

Problem Statement and Goals

Software Eng 4G06

Team 2, Parnas' Pals
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Table 1: Revision History

Date	Developer(s)	Change
24/09/22	Jared Bentvelsen, Yuvraj Randhawa, Bassel Rezkalla	Initial draft of Problem Statement
Date2	Name(s)	Description of changes
...

1 Problem Statement

1.1 Problem

Working out and exercising is a vital component of any healthy lifestyle, and has been shown to greatly improve both physical and mental well-being. However, many individuals feel reluctant to go to a gym or establish any consistent workout routines simply because they aren't sure what to do. Existing exercise content is mostly expensive Excel spreadsheets or brief, hard-to-follow Tik-Tok clips which are inconvenient to use while you're exercising or in the gym. There does not yet exist an application to track progress and discover new workout

content in an easy and effective manner. Workout routines can vary infinitely depending on an athlete's goals and preferences. A workout can be composed of any number of exercises and each of these exercises can be done in any number of variations, with different technical adjustments. The high level goal of this project is to make working out highly accessible for beginners and to spread new tips and techniques to even the most experienced athletes in a clean and accessible manner.

1.2 Inputs and Outputs

Inputs:

1. A user's favourite workout routines for accomplishing a specific goal (e.g. build strength on bench press) for others to discover
 - (a) General workout description
 - (b) A set of exercises
 - (c) Sets, reps, and weight where applicable
 - (d) Technical comments, pieces of advice
 - (e) Self recorded technique demonstration videos
2. Comments and reviews for other posted workout routines
3. Fitness goals that a user wishes to reach in an optional time frame (e.g. Run 5km in under 25 minutes, or lift 225lbs on bench press)
4. A user's actions during a workout, or data progressing towards a set goal (e.g. Record weight on the bench press, and 'tick off' exercises as they are performed during a session.)

Outputs:

1. Searchable workout content for users to discover programs for specific goals.
2. A method for users to seamlessly track their own progress through a routine or towards their more general goals.
3. Reviews and comments left by other users indicating the quality of a given workout routine.

1.3 Stakeholders

1. Anyone interested in exercising (both beginner and advanced)
2. Personal trainers
3. Fitness Advertisers

1.4 Environment

Supported platforms: iOS/Android mobile application, web application accessible from browser

2 Goals

Goal Descriptions	
Goal Name	blah blah blah
Name	blah blah blah
Name	blah blah blah
Name	blah blah blah
Name	blah blah blah

2.1 Stretch Goals

3 Inputs and Outputs

4 Development Plan

4.1 Team meeting plan

Team meetings will be conducted weekly on non-holiday Mondays at 4:30pm. Further meetings can be scheduled if needed. Meetings will be conducted in person at a McMaster bookable room or library unless specified otherwise.

4.2 Team communication plan

Common team communication and questions will be conducted on **Mircosoft Teams**.

Any online meetings will be conducted on **Mircosoft Teams**.

4.3 Workflow plan

GitHub will be used for all workflow and version control.

4.3.1 Task Scheduling

The **Github Kanban** project board will be used to plan and assign upcoming and ongoing tasks to team developers.

If a task is large or general, sub-tasks will be created and assigned accordingly. Upcoming project deliverables must include deadlines.

4.3.2 Git Branch Usage

All features, documents and file changes require a named branch describing the change. Branches will follow a similar format to:

topic_or_type/section/branch_description

4.3.3 Git Commits

Tags will be attached to commits as needed to further display the change description.

Commit Squashing may be used prior to creating pull requests to clean up unnecessary commits.

4.3.4 Git Branch Merging and Pull Requests

The main or centered branch will be protected such that new features and additions will require a pull request in order to be merged.

Pull Requests require a minimum of 2 approvals to be accepted.

4.3.5 Technial Issues

For all technial questions, concerns and issues, the **Github Issues** feature will be used to open an issue or concern accordingly.

4.4 Team Roles

Team Role Descriptions	
Role	blah blah blah
Front End Expert	Dimitri
Database Expert	Jared
UX/UI Expert	Matt
Role	blah blah blah

4.5 Coding Style and Standards

The **Google Coding Style** will be used as a standard for all code in the project. The style guide for this can be found [here](#). A language specific linter will be enforced.

4.6 Testing

4.6.1 Unit Testing

Jest will be used for this app's unit testing. Jest is a popular Javascript testing framework that will be used to verify code correctness. Other features offered by Jest that will prove useful include mocking and code coverage insights.

4.6.2 Simulation / Integration Testing

TestCafe will be used for this app's integration testing. TestCafe is a cross-browser integration testing framework that will be used to verify proper integration between the app's various components (back-end, front-end, database, etc). TestCafe also offers end-to-end testing which includes automatic simulation of many common web-app components such as forms and buttons.

4.7 Risks