

Assignment 1

Team number: Group 41

Team members

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This document has a maximum length of 5 pages (excluding the contents above).

Introduction

Author(s): Andres Latorre and Alex Pascual

GPX manager is a tool used to register users' exercise activities, including a variety of sports. The average user of this tool should be someone who frequently exercises and desires to track and compare their physical progress over time. Our tool should produce a map of the user's journey and assign an activity to the GPX file being visualized. With this, we will be able to compute basic metrics and statistics in order to compare and visualize different track recordings. The contents of the GPX Manager is saved to a database file on the users' local device, and therefore the contents of the GPX Manager can be accessed without requiring an internet connection. The GPX manager is an open format and therefore it is license free, it allows the users to add waypoints, tracks and routes.

The GPX manager would work as follows:

1. Parse a GPX file containing data including latitude, longitude, and elevation.
2. Show the user a visualization of the gpx file as a map.
3. Be able to compute the total distance traveled and other statistics, such as average speed, calories burned, difference in altitude, etc.
4. The user can access a calendar that shows a summary of the daily activity performed by the user.

Features.

Author(s): Nikolay Filipov

Functional features

ID	Short name	Description	Champion
F1	Map	Users should be able to see a map display with the location surpassed. This is one of our most relevant features as it is vital to have precision in the user's location.	Nikolay F.
F2	Calendar	The user should be able to see the exact date and time in which they have exercised and select the recordings(for example, if there is more than one exercise session that day) the user can select the session they want to view.	Alex
F3	Statistics	User should visualize various statistics: <ul style="list-style-type: none">- total distance recorded- total time exercised- min-max altitude- the estimated total number of calories burned.- medium velocity- total number of activities recorded- fastest pace	Andres
F4	Detection	Auto detection of similar tracks. If there is a similar track so for example someone runs the same route , it will detect it.	Asim

Quality requirements

Author(s): Asim Manzaij

ID	Short name	Quality attribute	Description
QR1	Extensible map	Usability	The tool should have a user-friendly interface so many users can use it.
QR2	Instantaneous results	Performance	Once the user makes a move in real life, there should not be a large delay on the map.

Java libraries

Author(s): Andres Latorre

JFoenix

Used for styling the user interface of the system. We chose it among others because there are a lot of resources available and many tutorials online (Youtube)

GMapsFX

We will use this library in order to include Google Maps to our JavaFX application without the need to interact with the underlying Google Maps JavaScript API. We chose it because it was given in the assignment description as a simple way to incorporate a map in our project.

SLF4J

This library is used for basic login features, it provides helpful tools and features. It also lets for the login framework to be changed during runtime and includes an event logger in order to record login attempts.

Time logs

Member	Activity	Hours
Week 1		
Nikolay Filipov	Merging Github and Installation	1
Andres Latorre	Merging Github and Installation	1
Asim Manzaij	Merging Github and Installation	1
Alex Pascual	Merging Github and Installation	1
Week 2		
Nikolay Filipov	Define functional features	2
Andres Latorre	Search Java libraries	2
Asim Manzaij	Define functional features	2
Alex Pascual	Write Introduction	2
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