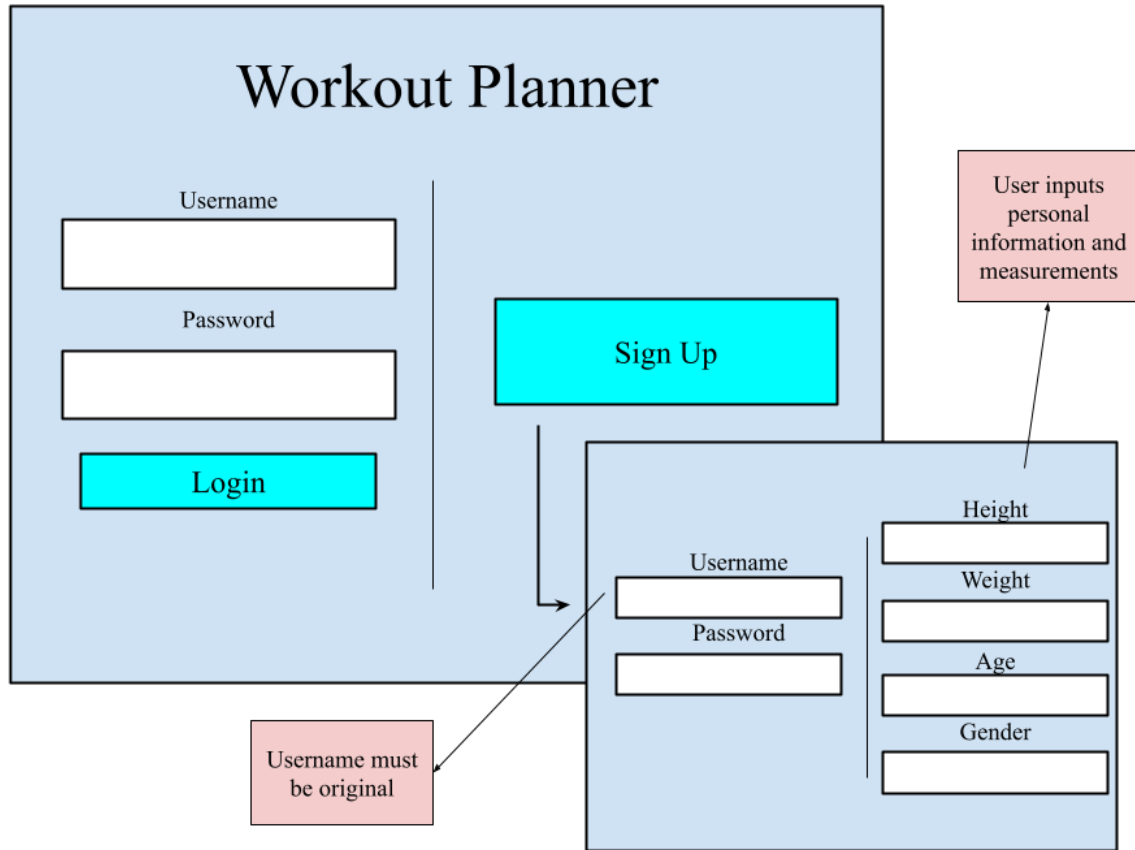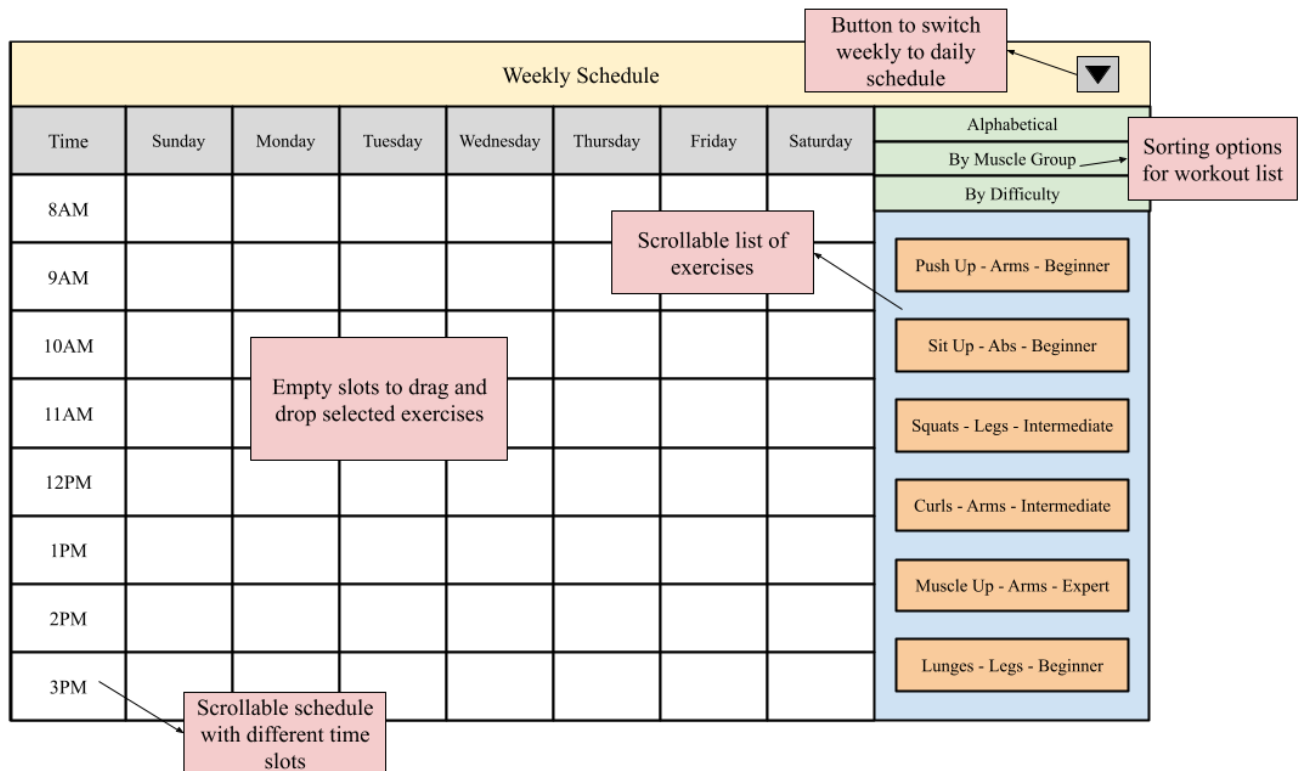# Criterion B: Design

Graphical Interface Design
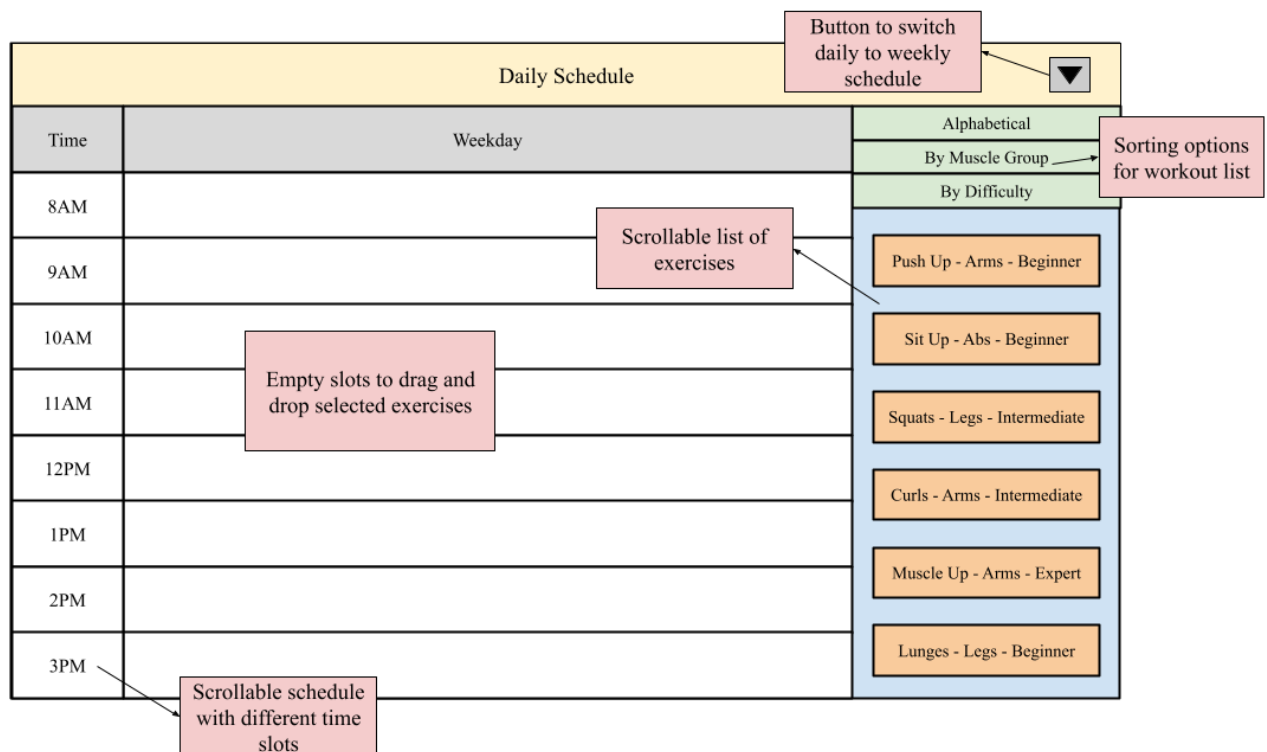
Home Menu Interface
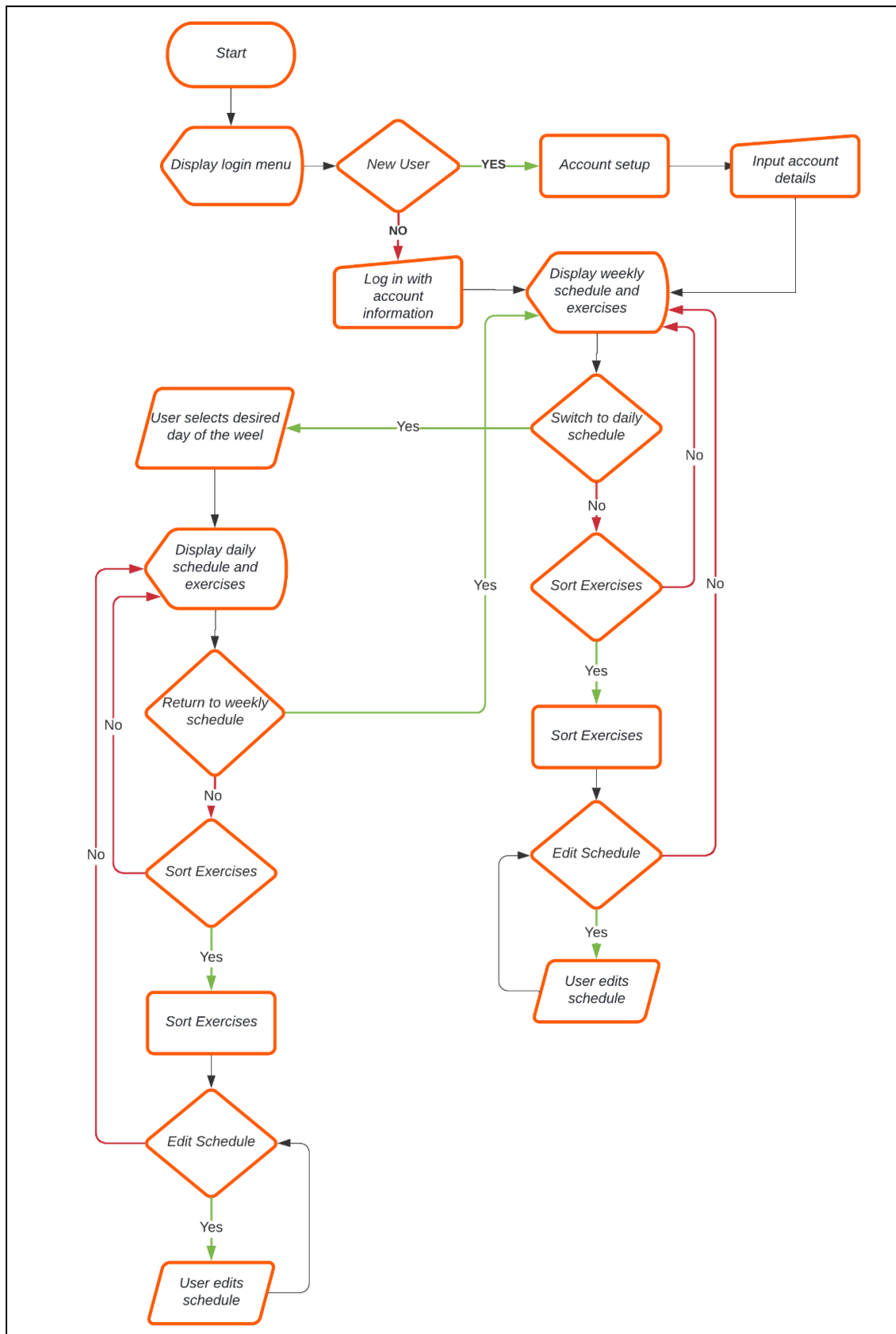
Weekly Schedule Interface

Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8AM							
9AM							
10AM							
11AM							
12PM							
1PM							
2PM							
3PM							

Weekly Schedule

Button to switch weekly to daily schedule ▼

Alphabetical
By Muscle Group — Sorting options for workout list
By Difficulty

Scrollable list of exercises

- Push Up - Arms - Beginner
- Sit Up - Abs - Beginner
- Squats - Legs - Intermediate
- Curls - Arms - Intermediate
- Muscle Up - Arms - Expert
- Lunges - Legs - Beginner

Empty slots to drag and drop selected exercises

Scrollable schedule with different time slots

Daily Schedule Interface

Time	Weekday
8AM	
9AM	
10AM	
11AM	
12PM	
1PM	
2PM	
3PM	

Daily Schedule

Button to switch daily to weekly schedule ▼

Alphabetical
By Muscle Group — Sorting options for workout list
By Difficulty

Scrollable list of exercises

- Push Up - Arms - Beginner
- Sit Up - Abs - Beginner
- Squats - Legs - Intermediate
- Curls - Arms - Intermediate
- Muscle Up - Arms - Expert
- Lunges - Legs - Beginner

Empty slots to drag and drop selected exercises

Scrollable schedule with different time slots

Program Process Flowchart

Program UML Diagram

Main

- schedule: Schedule

+ run()
+ switchDisplay()

1 — Uses a — 1

—Uses a—

1 **Schedule** 1

+ timeslots: Timeslots
+ exercises: WorkoutSelections

+ refresh()
+ saveData()
+ loadData()

1 Has a 1

Menu

- accounts: Account array

+ login()
+ signUp()
+ accountSetup()

1 Has a

0..* 0..* 0..*

Timeslots

- posX: int
- posY: int
- sizeX: int
- sizeY: int
- isTaken: boolean

+ getter/setter methods
+ refresh()

WorkoutSelections

- posX: int
- posY: int
- sizeX: int
- sizeY: int
- inUse: boolean
- workout: Workouts

+ sortWorkouts()
+ loadData()
+ refresh()

Account

- user: String
- pass: String
- gender: String
- height: int
- weight: int
- age: int

+ getter/setter methods

1 Has a

1 **Workouts**

- name: String
- description: String
- muscleGroup: String
- difficulty: String

+ getter/setter methods

Product Development Plan

Functionalities	Description
Main menu - Account creation - Login menu	- Users can create an account and enter their data and measurements (age, height, weight, etc.) - Users can select their skill level (beginner, intermediate, expert) and preferred workout intensity (easy, medium, hard) - After account creation, users can log in to the schedule to begin planning their workout
Workout Selection - Database of all available workouts - Sorting options - Workout recommendations	- Store and retrieve data for the information regarding a wide range of workouts - Allow users to sort through workouts based on various criteria (ex. by muscle group, by difficulty) - Recommend specific workouts using the data inputted by the user for their measurements and preferences.
Weekly Schedule - Scrollable schedule - Drag and drop workouts	- Have a scrollable interface for users to view all time slots in their weekly schedule - Allow users to drag selected exercises from the workout selection and drop them onto any time slot in their schedule.
Daily Schedule - Daily view - Day of the week selector	- A magnified view of the user's schedule for a given day of the week - Users can manually select to expand the schedule for a chosen week day.
Database - Saving account information and schedule data - Retrieving account information and schedule data	- All account information (age, height, weight, etc.) as well as usernames and passwords will be saved. - Account information will be retrieved upon user login - All data in the weekly schedule will be saved and stored under the user's account, and loaded once the user logs into their account

Testing Plan

Tested Functionality	Input Data	Expected Results
Program Startup	Start the program	The program runs without any errors, opening up the home menu.
Account creation	User creates an account and inputs their measurements (age, height, weight, etc.) and their skill level (beginner, intermediate, expert) and preferred workout intensity (easy, medium, hard)	All account data should be stored in a database, and new accounts should be able to be created as well. Account username and password should also be stored. New accounts can not be registered if the chosen username is already in use.
Account login	User inputs login information	The user's data and preferences should be saved and loaded upon their login, only if the inputted username exists in the database, and the inputted password matches that of the account. Successful login will take the user to the weekly schedule interface
Schedule time slots and list of exercises are scrollable	Scroll through the schedule and list of exercises.	The list and schedule will move according to the scroll wheel input. Once the bottom or top of the list and schedule is reached, it should no longer be scrollable in that direction.
Selected workouts can be dragged and dropped	Click and hold on a selection in the list of workouts, and drop it into an empty time slot in the schedule.	The chosen workout should move with the mouse while it is pressed, and clip onto the time slot that is currently being hovered. Upon mouse release, the chosen workout will stay in its position in the selected time slot
Sorting the list of workouts	Click on the sorting options for the list of workouts	The list of workouts should be sorted according to the chosen criteria (ex. By muscle group, by difficulty)
Recommended workouts	Click on the button for recommended workouts in the sorting options	A list of workouts should be displayed that match the user's account information (personal preference and body measurements)
Day of the week selector	Click on one of the days of the week on the weekly schedule	Display a magnified version of the schedule for the chosen day. The schedule can also be edited and all changes should be saved.
Accessing daily view through the schedule selector	Click on the dropdown menu in the top bar and select daily	A magnified version of the daily schedule for today's date should be displayed (Ex. if this was accessed on a Monday, the displayed daily schedule should be for Monday)
Data saving and retrieving functionality	Edit the schedule, exit out of the program, and re-enter the schedule	All previous changes made to the schedule should be saved even after exiting the program, and loaded back up on the user logs back into their account