Gym & Padel Management System

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- **Main Idea**

  The system simulates the management of subscriptions and reservations for gym members and organizes the reservation system for the gym's padel courts.

- **Structure of system**

  - User Type: Each user has an email and password to help him log in to his account, he also has a name for the account, his date of birth, data of his subscription , and a variable that stores the location of the account's profile picture and contains some custom data type such as the **slot** he has reserved, **notifications**, classes he is waiting for, and **classes** that have been reserved.

  - Staff Type: His responsibilities differ based on his role. There are three possible roles: manager, receptionist, and coach. Each staff member has a password, email, username, a variable for the profile picture location, and a variable indicating their position. If the staff member is a coach, this also includes the class ID they are assigned to.

  - Gym Class type : Each gym class has class Id , class name , instructor , instructor Id , start date , end date, price ,type of subscription allowed to enter this class , max number of member and session added by manager , it also includes a waitlist and a membership list, which are updated based on actual users who join.

- Padel Court type : Each court has a court ID, name, location, price, and a list of reserved slots.

- Credit Card type : Each card includes an ID , CVV , Name , Expiration date and amount

- Workout type: Each workout has Id , type , duration and count of calories burned

- Subscriptions type: Each subscription includes a type, start date, end date, price, and two variables to indicate whether the account is activated and whether it has VIP status.

- Slot type : Each slot includes an Id ,court name , date of slot and start time.

- Notification type: Each notification includes an ID, message, the date and hour it was sent, and a Boolean value indicating whether the message has been read.

- Program logic
  - Login page : The user enters their email and password, and if the credentials are correct, they're directed to their personal account page based on their account, either a staff or a regular user.
  If the user doesn't have an account, they can create a new

one if they're a regular user. However, if they're a staff member, they must enter a specific code generated by the manager. This code is valid for one-time use only and is required to successfully create a new account.

- o User page : There are several options or actions that the user can perform, including:
    - Booking padel courts : The user can choose the desired day and time for booking, and the system will display all available courts. If no courts are available, the user can select a different location, time, or day. Once they find a suitable court and time slot, they can proceed with the booking and will be redirected to the payment page.

    - Viewing the courts they 've booked and the corresponding times: All courts and time slots that the user has booked are displayed, and they have the option to cancel a booking provided it is done at least 3 hours before the scheduled time.

    - Renewing their subscription: When the renewal page opens, the user's current subscription type and duration are automatically selected, so if they want to renew the same plan, they can go straight to the payment page without extra steps. However, they also have the option to modify any details of the subscription. The new subscription will begin once the current one ends.

Subscription renewal becomes available up to 15 days before the current one expires.

- Viewing the messages they've received : There are three types of messages:
  - The first type appears automatically when the subscription is close to expiring and it pops up as soon as the user opens their account.
  - The second type is sent manually by a staff to remind the user that their subscription is nearing expiration. This message appears in the user's direct messages (DM).
  - The third type is an automatic message sent when a user on the waiting list gets accepted into a class, notifying them that they have officially joined.

- Subscribing to gym classes : Each class is available only to users with specific subscription types. Every class has a set number of participants, a designated coach, and consists of multiple sessions. Users can either subscribe to a class or join its waiting list within 15 days from the class's start date. This same 15-day window also applies to cancellations.
  When a user cancels their class subscription, one of the users from the waiting list is automatically added to the class, and a notification is sent to inform them of the update.

- **Waiting List Management System:**
  - Regular users are added to the end of the waiting list in order they join.
  - VIP users are given priority and are added to the beginning of the waiting list.

- Workout filter :