

MyFit Tracker – Workout Tracking Application
ITMD510 – Object Oriented Application Development

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ABSTRACT

In the world of fitness tracking applications, ease of use and practicality is crucial. The JavaFX-based Fitness Tracker Application focuses on a simplified client-view and admin functionalities. The application includes functionalities for both user and admin, providing user-friendly interfaces for workout management and progress tracking, as well as administrative tasks such as workout management, account deletion, and password reset.

Client Functionality:

Client-view provides access to users to manage their workouts and track progress. Users can add workouts based on predefined difficulty levels, enabling quick customization of exercise routines. Also, users can update their progress, monitor their fitness journey, and make informed adjustments to their workout plans.

Admin Functionality:

Admins have access to enhanced functionalities such as managing user data and monitor/update workouts. The admin interface allows administrators to view users' progress, providing insights into their fitness activities and performance. Admins can update or delete existing workouts, ensuring that the application's exercise database remains relevant and up to date.

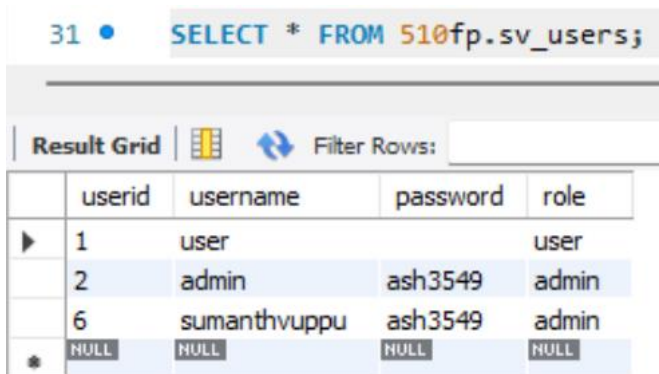
Moreover, administrators can manage user accounts such as deleting existing accounts and reset passwords for existing users demonstrating the update functionality in Admin View.

Conclusion:

The application offers a simple UI for fitness tracking. With further optimization, we can deliver a seamless and rewarding experience for both users and administrators, promoting health and wellness in the digital age.

User Information and Application Workflow Description

Admin and User Credentials:



The screenshot shows a database query interface. At the top, a SQL query is entered: `SELECT * FROM 510fp.sv_users;`. Below the query, there is a 'Result Grid' tab and a 'Filter Rows' input field. The result grid displays a table with four columns: 'userid', 'username', 'password', and 'role'. The table contains four rows of data. The first row has '1' for userid, 'user' for username, and 'user' for role. The second row has '2' for userid, 'admin' for username, 'ash3549' for password, and 'admin' for role. The third row has '6' for userid, 'sumanthvuppu' for username, 'ash3549' for password, and 'admin' for role. The fourth row has 'NULL' for all four fields. A star icon is visible in the first column of the fourth row.

	userid	username	password	role
▶	1	user		user
	2	admin	ash3549	admin
	6	sumanthvuppu	ash3549	admin
★	NULL	NULL	NULL	NULL



Application Initial Workflow Description:

Application begins with the Main class which has Login View. Upon giving the inputs for username and password, credentials are authenticated and if the role is user “ClientView” is opened else “Admin View” is opened.

3. Tables from DB:





3.1. User Table:

```
31 • SELECT * FROM 510fp.sv_users;
```

Result Grid   Filter Rows:

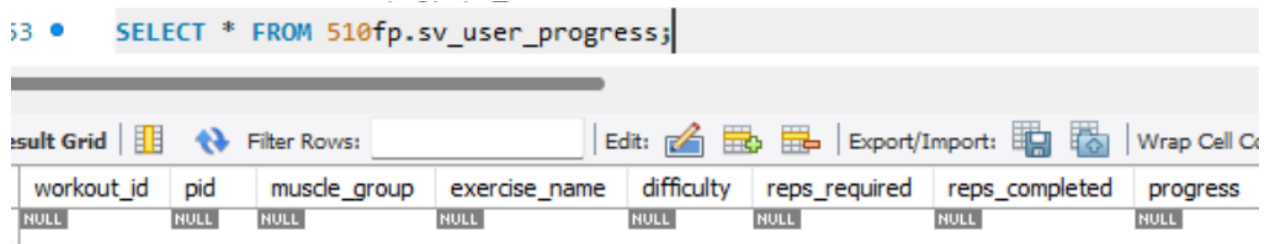
	userid	username	password	role
▶	1	user		user
	2	admin	ash3549	admin
	6	sumanthvuppu	ash3549	admin
*	NULL	NULL	NULL	NULL

3.2 Workouts Table:

Result Grid   Filter Rows: Edit:  

	pid	muscle_group	Exercise	Difficulty	Reps
▶	1	Chest	Bench Press (Flat)	Easy	8
	2	Chest	Bench Press (Flat)	Medium	10
	3	Chest	Bench Press (Flat)	Hard	12
	4	Chest	Dumbbell Flyes	Easy	10
	5	Chest	Dumbbell Flyes	Medium	12
	6	Chest	Dumbbell Flyes	Hard	15
	7	Back	Pull-ups/Chin-ups	Easy	6
	8	Back	Pull-ups/Chin-ups	Medium	8
	9	Back	Pull-ups/Chin-ups	Hard	10
	10	Back	Barbell Rows	Easy	8
	11	Back	Barbell Rows	Medium	10
	12	Back	Barbell Rows	Hard	12
	13	Shoulders	Military Press (Ba...	Easy	8
	14	Shoulders	Military Press (Ba...	Medium	10
	15	Shoulders	Military Press (Ba...	Hard	12
	16	Shoulders	Lateral Raise	Easy	10

3.3 User Progress Table:



The screenshot shows a database query interface. At the top, a SQL query is entered in a text box: `SELECT * FROM 510fp.sv_user_progress;`. Below the query box is a toolbar with various icons for grid manipulation, a 'Filter Rows' input field, an 'Edit' button, and 'Export/Import' buttons. Below the toolbar is a table representing the query results. The table has eight columns: `workout_id`, `pid`, `muscle_group`, `exercise_name`, `difficulty`, `reps_required`, `reps_completed`, and `progress`. The first row of data shows all columns containing the value `NULL`.

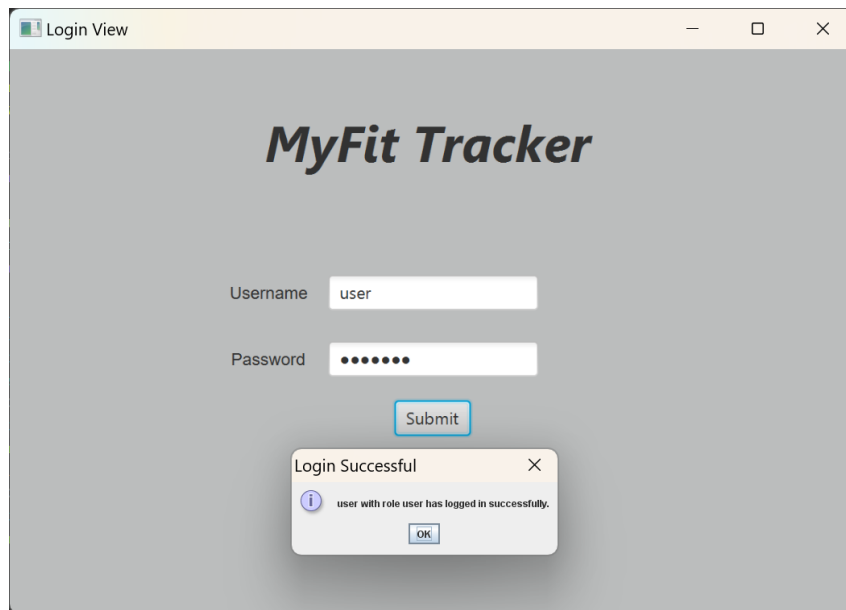
workout_id	pid	muscle_group	exercise_name	difficulty	reps_required	reps_completed	progress
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

`pid` is the foreign key reference from `sv_workouts` table.

Rows for `sv_user_progress` will be added during runtime.

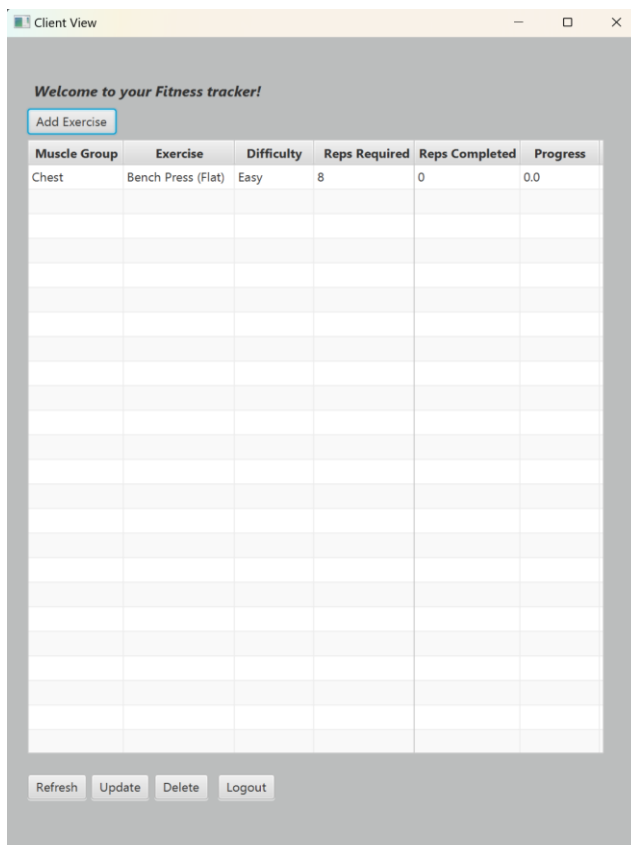
Screenshots from Application

4.1. Login View: Successful login of regular user



4.2. User View: Add 10 rows to DB.

Step1: Before adding any rows:



Step2: Click on Add Exercise

A new window will open displaying all existing workouts from DB. Click on Add button to add exercise to User Progress table.

The screenshot shows a web application interface for a fitness tracker. The main window, titled "Client View", displays a welcome message and an "Add Exercise" button. Below the button is a table with columns: Muscle Group, Exercise, Difficulty, Reps Required, Reps Completed, and Progress. The table contains one row: Chest, Bench Press (Flat), Easy, 8, 0, 0.0.

A modal window is open, displaying a list of exercises. The modal window has a table with columns: Muscle Group, Exercise, Difficulty, Reps, and Add to Workouts. The table lists 12 exercises, each with an "Add" button in the "Add to Workouts" column.

Muscle Group	Exercise	Difficulty	Reps	Add to Workouts
Chest	Bench Press (Flat)	Easy	8	<button>Add</button>
Chest	Bench Press (Flat)	Medium	10	<button>Add</button>
Chest	Bench Press (Flat)	Hard	12	<button>Add</button>
Chest	Dumbbell Flyes	Easy	10	<button>Add</button>
Chest	Dumbbell Flyes	Medium	12	<button>Add</button>
Chest	Dumbbell Flyes	Hard	15	<button>Add</button>
Back	Pull-ups/Chin-ups	Easy	6	<button>Add</button>
Back	Pull-ups/Chin-ups	Medium	8	<button>Add</button>
Back	Pull-ups/Chin-ups	Hard	10	<button>Add</button>
Back	Barbell Rows	Easy	8	<button>Add</button>
Back	Barbell Rows	Medium	10	<button>Add</button>

At the bottom of the main window, there are four buttons: Refresh, Update, Delete, and Logout.

Step 3: 10 rows added successfully.

[illegible]

Rows reflected in DB:

```
57 • SELECT * FROM 510fp.sv_user_progress;
```

58

[illegible]

[illegible]

Rows reflected in DB:

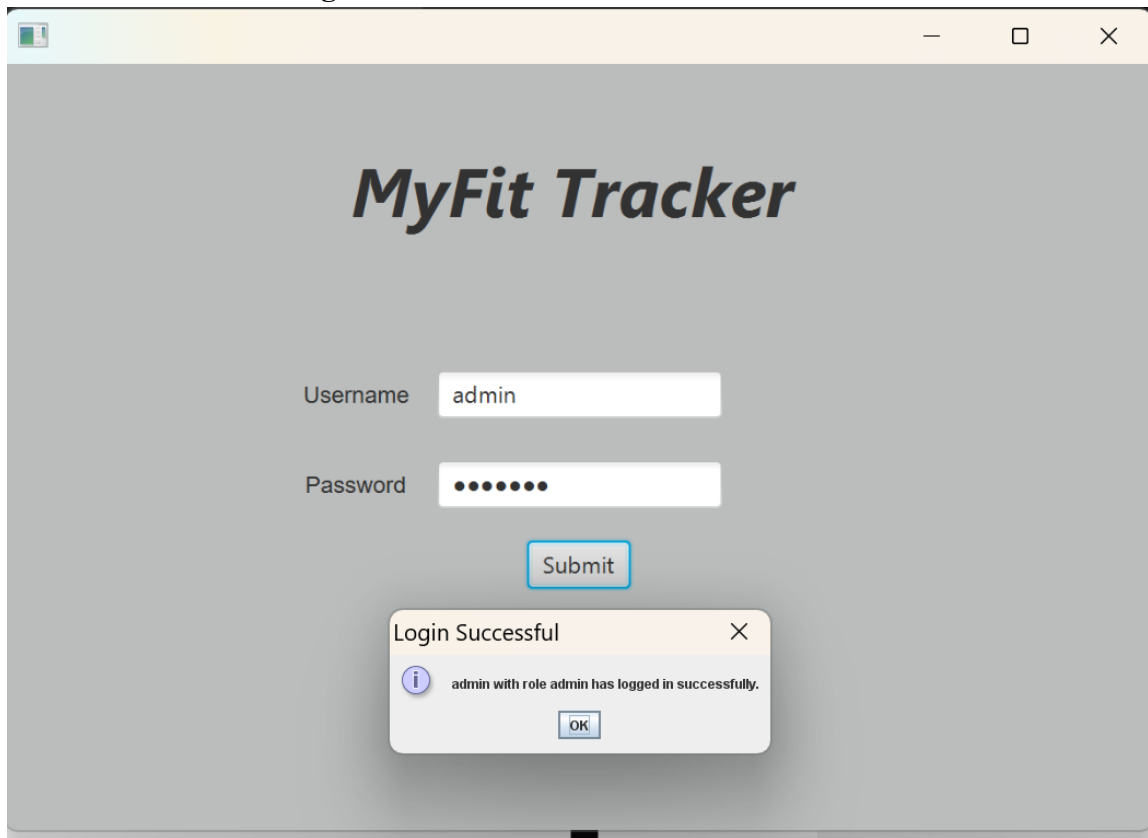
2

[illegible]

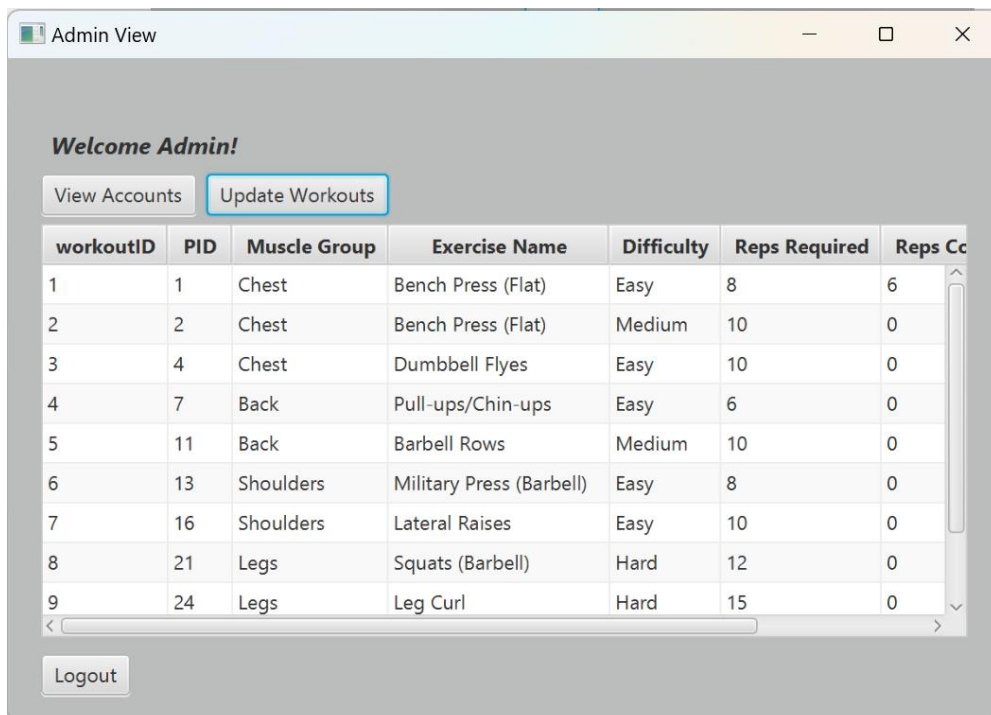
Step 5: Delete last record from User progress table and DB:

[illegible]

4.3.Admin View: Successful login of admin.



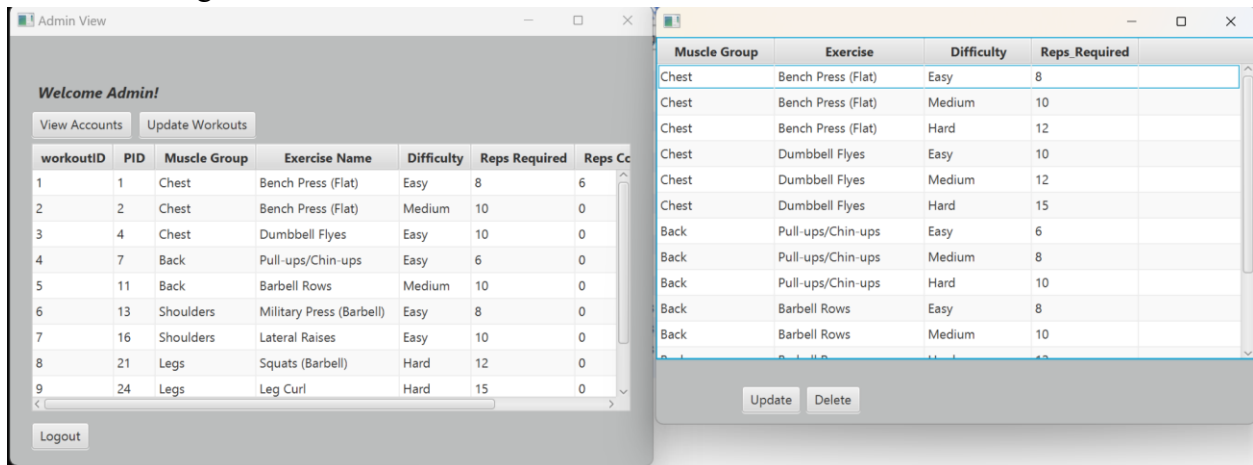
AdminView: The table shows the progress of users' workouts.



4.4.Admin View: Update first record from DB.

Step1: List of existing workouts before updating records.

Upon clicking Update Workouts button on Admin Main View, we get a new window with table of existing workouts.



From DB:

```
59 • SELECT * FROM 510fp.sv_workouts;
```

Result Grid Filter Rows: Edit:					
	pid	muscle_group	Exercise	Difficulty	Reps
▶	1	Chest	Bench Press (Flat)	Easy	8
	2	Chest	Bench Press (Flat)	Medium	10
	3	Chest	Bench Press (Flat)	Hard	12
	4	Chest	Dumbbell Flyes	Easy	10
	5	Chest	Dumbbell Flyes	Medium	12
	6	Chest	Dumbbell Flyes	Hard	15
	7	Back	Pull-ups/Chin-ups	Easy	6
	8	Back	Pull-ups/Chin-ups	Medium	8
	9	Back	Pull-ups/Chin-ups	Hard	10
	10	Back	Barbell Rows	Easy	8
	11	Back	Barbell Rows	Medium	10
	12	Back	Barbell Rows	Hard	12
	13	Shoulders	Military Press (Ba...	Easy	8
	14	Shoulders	Military Press (Ba...	Medium	10
	15	Shoulders	Military Press (Ba...	Hard	12
✱	NULL	NULL	NULL	NULL	NULL

Step2: Update the first row by selecting it and click on the update button.

Update Reps required

Please enter the new value for reps required:

OK Cancel

Muscle Group	Exercise	Difficulty	Reps_Required
Chest	Bench Press (Flat)	Easy	6
Chest	Bench Press (Flat)	Medium	10
Chest	Bench Press (Flat)	Hard	12
Chest	Dumbbell Flyes	Easy	10
Chest	Dumbbell Flyes	Medium	12
Chest	Dumbbell Flyes	Hard	15
Back	Pull-ups/Chin-ups	Easy	6
Back	Pull-ups/Chin-ups	Medium	8
Back	Pull-ups/Chin-ups	Hard	10
Back	Barbell Rows	Easy	8
Back	Barbell Rows	Medium	10

Updated row reflected in workouts table:

```
59 • SELECT * FROM 510fp.sv_workouts;
```

Result Grid | Filter Rows: | Edit:

	pid	muscle_group	Exercise	Difficulty	Reps
1	1	Chest	Bench Press (Flat)	Easy	6
2	2	Chest	Bench Press (Flat)	Medium	10
3	3	Chest	Bench Press (Flat)	Hard	12
4	4	Chest	Dumbbell Flyes	Easy	10

Updated row reflected user_progress table:

[illegible]

4.5.Admin View: Delete last record from DB.

Step1: Displaying last record of workouts table from DB.

Muscle Group	Exercise	Difficulty	Reps_Required
Chest	Dumbbell Flies	Medium	12
Chest	Dumbbell Flies	Hard	15
Back	Pull-ups/Chin-ups	Easy	6
Back	Pull-ups/Chin-ups	Medium	8
Back	Pull-ups/Chin-ups	Hard	10
Back	Barbell Rows	Easy	8
Back	Barbell Rows	Medium	10
Back	Barbell Rows	Hard	12
Shoulders	Military Press (Barbell)	Easy	8
Shoulders	Military Press (Barbell)	Medium	10
Shoulders	Military Press (Barbell)	Hard	12

59 • `SELECT * FROM 510fp.sv_workouts;`

Result Grid

Filter Rows:

Edit:

	pid	muscle_group	Exercise	Difficulty	Reps
▶	1	Chest	Bench Press (Flat)	Easy	6
	2	Chest	Bench Press (Flat)	Medium	10
	3	Chest	Bench Press (Flat)	Hard	12
	4	Chest	Dumbbell Flyes	Easy	10
	5	Chest	Dumbbell Flyes	Medium	12
	6	Chest	Dumbbell Flyes	Hard	15
	7	Back	Pull-ups/Chin-ups	Easy	6
	8	Back	Pull-ups/Chin-ups	Medium	8
	9	Back	Pull-ups/Chin-ups	Hard	10
	10	Back	Barbell Rows	Easy	8
	11	Back	Barbell Rows	Medium	10
	12	Back	Barbell Rows	Hard	12
	13	Shoulders	Military Press (Ba...	Easy	8
	14	Shoulders	Military Press (Ba...	Medium	10
	15	Shoulders	Military Press (Ba...	Hard	12
✱	NULL	NULL	NULL	NULL	NULL

This row is also present in user_progress table:

57 • `SELECT * FROM 510fp.sv_user_progress;`

Result Grid

Filter Rows:

Edit:

Export/Import:

Wrap

	workout_id	pid	muscle_group	exercise_name	difficulty	reps_required	reps_completed
1	1	Chest	Bench Press (Flat)	Easy	6	6	
2	2	Chest	Bench Press (Flat)	Medium	10	0	
3	4	Chest	Dumbbell Flies	Easy	10	0	
4	7	Back	Pull-ups/Chin-ups	Easy	6	0	
5	11	Back	Barbell Rows	Medium	10	0	
6	13	Shoulders	Military Press (Barbell)	Easy	8	0	
12	15	Shoulders	Military Press (Barbell)	Hard	12	0	
	NULL	NULL	NULL	NULL	NULL	NULL	

Step2: Select the last row and click on Delete to remove the record.

Record deleted from workouts table:

Muscle Group	Exercise	Difficulty	Reps_Required
Chest	Bench Press (Flat)	Hard	12
Chest	Dumbbell Flyes	Easy	10
Chest	Dumbbell Flyes	Medium	12
Chest	Dumbbell Flyes	Hard	15
Back	Pull-ups/Chin-ups	Easy	6
Back	Pull-ups/Chin-ups	Medium	8
Back	Pull-ups/Chin-ups	Hard	10
Back	Barbell Rows	Easy	8
Back	Barbell Rows	Medium	10
Back	Barbell Rows	Hard	12
Shoulders	Military Press (Barbell)	Easy	8
Shoulders	Military Press (Barbell)	Medium	10

```
59 • SELECT * FROM 510fp.sv_workouts;
```

pid	muscle_group	Exercise	Difficulty	Reps
1	Chest	Bench Press (Flat)	Easy	6
2	Chest	Bench Press (Flat)	Medium	10
3	Chest	Bench Press (Flat)	Hard	12
4	Chest	Dumbbell Flyes	Easy	10
5	Chest	Dumbbell Flyes	Medium	12
6	Chest	Dumbbell Flyes	Hard	15
7	Back	Pull-ups/Chin-ups	Easy	6
8	Back	Pull-ups/Chin-ups	Medium	8
9	Back	Pull-ups/Chin-ups	Hard	10
10	Back	Barbell Rows	Easy	8
11	Back	Barbell Rows	Medium	10
12	Back	Barbell Rows	Hard	12
13	Shoulders	Military Press (Ba...	Easy	8
14	Shoulders	Military Press (Ba...	Medium	10
NULL	NULL	NULL	NULL	NULL

Record deleted from user_progress table:

```
57 • SELECT * FROM 510fp.sv_user_progress;
```

workout_id	pid	muscle_group	exercise_name	difficulty	reps_required	reps_completed
1	1	Chest	Bench Press (Flat)	Easy	6	6
2	2	Chest	Bench Press (Flat)	Medium	10	0
3	4	Chest	Dumbbell Flyes	Easy	10	0
4	7	Back	Pull-ups/Chin-ups	Easy	6	0
5	11	Back	Barbell Rows	Medium	10	0
6	13	Shoulders	Military Press (Barbell)	Easy	8	0
NULL	NULL	NULL	NULL	NULL	NULL	NULL

4.6. Admin View: Reset Password for all accounts.

Step1: Display users table by clicking on View Accounts:

Note: Hashed passwords are displayed in Admin View.

The screenshot shows the 'Admin View' interface. On the left, the 'View Accounts' tab is selected, displaying a table with columns: workoutID, PID, Muscle Group, Exercise Name, Difficulty, Reps Required, and Reps Completed. The table contains 6 rows of workout data. On the right, a modal window displays a table of users with columns: User ID, username, and password. The table contains 3 rows of user data. Below the table are 'ResetPassword' and 'Delete' buttons.

workoutID	PID	Muscle Group	Exercise Name	Difficulty	Reps Required	Reps Completed
1	1	Chest	Bench Press (Flat)	Easy	6	6
2	2	Chest	Bench Press (Flat)	Medium	10	0
3	4	Chest	Dumbbell Flyes	Easy	10	0
4	7	Back	Pull-ups/Chin-ups	Easy	6	0
5	11	Back	Barbell Rows	Medium	10	0
6	13	Shoulders	Military Press (Barbell)	Easy	8	0

User ID	username	password
1	user	e3b0c44298fc1c149afb...
2	admin	98e19d6d07701ba1629...
6	sumanthvuppu	98e19d6d07701ba1629...

The screenshot shows a SQL query editor with the query: `SELECT * FROM sv_users;`. Below the query, the 'Result Grid' displays the results of the query. The table has columns: userid, username, password, and role. The results show 3 rows of user data.

userid	username	password	role
1	user		user
2	admin	ash3549	admin
6	sumanthvuppu	ash3549	admin

Step2: Reset Password for first row from user table:

The screenshot shows the 'Admin View' interface. On the left, the 'View Accounts' tab is selected, displaying a table with columns: workoutID, PID, Muscle Group, Exercise Name, Difficulty, Reps Required, and Reps Completed. The table contains 6 rows of workout data. On the right, a modal window displays a table of users with columns: User ID, username, and password. The table contains 3 rows of user data. Below the table are 'ResetPassword' and 'Delete' buttons. The 'ResetPassword' button is highlighted with a blue border.

workoutID	PID	Muscle Group	Exercise Name	Difficulty	Reps Required	Reps Completed
1	1	Chest	Bench Press (Flat)	Easy	6	6
2	2	Chest	Bench Press (Flat)	Medium	10	0
3	4	Chest	Dumbbell Flyes	Easy	10	0
4	7	Back	Pull-ups/Chin-ups	Easy	6	0
5	11	Back	Barbell Rows	Medium	10	0
6	13	Shoulders	Military Press (Barbell)	Easy	8	0

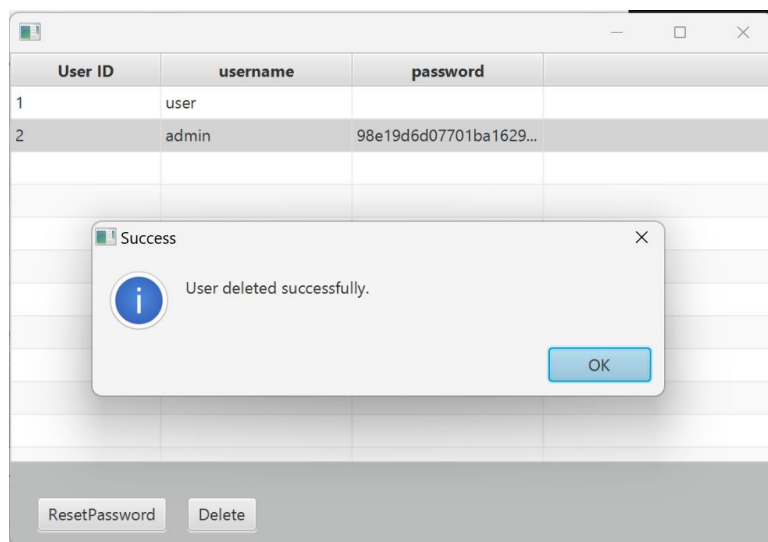
User ID	username	password
1	user	
2	admin	98e19d6d07701ba1629...
5	sumanthvuppu	98e19d6d07701ba1629...


```
31 • SELECT * FROM 510fp.sv_users;
```

	userid	username	password	role
1	1	user		user
2	2	admin	ash3549	admin
6	6	sumanthvuppu	ash3549	admin
*	NULL	NULL	NULL	NULL

4.7. AdminView: Delete last user from View Accounts:

Step1: From the above users table, we select last row and delete the user.



4.8. All remaining records from admin view:

Admin View

Welcome Admin!

View Accounts Update Workouts

workoutID	PID	Muscle Group	Exercise Name	Difficulty	Reps Required	Reps Co
1	1	Chest	Bench Press (Flat)	Easy	6	6
2	2	Chest	Bench Press (Flat)	Medium	10	0
3	4	Chest	Dumbbell Flyes	Easy	10	0
4	7	Back	Pull-ups/Chin-ups	Easy	6	0
5	11	Back	Barbell Rows	Medium	10	0
6	13	Shoulders	Military Press (Barbell)	Easy	8	0

Logout

Muscle Group	Exercise	Difficulty	Reps Required
Chest	Bench Press (Flat)	Easy	6
Chest	Dumbbell Flyes	Easy	10
Chest	Dumbbell Flyes	Medium	12
Chest	Dumbbell Flyes	Hard	15
Back	Pull-ups/Chin-ups	Easy	6
Back	Pull-ups/Chin-ups	Medium	8
Back	Pull-ups/Chin-ups	Hard	10
Back	Barbell Rows	Easy	8
Back	Barbell Rows	Medium	10
Back	Barbell Rows	Hard	12
Shoulders	Military Press (Barbell)	Easy	8
Shoulders	Military Press (Barbell)	Medium	10

Update Delete

Cross-check from DB:

57 • `SELECT * FROM 510fp.sv_user_progress;`

workout_id	pid	muscle_group	exercise_name	difficulty	reps_required	reps_completed	progress
1	1	Chest	Bench Press (Flat)	Easy	6	6	75
2	2	Chest	Bench Press (Flat)	Medium	10	0	0
3	4	Chest	Dumbbell Flyes	Easy	10	0	0
4	7	Back	Pull-ups/Chin-ups	Easy	6	0	0
5	11	Back	Barbell Rows	Medium	10	0	0
6	13	Shoulders	Military Press (Barbell)	Easy	8	0	0
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

59 • `SELECT * FROM 510fp.sv_workouts;`

pid	muscle_group	Exercise	Difficulty	Reps
1	Chest	Bench Press (Flat)	Easy	6
2	Chest	Bench Press (Flat)	Medium	10
3	Chest	Bench Press (Flat)	Hard	12
4	Chest	Dumbbell Flyes	Easy	10
5	Chest	Dumbbell Flyes	Medium	12
6	Chest	Dumbbell Flyes	Hard	15
7	Back	Pull-ups/Chin-ups	Easy	6
8	Back	Pull-ups/Chin-ups	Medium	8
9	Back	Pull-ups/Chin-ups	Hard	10
10	Back	Barbell Rows	Easy	8
11	Back	Barbell Rows	Medium	10
12	Back	Barbell Rows	Hard	12
13	Shoulders	Military Press (Ba...	Easy	8
14	Shoulders	Military Press (Ba...	Medium	10
NULL	NULL	NULL	NULL	NULL

4.9. End user table: As we reset the password for user in Step 4.6, the password field is empty.

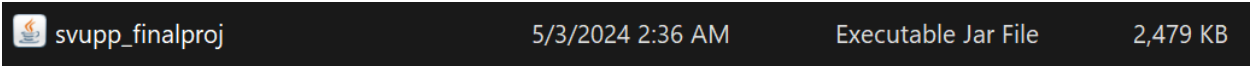
31 • `SELECT * FROM 510fp.sv_users;`

userid	username	password	role
1	user		user
2	admin	ash3549	admin
NULL	NULL	NULL	NULL

Extra Credit

5.1. Creating a working .jar File:

As per the given instructions, the application has been exported with the Main class as starting point of the execution.



The file can be found along with the zip file of the project.

5.2. Displaying hashed passwords in admin view:

Original table from DB:

31

```
SELECT * FROM 510fp.sv_users;
```

	userid	username	password	role
1	1	user		user
2	2	admin	ash3549	admin
6	6	sumanthvuppu	ash3549	admin
*	NULL	NULL	NULL	NULL

Hashed Passwords displayed in admin view:

