ResistanceTracker – PLANNING 2

SPECIFICATIONS

Date: 24/07/2025

Overview

Define and specify overall scope for the project.

Define and specify features.

Consider data requirements ready for next stage, database planning.

Scope

The minimum requirement for success in this project is for it to be able to replace my current spreadsheet based tracking system.

That being said – a like for like replacement offers no additional benefit over what I currently use. The main benefit I envision is analysis tools.

The system is intended for single user use in the short to medium term, which might be as far as it goes, but considering it might be scaled in future, and there is a need for personal data to be stored anyway, I will include in the scope functionality for ‘users’ and user settings. This can also allow for system administration features to be hidden when in day to day use.

The system will be hosted entirely locally as described in the initial planning document.

Features /Systems

Based on the described scope, I consider these to be the minimum features to consider this project to have met it’s aims. Further aims may be introduced later.

First the absolute crucial components (in no order of importance):

* Main Page/ Hub/ Dashboard:
* Central page linking to different areas/modules, essentially main menu. May also contain some overview information/ widget type things.
* Session input:
* The most critical feature, ability to save workout sessions. This has already been prototyped but needs to be fleshed out. Ability to load preplanned template sessions would be a good feature. Need to figure out an intuitive way to select exercises besides unvalidated user input or a long list. Exercises should be stored in database to allow for analysis functionality. Session data structure needs to be defined. Considerations for more complex techniques like supersets, partial reps etc need to be thought about.
* Potentially have notes for each set, separate from training journal?
* Training Journal:
* Currently have a separate sheet in the spreadsheet which I journal my training, recovery etc which needs to be carried over. And linked to in session review.
* Injury tracker:
* Should have a means to record injuries as their own entity rather than a journal entry
* Session review:
* Another critical feature, directly replacing spreadsheet functionality, is ability to look back over previous sessions. Different levels of granularity should be available as well as different filtering options. ;eg I might just want to look back at a listing of all sessions. Or be able to see all back sessions with sets details.
* Exercise database management:
* User will need to be able to add exercises according to their needs. Consideration needs to be given to trying to avoid duplications.
* Exercise details will play into analysis and tracking. Eg; how are bodyweight exercises calculated vs weighted etc.. serious thought needs to be given to that and what details are required.
* Import processes:
* Need to be able to import data for the purposes of migrating from current system. Should be implemented fairly early as will provide test data for subsequent features.
* Csv uploads.

Secondary features. Ie;- not fundamentally crucial but required for higher level aims of the project.

* Program planning:
* This will be an advancement from the spreadsheet where I vaguely write out a program plan and sessions plans. This would allow analysis and session tracking to be within the context of an active program and give more context when viewing historical sessions. Will inevitably be complex and a system in itself. Feeds back into session data structure as will be linked to program data. Will allow template sessions to be loaded in to session input.
* Analysis:
* Another ‘system’ in and of itself, comprising multiple functionality. Main concept being graphing tools to view long term trends, this might be done using chart.js library for example.
* Scope for now would be to view straightforward data like weight, exercise performance by different metrics, volume etc..
* This may be the most ‘live’ part of the system as new features are thought of by the user.
* User profile:
* Allow personal details, measurements to be saved
* Allow user settings, giving some degree of tailoring
* Different permissions, allowing system admin features
* User logon
* Training calender:
* This is something I don’t have currently and is inspired by githubs activity calender. A visual high level way of seeing training over the weeks/months/years. Could be displayed on main page.

**Detailed Feature Specifications**

Main Page

Central hub, from which to navigate to the other areas/subsystems of the application.

Requirements:

* Buttons/cards whatever to navigate to each system, according to the above features list will be:
* Tracking (data inputting)
* Review (straightforward enquiry on historical data)
* Planning (Program/session planning)
* Analysis (graphing/reporting)
* Database (database maintenance and data uploads)
* Profile (User details)
* Settings (system functionality settings)
* Pop up for unavailable options
* Show a message if click on something that’s not yet accessible.
* Overview panel (future feature):
* Optional informational displays – will be based on upcoming features and therefore can be ignored for initial development and added later.

Note that functionality is simple as in just link to other areas. The main aspect for initial development of this feature is establishing the visual style of the application.

Subsequent system/area menus will follow same pattern as and when features within them are developed.

Session Input

Page for inputting individual session data. Ie;- a variable length list of exercises with variable number of sets each, comprising of a value for sets and weights. Either fully manually input or prepopulated from template.

Standard features:

* Macro information;- Date (standard date input), Macrocycle (will for now be input, but eventually hidden as pulled from active macrocycle in planning system), Session Name (text)
* Exercises;- Select from list of exercises in database. (some sort of filtered dropdown?)
* Inputs for weight and reps
* Buttons for addition/removal of exercises and sets.
* Save session button
* Information panel ie;- instructions about recording weight
* (Hidden data also will be saved such as the current macrocycle – for later analysis. Number of sets will also be recorded on session ‘header’ record)

Advanced features (later development):

* Inputs for additional details like supersets etc
* Set notes input
* Load template session

Note that this is a fundamental feature and will be among the first to be developed, though there is a dependency one the exercises database from the start, this is to enforce standardisation of exercise names in the database which will allow reliable analysis. Therefore the exercise database maintenance functionality must be developed first;

Exercise Database Maintenance

This will be the first feature to be developed, in order to allow input of exercises to the database which will be necessary for the function of subsequent features.

This will be accessible to user due to large variety of possible exercises and individual variations

* Creation/Amendment/Deletion/Enquiry of exercise details
* Details:
* Exercise Name
* Equipment Type [Calisthenic, Free weight, fixed path machine, free path (cable) machine]
* Exercise type [compound, isolation]
* Prime mover(s) [main muscles targeted]
* Secondary mover(s) [secondary muscles targeted]
* Input validations
* Duplication checks (some messaging should also encourage user to check database for exercise before adding one)
* Deletion warnings (don’t allow if sessions in the database are using the exercise)

Note that this requires muscles to be in the database as well. This will be developed alongside the exercise db maintenance and will be a hidden feature to user (no need for user to maintain, finite number of muscles in body)

* Creation/Amendment/Deletion/Enquiry of muscles
* Details (all freetext but may be referenced in analysis so be careful to standardise, particularly body region):
* Muscle Name
* Body region
* Function description

Session Review

Enquiry functionalities for previous sessions.

**listing**

* Show list of previous sessions
* List should be filterable/sortable
* Different detail options (just date, name, numb of sets, volume. Include exercises info)
* Show if journal entry present for the session’s date.
* Ability to click on session for details and amendment

**Timeline/Calender (eventual feature)**

* Calender view with sessions, notes, injuries etc.

This will be developed after session input so it can be tested. Note it is data enquiry/amendment only and therefore no new data needs to be considered for this.

Training Journal

Simple free text input with a date.

Injury Tracker

Simple form for injury entry

* Date, name, notes

Show current injuries

* ‘Resolve’ Injuries, recovery date, notes.

Db:

Injury date, name, notes, recovery date, recovery notes

CSV uploads

Allow for import of historic data.

* Sessions (date, macrocycle, name, exercises[ sets[weights, reps]])
* Note exercises will need to match existing in database. Weights recorded standardised.
* Journal entries (date, text)

User measurements

Input user measurements. (bodyweight will be needed from outset for bodyweight exercises)

* Date, measurement (for each measurement type)

Conclusion

This concludes the initial features for a baseline working system. Further features will be specd out after initial development.

Next steps

* Database structure design – requirements for currently specd features + anything that will need to be linked to them
* Technical planning – Plan project infrastructure build
* Project plan for initial development