

Gym Management System (GMS)

Bùi Đức Anh

FILE HIERARCHY

- > assets
- > auth
- > data
- > data_work
- > guis
- > models
- > utils
- ✚ main.py
- ≡ Note.txt

✓ assets

- 🖼 background_v1.webp
- 🖼 background_v2.png
- 🖼 gym_icon.png
- 🎥 logo_v2.svg
- 🖼 logo_v3.jpg



✓ data

≡ ctt_grade_test.csv

{ } equipment_info.json

{ } member_info.json

{ } subscription_info.json

{ } trainer_info.json

{ } user.json

```
"1 Months": [30, 1000000],  
"3 Months": [90, 2800000],  
"6 Months": [180, 5500000],  
"12 Months": [365, 10000000],  
"36 Months": [1200, 25000000],  
"Lifetime": [400000, 100000000],  
"a": [123, 123],  
"7 days": [7, 200000]
```

```
[  
    {  
        "username": "ad",  
        "password": "ad",  
        "role": "admin"  
    },  
    {  
        "username": "trainer_test1",  
        "password": "1111111111",  
        "role": "trainer"  
    },  
    {  
        "username": "member_test1",  
        "password": "2222222222",  
        "role": "member",  
        "equipment": {  
            "Dumbells": 13,  
            "Rope": 5,  
            "Balls": 3,  
            "Chest Press": 6,  
            "Incline Chest Press": 1,  
            "Big Barbel Rod": 2,  
            "Zik-Zak Rod": 7,  
            "Small Barbel Rod": 4,  
            "Leg Press Machine": 1,  
            "Benth": 4,  
            "T.V": 1,  
            "Speeker": 2,  
            "Other": 1  
        },  
        "personal_info": {  
            "id": 1,  
            "f_name": "John",  
            "l_name": "Doe",  
            "gender": "Male",  
            "phone": "1234567890",  
            "date_of_birth": "1990-01-01",  
            "joined_date": "2023-01-01",  
            "address": "123 Main st, City, Country",  
            "email": "john@example.com",  
            "username": "johndoe",  
            "height": "180",  
            "weight": "80",  
            "trainer_id": "1",  
            "member_username": [  
                "ducanh",  
                "anh"  
            ],  
            "l_name": "Anh",  
            "gender": "Male",  
            "phone": "1234567890",  
            "date_of_birth": "1990-01-01",  
            "joined_date": "2023-01-01",  
            "address": "123 Main st, City, Country",  
            "email": "john@example.com",  
            "membership": "1 Months",  
            "subscription_expiry": "2025-09-01",  
            "username": "ducanh",  
            "attendance_days": [  
                "2025-07-03",  
                "2025-07-04",  
                "2025-07-01"  
            ],  
            "workout_days": [  
                [  
                    "2025-07-03",  
                    "100 Push-up, 10 jump rope"  
                ],  
                [  
                    "2025-07-04",  
                    "20 Push-up, 10 sit-ups"  
                ]  
            ]  
        }  
    }]  
]
```

✓ data_work

> __pycache__

✚ auth_add.py

✚ info_add.py

```
210
211
212
213
214
215
216
217     def change_equipment_in_json(equipment_data):
218         filepath = "data/equipment_info.json"
219         with open(filepath, "w", encoding="utf-8") as f:
220             json.dump(equipment_data, f, indent=4)
221
222
223     def delete_user_from_json(username):
224
225         # Delete from user.json
226         user_filepath = "data/user.json"
227         try:
228             with open(user_filepath, "r", encoding="utf-8") as f:
229                 users = json.load(f)
230                 # Filter out the user with matching username
231                 users = [user for user in users if user.get("username") != username]
232                 with open(user_filepath, "w", encoding="utf-8") as f:
233                     json.dump(users, f, indent=4)
234             except (FileNotFoundException, json.JSONDecodeError) as e:
235                 print(f"Error reading user.json: {e}")
236
237             return
```

guis

- > _pycache_
- > admin_guis
- > member_guis
- > trainer_guis
- ❖ admin_window.py
- ❖ login_window.py
- ❖ member_window.py
- ❖ register_window
- ❖ trainer_window.

```
# Create buttons with the specified text
btn_new_member = tk.Button(root, text="New Member", command=open_new_member)
btn_new_member.place(x=50, y=50, width=150, height=40)

btn_new_trainer = tk.Button(root, text="New Trainer", command=open_new_trainer)
btn_new_trainer.place(x=200, y=50, width=150, height=40)

btn_equipment = tk.Button(root, text="Equipment", command=open_equipment_manager)
btn_equipment.place(x=350, y=50, width=150, height=40)

btn_search_member = tk.Button(root, text="Edit-Report Mem", command=open_search_member)
btn_search_member.place(x=500, y=50, width=150, height=40)
```

```
✓ models
> _pycache_
  admin.py      2
  member.py
  trainer.py
  user.py
  .gitignore

def save_equipment_data(self, equipment_data):
    try:
        change_equipment_in_json(equipment_data)
        return True
    except Exception as e:
        print(f"Error saving equipment data: {e}")
        return False

def delete_member(self, username):
    try:
        delete_user_from_json(username)
        return True
    except Exception as e:
        print(f"Error deleting member: {e}")
        return False

def search_members(self, search_term):
    try:
        return search_members_by_name(search_term)
    except Exception as e:
```

✓ admin_guis

- > __pycache__
- ❖ add_attendance.py
- ❖ cal_revenue.py
- ❖ delete_member.py
- ❖ equipment_manag...
- ❖ manage_subscription.py
- ❖ new_member.py
- ❖ new_trainer.py
- ❖ search_member.py
- ❖ search_trainer.py

✓ member_guis

- > __pycache__
- ❖ check_info.py
- ❖ check_workout.py
- ❖ contact.py
- ❖ view_subscription.py

✓ trainer_guis

- > __pycache__
- ❖ add_attendance.py
- ❖ assigning_workout...
- ❖ tracking_attendanc...

✓ utils

> _pycache_

✚ create_background.py

✚ create_icon.py

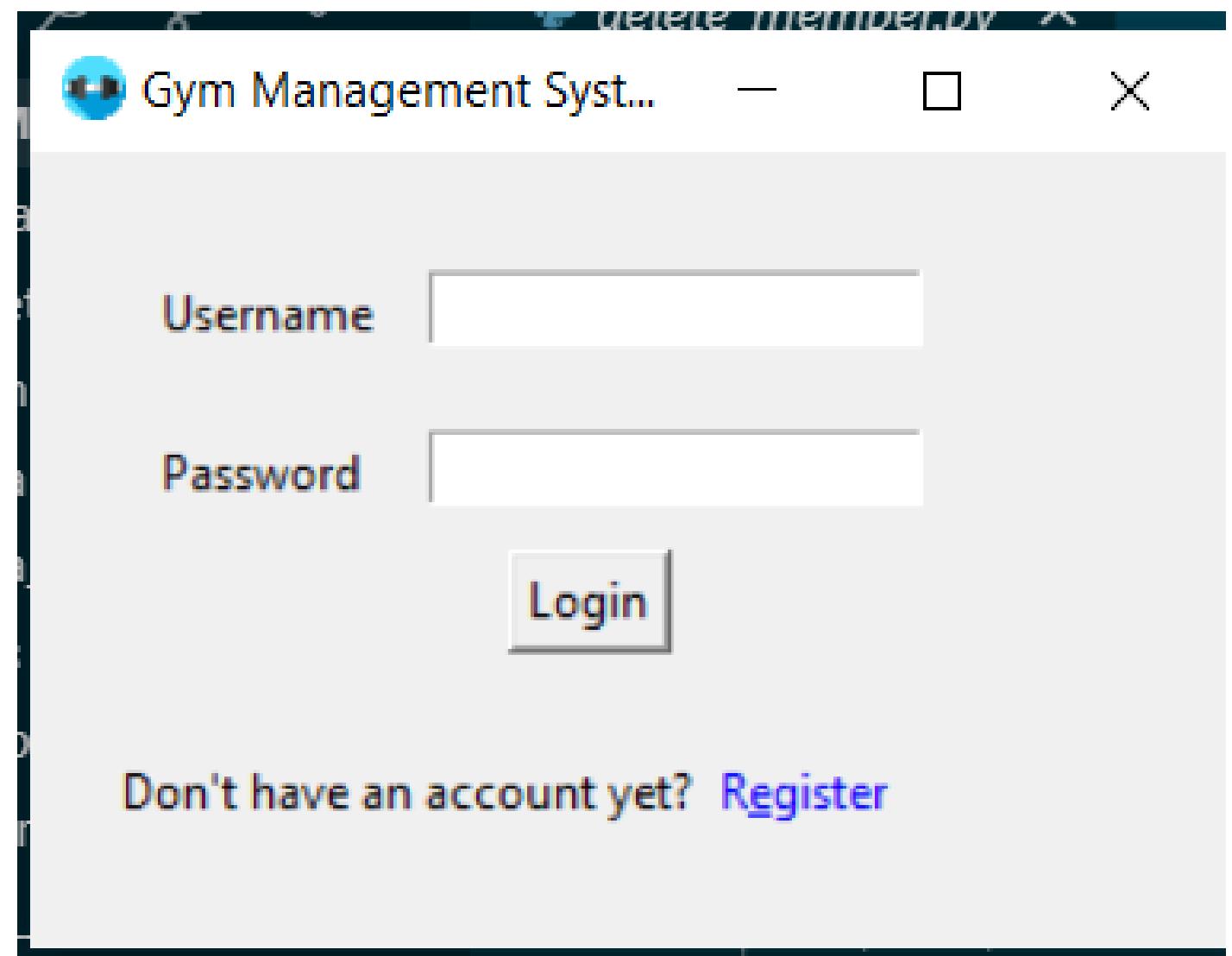
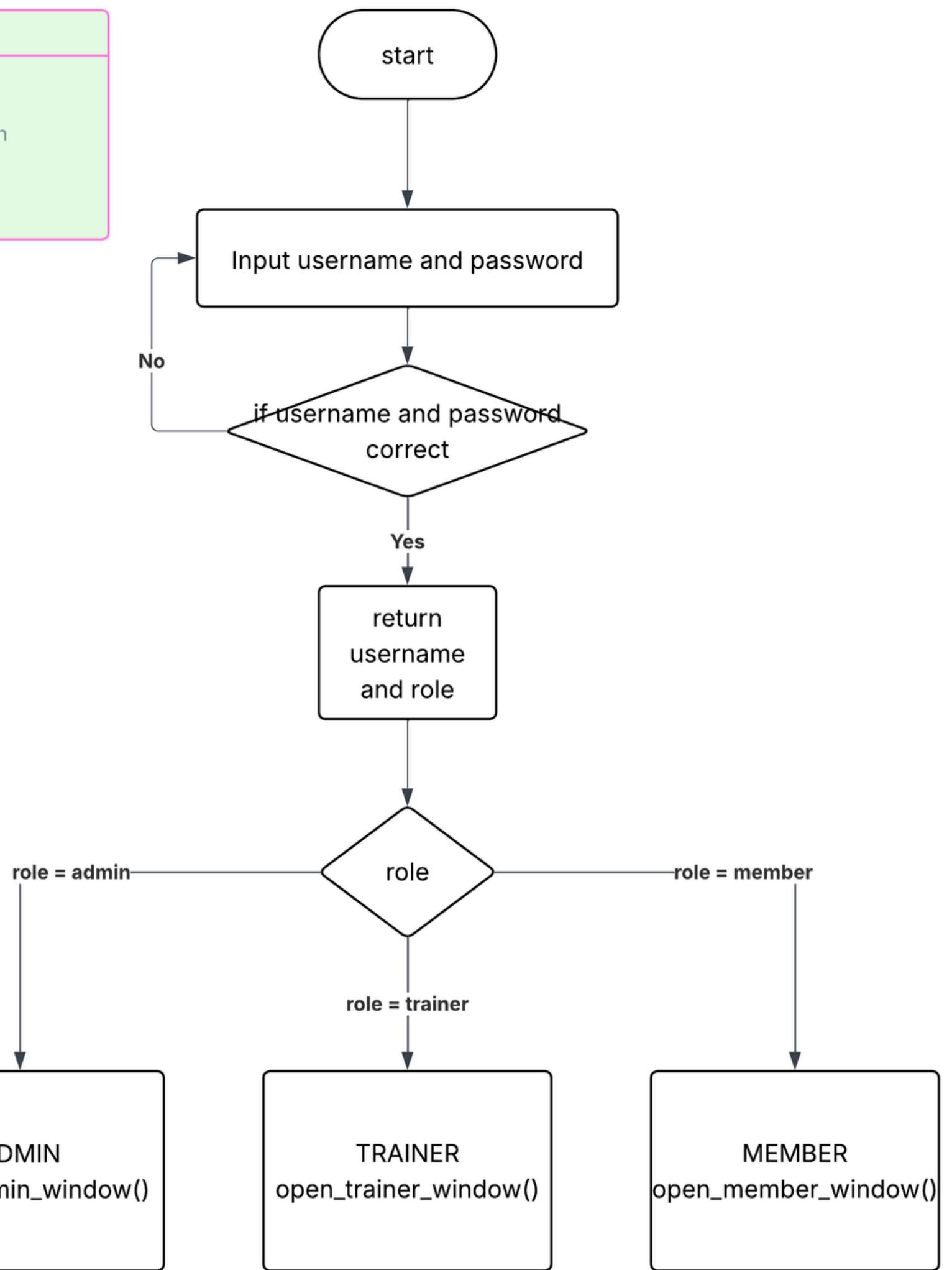
```
1 import tkinter as tk
2 from PIL import Image, ImageTk
3
4 def c_background(window: tk.Tk):
5
6     # Load and resize the background image
7     bg_image = Image.open("assets/background_v2.png")
8     #bg_image = Image.open("assets/gym_icon.png")
9     bg_image = bg_image.resize((window.winfo_screenwidth(), window.winfo_screenheight()))
10    bg_photo = ImageTk.PhotoImage(bg_image)
11
12    # Set image as a label background
13    bg_label = tk.Label(window, image=bg_photo)
14    bg_label.place(x=0, y=0, relwidth=1, relheight=1)
15    Ctrl+L to chat, Ctrl+K to generate
16    bg_label.image = bg_photo
17
```

```
9
10    def main():
11
12        username, role = open_login_window()
13
14        if role == "admin":
15            admin_user = Admin(username)
16            open_admin_window(admin_user)
17
18        elif role == "trainer":
19            trainer_user = Trainer(username)
20            open_trainer_window(trainer_user)
21
22        elif role == "member":
23            # member_user = Member(username)
24            # open_member_window(member_user)
25            print(f"Member functionality not yet implemented for {username}")
26
27        else:
28            print("Login failed.")
29
30    if __name__ == "__main__":
31        main()
```

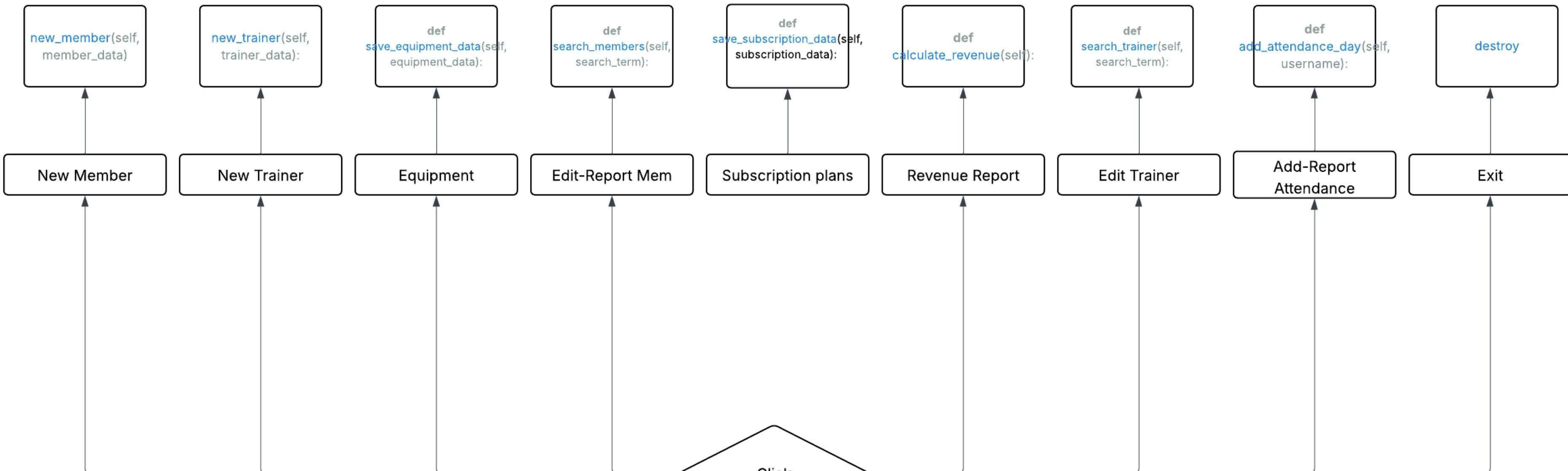
LOGIN WINDOW

main.py

```
open_login_window() #return  
username and role
```



ADMIN WINDOW



```
window = tk.TK  
c_background(window)  
c_icon(window)  
# Create window, change icon,  
change background  
Create buttons
```

New Member

New Trainer

Equipment

Edit-Report Mem

Subscription plans

Edit Trainer

Add-Report Attendance

Revenue Report

Exit



Some of the GUI in Admin

New Member

Gym Management System - Admin

New member

First Name

Last Name

Phone

Address

Email

Username

Gender

Male Female

Date of Birth

2000-01-01 ▾

Joined Date

2025-07-23 ▾

Membership

1 Months ▾

Trainer Username

johndoe ▾

Subscription Expiry

2025-08-22 ▾

Submit

Back to Menu



Type here to search



Equipment Manager

Equipment Manager



Equipment Manager

Dumbbells	30	<input type="button" value="+"/>	<input type="button" value="-"/>
Rope	5	<input type="button" value="+"/>	<input type="button" value="-"/>
Balls	3	<input type="button" value="+"/>	<input type="button" value="-"/>
Chest Press	6	<input type="button" value="+"/>	<input type="button" value="-"/>
Incline Chest Press	1	<input type="button" value="+"/>	<input type="button" value="-"/>
Big Barbel Rod	2	<input type="button" value="+"/>	<input type="button" value="-"/>
Zik-Zak Rod	7	<input type="button" value="+"/>	<input type="button" value="-"/>
Small Barbel Rod	4	<input type="button" value="+"/>	<input type="button" value="-"/>
Leg Press Machine	1	<input type="button" value="+"/>	<input type="button" value="-"/>
Benth	4	<input type="button" value="+"/>	<input type="button" value="-"/>
T.V	1	<input type="button" value="+"/>	<input type="button" value="-"/>
Speeker	2	<input type="button" value="+"/>	<input type="button" value="-"/>
2 kg Weight	8	<input type="button" value="+"/>	<input type="button" value="-"/>
5 kg Weight	5	<input type="button" value="+"/>	<input type="button" value="-"/>
10 kg Weight	6	<input type="button" value="+"/>	<input type="button" value="-"/>
20 kg Weight	2	<input type="button" value="+"/>	<input type="button" value="-"/>
30 kg Weight	3	<input type="button" value="+"/>	<input type="button" value="-"/>
50 kg Weight	4	<input type="button" value="+"/>	<input type="button" value="-"/>

Save

Back to Menu



Type here to search



Add Attendance Day & Export Report

Add Attendance Day & Export Report

Select Member:

Select Attendance Date:

Add Attendance

Export Attendance Report to CSV

Back to Menu

TRAINER WINDOW

```
def  
assign_workout(self,  
username, date,  
workout):
```

```
def  
attendance_tracking(self,  
username):
```

```
def  
add_attendance_day(self,  
username, date):
```

```
def  
members_info(self,  
username):
```

Assign Workout

Attendance Tracking

Add Attendance

View Member Info

Click

```
window = tk.TK  
c_background(window)  
c_icon(window)  
# Create window, change icon,  
change background  
Create buttons
```

[Assign Workout](#)[Attendance Tracking](#)[Add Attendance](#)[View Member Info](#)

Some of the GUI in Trainer

Assign Workout

Assign Workout to Member

Select Member:

khanhan

Select Workout Date:

2025-07-23

Workout Description:

Assign Workout

Back to Menu

Add Attendance Day & Export Report

Add Attendance Day & Export Report

Select Member:

khanhan

Select Attendance Date:

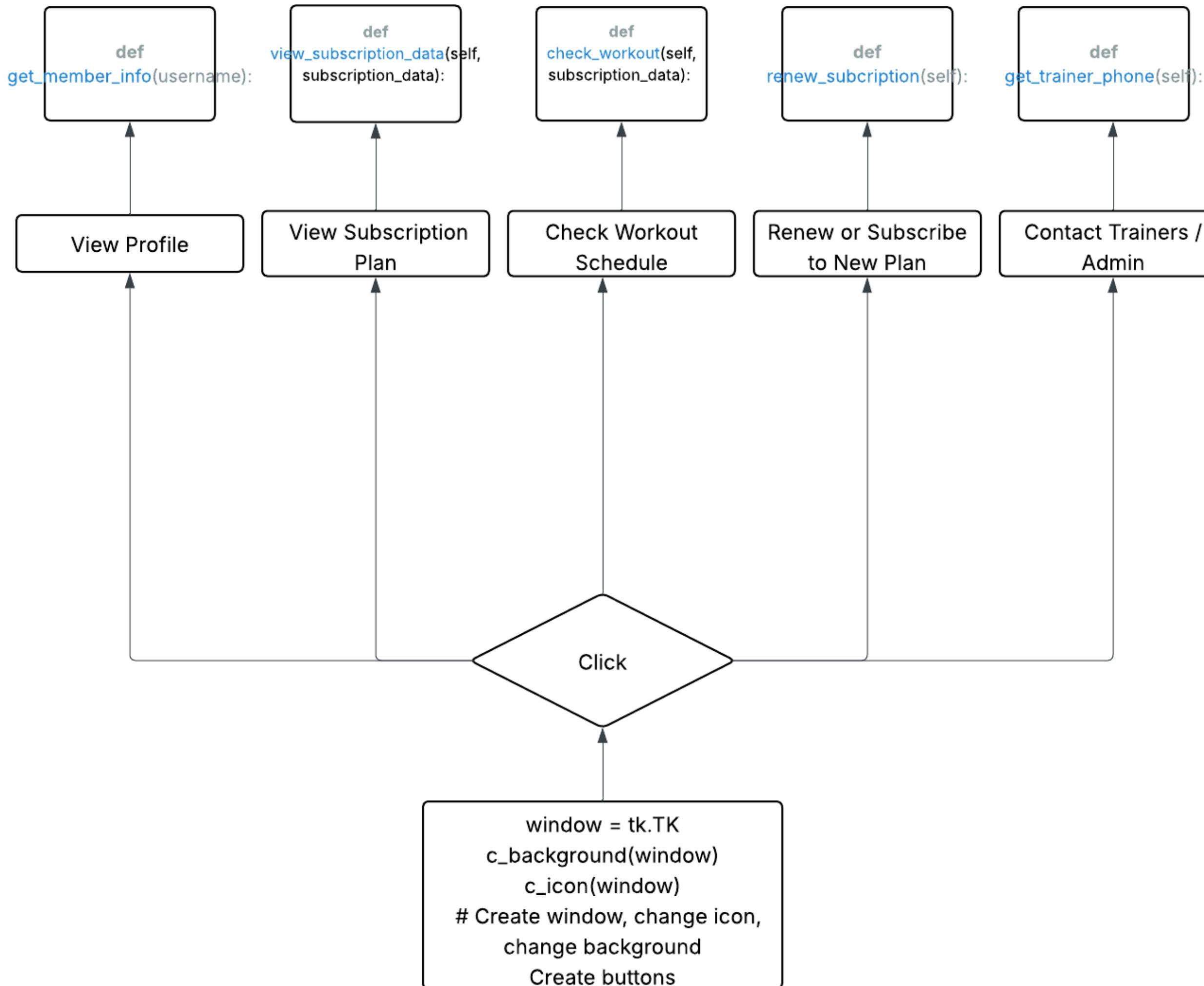
2025-07-23

Add Attendance

Export Attendance Report to CSV

Back to Menu

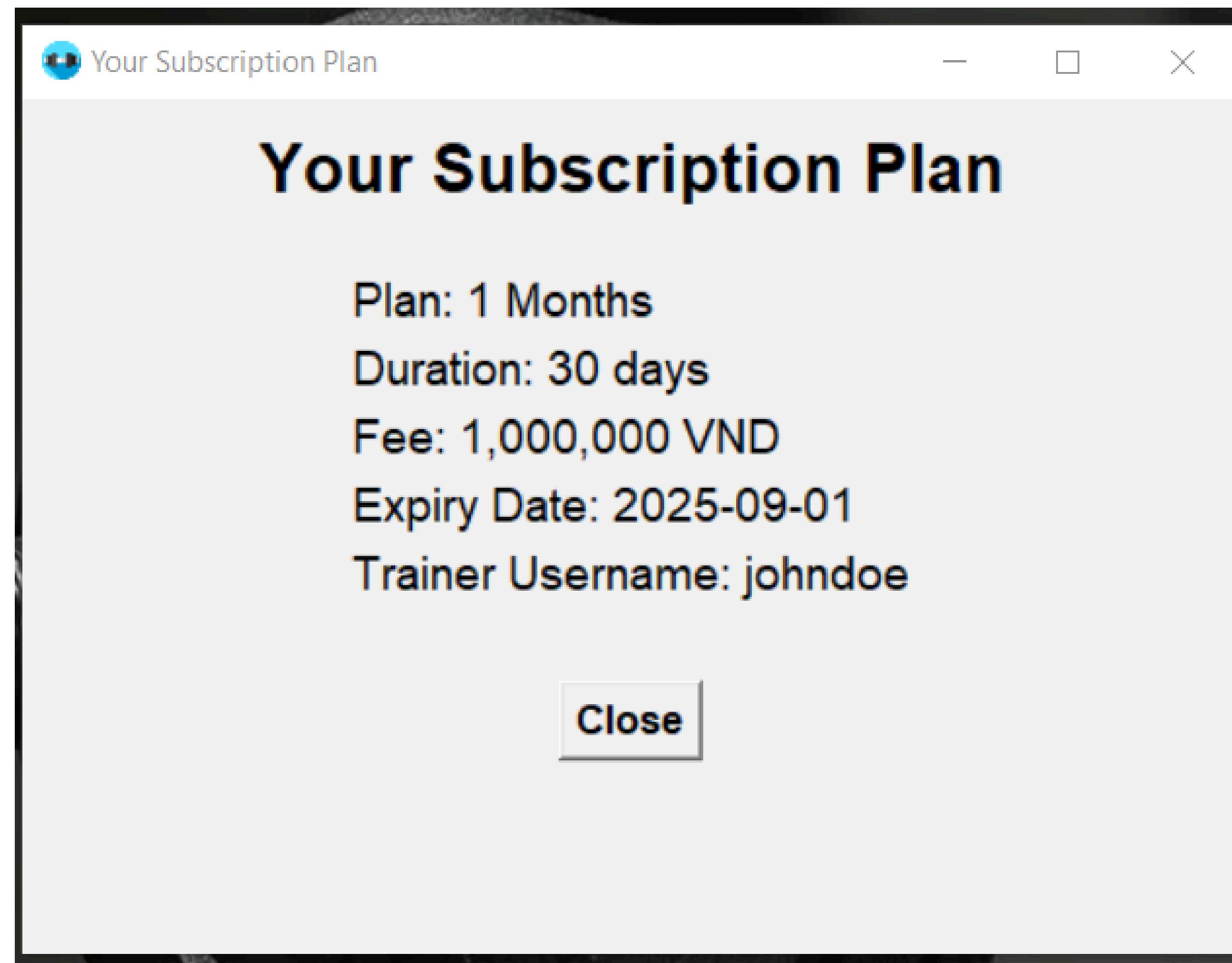
MEMBER WINDOW



[View Profile](#)[View Subscription Plan](#)[Check Workout Schedule](#)[Renew/Subscribe to New Plan](#)[Contact Trainers / Admin](#)

Some of the GUI in Member

View Subscription Plan



View Profile

Member Info: ducanh

Member Profile: ducanh

```
id: 1
f_name: Duc
l_name: Anh
gender: Male
phone: 1234567890
date_of_birth: 1990-01-01
joined_date: 2023-01-01
address: 123 Main St, City, Country
email: john@example.com
membership: 1 Months
subscription_expiry: 2025-09-01
username: ducanh
attendance_days: ['2025-07-03', '2025-07-04', '2025-07-01']
workout_days: [['2025-07-03', '100 Push-up, 10 jump rope'], ['2025-07-04', '50 Squat, 20 Burpees'], ['2025-07-24', 'Chay 100km']]
trainer_username: johndoe
```

Close

View Workout

Workout Days for ducanh

Date: 2025-07-03

Workout: 100 Push-up, 10 jump rope

Date: 2025-07-04

Workout: 50 Squat, 20 Burpees

Date: 2025-07-24

Workout: Chay 100km

Close