Database Lab 2324 - Project Announcement

Within the scope of the subject assigned to your groups, you are asked to implement an application with an interface and a connection to the database, taking into account the following features. The database you will use must be PostgreSQL. There are no platform restrictions for your application, you can use any language and development environment you want. The process of creating the tables and entering the data is up to you. The requirements for the database system and application to be performed are as follows:

1. The database you will create must contain at least 4 tables. Each table must contain at least 10 records.
2. You should use the primary key and foreign key constraints in your tables.
3. At least one table must have a delete constraint and a number constraint.
4. At least one insert, update and delete operation should be performed from the interface.
5. You must write a query that lists the results on the screen according to a value to be entered from the interface.
6. At least one of the queries called from the interface must be defined as a "view".
7. You must create at least one "sequence" and ensure that the values in the relevant column are automatically assigned during the insert to be made from the interface.
8. You must have used union or intersect or except in at least one of the queries called from the interface.
9. At least one of your queries must contain aggregate functions, and the having statement must be used.
10. You must have defined 3 different SQL functions **that take the values entered from the interface as parameters and return results to the screen**. At least one of these functions must have the definition-use of "record" and "cursor".
11. You must define 2 triggers and trigger them with the values to be entered from the interface. An information message should be returned to the interface that Trigger is running.

You are also asked to write a report with your project . The report should include:
*   ER diagram of the designed database
*   Screenshots of your tables
*   Blocks of code that indicate that the above items have been provided. For example, for "At least one insert, update and delete operation should be performed from the interface" in article 4 above;

> INSERT INTO …..
> UPDATE …...
> (SQL codes you type)

The zip file you will send at the time of project delivery should contain:
*   Project codes
*   Your database schema file with .sql extension (the file with the table creation codes)
*   Your project report (in pdf format)

Deadline : Until 05.01.2024 Friday 23:59, you will be asked to upload your files to the form whose link will be announced in the future. You will be expected to present your projects via ZOOM on January 6-7, at your appointment time to be given during the day, within 10 minutes.

A presentation is required in order to get points from the project. The scoring criteria are as follows:
➔ Design (ER Diagram) : 15 points
➔ Queries & Functions & Triggers : 60 points
➔ Interface design and usability of the system: 25 points

The score you will get from the project will affect the overall grade of the course by 10%. Achievements.

Details of the project topics are given in general terms on the next page.

It is up to your preference to write modules in addition to the specified system specifications. Expanding the scope and adding different features will benefit you in terms of designing functions and triggers. In the projects, the design will be looked at from the perspective of the end user.

Job Find - Job Application System
The user registers to the system with a username and password and logs in from the login screen. By filtering or searching, it ensures that the advertisements suitable for it are listed. Must be able to enter and update various personal information (work experience, school, etc.) on their account page. The postings applied for should be listed on the user page. The opening date of the advertisements and the number of applicants should be displayed on the screen, and the number of applicants should be updated after the user has applied. As additional features; Various companies have certificate programs. Users can also apply for these courses.

Party World - Organization Planning & Procurement System
The user registers to the system with a username and password and logs in from the login screen. Companies are listed according to the type of organization they choose (birthday, engagement, etc.). According to the information entered by the user (number of people, time zone, summer-winter, etc.), he receives offers from these companies, and the price offers he receives are listed on the user's page. The number of bids of the companies should be listed on the screen and should be updated after the user receives a bid. As additional features; Users can also purchase party products from the shopping module (e.g. party decorations, disposable cups-plates, birthday cakes, etc.)

Hobby Market - Exhibition & Sales System of Handcrafted Products
The user registers to the system with a username and password and logs in from the login screen. By filtering or searching, it lists the handcrafted products it wants (candles, soaps, necklaces, knitted works, etc.). He can buy any product he wants. The sales numbers of the products sold should be included in the product information and should be updated after the user purchases. The user should be able to list the products they have purchased on their own screen. Must be able to enter and update their personal information (address, phone, etc.). As additional features; The user can also put a product up for sale with the price information he has determined.

PetSet - Animal Adoption System
The user registers to the system with a username and password and logs in from the login screen. Adoption ads are listed according to the type of animal they choose (cat, dog, bird, etc.). The user applies to the listed postings. Each adoption advertisement should list who applied for which cities and from which city. After the user has applied, his name must appear among the applicants, along with the city where he is located.
The user should be able to view the advertisements applied on their own page, enter and update their personal information such as address, etc. As additional features; The user can also place their own pet in the adoption advertisement. Various pet products can be purchased from the shopping module.