# Health Tracker – Final Lab Assignment Report

Student: Pawel Sitko

CID: 33788775

## Overview

Health Tracker is a Node.js + Express web application that allows users to create, manage, and review workout logs. The system provides secure authentication using bcrypt, session management, sanitized inputs, and full CRUD operations stored in a MySQL database. The application is deployed and tested on the Goldsmiths DOC server.

## Features Implemented

- Secure user registration and login (bcrypt hashing)
- Express-session login persistence
- Add, list, edit, delete workouts
- Search workouts
- Sanitized inputs using express-sanitizer
- Parameterized MySQL queries (prevents SQL injection)
- Clean UI built with EJS templates

## Database Structure

Users Table:

| Column | Type | Notes |
|---|---|---|
| id | INT, PK, AI | Unique identifier |
| first | VARCHAR(50) | First name |
| last | VARCHAR(50) | Last name |
| email | VARCHAR(100) | Unique email address |
| username | VARCHAR(50) | Unique username |
| password | VARCHAR(255) | Bcrypt-hashed password |
| | | |

| Column | Type | Notes |
|---|---|---|
| id | INT, PK, AI | Unique identifier |
| user_id | INT, FK | Links workout to a user |
| workout_date | DATE | Workout date |
| workout_type | VARCHAR(100) | Activity type |
| duration | INT | Time in minutes |
| intensity | VARCHAR(20) | low / medium / high |
| notes | TEXT | User notes |

- id (INT PK AI)
- first
- last
- email
- username
- password (bcrypt hashed)

Workouts Table:

- id (INT PK AI)
- user_id
- workout_date
- workout_type
- duration_minutes
- intensity
- notes

## Testing Summary

| Feature | Status |
|---|---|
| Register new user | ✓ Works |
| Login with correct credentials | ✓ Works |
| Login fails with incorrect password | ✓ Securely fails |
| Add workout | ✓ Works |
| Edit workout | ✓ Works |
| Delete workout | ✓ Works |
| Only logged-in users can access workouts | ✓ Enforced |
| Sanitisation strips harmful input | ✓ Tested |
| Password hashing verified | ✓ Hashed in DB |
| Sessions persist user state | ✓ Working |

## Server Information

The system runs successfully on:

http://www.doc.gold.ac.uk/usr/348

## Default Test Account for Markers

Username: gold

Password: smiths123

## AI Usage Statement

The only AI assistance used in this project was for generating CSS styling. All JavaScript, Node.js, Express, MySQL, routing logic, security implementation, and application structure were written manually by the student. (Manually added in each ejs code using <style>