving the score. You MUST completely test your program before you submit the project.**
- You can refer to the project demo website http://vader.kean.edu/TECH3740/
- Your project URL must be: http://eve.kean.edu/~xxxx/TECH3740 where xxxx is your eve ID.
- You must use and implement the table, and store data on the required databases at **imc.kean.edu.**
- **The results shown here is just a demo. The data will be changed when the projects are graded. Do NOT hardcode any results. Otherwise, the corresponding function will have 0 point.**
- You have to submit your project through the class grade/submission system. http://vader.kean.edu/students
- **Authentication must use COOKIE, NOT SESSION. 10 points penalty will be applied if using SESSION.**
- **All CGI functions should use POST method, except the search is using GET method.**
- You must submit the project through the class grade/submission system. **You need to indicate the item you have completed the test and the function is working. If the item is indicated, but it is not working, you won't get the points and a penalty 5 points/item will be applied.**
- All the link and programs should call programs under same folder. No link to eve or other servers.
- Note: The program name must be exactly the same as indicated "*". Otherwise, your project won't be graded.
- **Note: Your project will be 0 if the system detects plagiarism in your programs. It is ILLEGAL to share your codes or copy/modify/submit other people's codes under your name.**

The project requires the following functions implemented:
- Create a TECH3740 project website on **eve.kean.edu** as shown in Figure 1 with search and login functions.
- Permission mode 705 for your project folder and all PHP/HTML files.

1. (**30 pts**) Main page & "**Search**" function.
    1.1 _____ (**5 pts**) If users click "**View all admin**", your program should **list all the records in the TECH3740.Admin table** in HTML TABLE format as shown in Figure 4. If the **dob** is **NULL**, print it in **red** color. If the **join date** is **early than the dob**, print **both** in **red color**. Otherwise, the **dob** and **join date** should be in **blue color**.
    ==(1.2-1.6 search function) When users enter search criteria in the field and click the "Search" button, a program named search_admin.php should be called to do the followings:==
    1.2 _____ (**5 pts**) If the search field is not empty, the program should be called to search and compare the **address** field against the **Admin** table in **TECH3740** database.
    1.3 _____ (**5 pts**) If the user enter "*****", your program should **list all the records in the table** as shown in Figure 5. Please follow item 1.1 for displaying **dob** and **join date**.
    1.4 _____ (**5 pts**) If the search keyword is not "*****", you should use pattern match to find and display the record(s) that the **address contain** the **keyword** for these record(s). **If no record found**, display "**No records in the database for the keyword: xxx**". You need to replace the xxx with the keyword. **No other information should be shown on the browser.**
    1.5 _____ (**5 pts**) If there are records **matched**, display the **correct records** that the **address contain the keyword** as shown in Figure 5. You must use **partial match** in the SQL statement.
    1.6 _____ (**5 pts**) There should be a statement "There are **#** admin(s) are in the database that the address contains the search keyword **zzz**." above the results. You need to replace the zzz with keyword as shown in Figure 5.
2. (**25 pts**) "Login" function. An admin can type login ID and password on the input textboxes and a program name named "**login.php**" should be called after the "Submit" button is clicked.

2.1 _____ (**5 pts**) If both login ID and password **are not empty**, the program should access the table **TECH3740.Admin** to verify the **login** and **password**. If either one is empty, do NOT call the program.

2.2 _____ (**5 pts**) If the login not exists, show a message "**Login xxxx is not in the system**" and terminate the program. You must display login xxxx in the message.

2.3 _____ (**5 pts**) If the login exists, and password not matched the record in the **Admin** table, show a message "**User xxxx is in the system, but wrong password was entered**." and terminate the program.

If the login ID and password match the record in the Admin table, your program should do the followings as shown in Figure 2.

2.4 _____ (**5 pts**) Always **display client's IP address** and "**You are from Kean domain**." under the IP address, if user IP is from (**10.*.*.***) or (**131.125.*.***). Otherwise, display "**You are NOT from Kean University**". You can use the **lynx** command on the eve sever for checking if the IP is from the Kean's wired network.

2.5 _____ (**5 pts**) Display a welcome message with Admin **name**, **dob, join date, age, address, gender.**

2.6 Add an "**Add a course**" link/function, "Search course (id, name): " label, an **input box and a search button** to search **course in your Courses_XXXX table in the database**.

3. **(30 pts) "Add a course" link/function**: After "**Add a course**" is clicked, a program "**add_course.php**" is called to do the followings: (Figure 3)

   3.1 _____ (**5 pts**) If the admin doesn't login successfully, your program should display "please login first!" without displaying other information. In other word, if the users bypass the admin login process and call the **add_course.php** directly from the browser, your program should display "please login first!" without displaying other information.

   3.2 _____ (**5 pts**) If the admin login successfully, a "Add a course" web page (Figure 3) should be displayed and allow user to add a new course – enter ID, name, description, three terms – Spring, Summer, Fall in **checkboxes**, enrollment in **textbox**, select faculty and room information in a **dropdown list**, and a submit **button**.

   3.3 _____ (**10 pts**) For "Select a faculty" in Figure3, your PHP program should retrieve all the faculty **ids** and **names** from table **TECH3740.Faculty** (**5 pts**), and only display the faculty **names** in the **dropdown list** for the user to select. The first option should be empty.

   3.4 _____ (**10 pts**) For "Room" selection in Figure3, your PHP program should retrieve all the room's information from table **TECH3740.Rooms** (**5 pts**), and display the room's information "**building name room number has zzz seats**" in the **dropdown list** for the user to select, where zzz is the size of that room. The first option should be empty.

4. **(25 pts) "Insert" function**: After user clicks the Submit button in Figure3, a program "**insert_course.php**" should be called to verify the data and do the followings: **Note**: The program name must be **insert_course.php.**

   4.1 _____ (**5 pts**) If the admin **doesn't login successfully** and try to run the program directly, your program should display "**Please login first!**" without displaying other information. Same concept as previous requirement, users can not bypass the admin login process and call **insert_course.php** directly.

   4.2 _____ (**5 pts**) After users click the submit button in Figure3, if 1. **Enrollment < 0**, 2. **Enrollment <= room size**; 3. **Any input box is empty**; display the corresponding error message, and the record should be inserted into your Courses_xxxx table.

   4.3 _____ (**5 pts**) If **same course ID exists** in **your Courses_XXXX** table, display an error message "**Cannot have the same course ID**", and the record should be inserted into your Courses_xxxx table.

   4.4 _____ (**10 pts**) If there is no error, the course data should be inserted into **your Courses_XXXX** table (**8 pts**) and show successful message "course yyyy has been added successfully" (**2 pts**).

5. **(40 pts) "Search/Display" function**: After clicking on the "**Search**" button in Figure 2, a program named "**search_course.php**" should be called to do the following functions. Refer to Figure 6 and Figure 7.

    5.1 _____ (**5 pts**) If the admin **doesn't login successfully** and try to run the program directly, your program should display "**Please login first!**" without displaying other information. Same concept as previous requirement, users can not bypass the admin login process and call **search_course.php** directly.

    5.2 _____ (**5 pts**) If the search keyword is "*****", display **all the courses** in HTML TABLE format in **your Courses_XXXX** table, and the total enrollment should be displayed after the HTML table. (Figure 6)

    5.3 _____ (**5 pts**) if the search keyword is not "*****", show the records that courses' **ID or names** in **your Courses_XXXX** table **pattern matched** the search keyword, and the total enrollment for the matched courses. (Figure 7)

    5.4 _____ (**5 pts**) **Faculty Name** should show **faculty name**, not id.

    5.5 _____ (**5 pts**) **Building Room** should show **Building name, room number**, not id.

    5.6 _____ (**5 pts**) **Added by Admin** should show **Admin's name**, not id.

    5.7 _____ (**5 pts**) Show other column information correctly as shown in Figure 6 and 7.

    5.8 _____ (**5 pts**) If **the room size minus the course's enrollment is less than 3 (room size – enrollment < 3)**, highlight that **course's enrollment in red** as shown in Figure 6 and Figure 7.
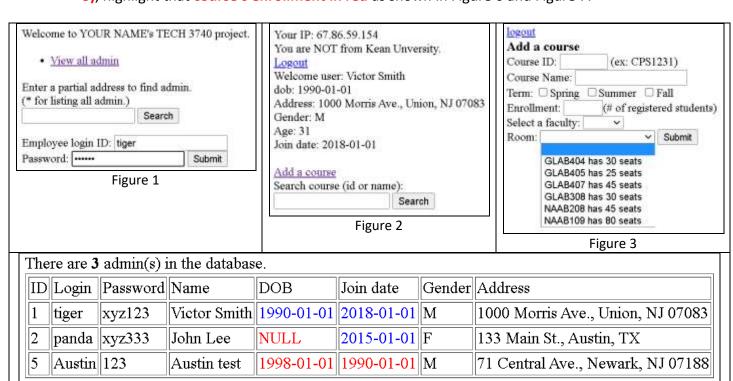

Figure 1

Figure 2

Figure 3

There are **3** admin(s) in the database.

ID	Login	Password	Name	DOB	Join date	Gender	Address
1	tiger	xyz123	Victor Smith	1990-01-01	2018-01-01	M	1000 Morris Ave., Union, NJ 07083
2	panda	xyz333	John Lee	NULL	2015-01-01	F	133 Main St., Austin, TX
5	Austin	123	Austin test	1998-01-01	1990-01-01	M	71 Central Ave., Newark, NJ 07188

Figure 4

There are **2** admin(s) in the database that the address contains search keyword **t**.

ID	Login	Password	Name	DOB	Join date	Gender	Address
2	panda	xyz333	John Lee	NULL	2015-01-01	F	133 Main St., Austin, TX
5	Austin	123	Austin test	1998-01-01	1990-01-01	M	71 Central Ave., Newark, NJ 07188

Figure 5

The following course ID and name were matched the search keyword *.

Course ID	Course Name	Faculty Name	Term	Enrollment	Building Room	Size	Added by Admin
CPS1231	Java1	Dr. C	Spring,Summer,Fall	30	GLAB 308	30	John Lee
CPS2232	Java2	Dr. Y	Spring,Fall	30	GLAB 407	45	Victor Smith
CPS3740	Database	Dr. M	Spring	25	GLAB 404	30	John Lee
TECH3740	IT Database	Dr. M	Spring,Fall	23	GLAB 405	25	Victor Smith

Total enrollment: 108

Figure 6

The following course ID and name were matched the search keyword **data**.

Course ID	Course Name	Faculty Name	Term	Enrollment	Building Room	Size	Added by Admin
CPS3740	Database	Dr. M	Spring	25	GLAB 404	30	John Lee
TECH3740	IT Database	Dr. M	Spring,Fall	23	GLAB 405	25	Victor Smith

Total enrollment: 48

Figure 7