User

GUI

Controller

Track Handler

Normal

User → GUI: Selects draw option()

GUI → Controller: Switches to draw screen()

Controller → Track Handler: Asks for loaded GPX Files()

Track Handler → Controller: Returns loaded GPX Files()

Controller → GUI: shows Laoded GPX Files on page()

User → GUI: User selects which tracks to show()

GUI → Controller: Tells controller which GPX files to load()

Controller → GUI: Inserts data in graph and table()

User → GUI: user selects quit()

GUI → Controller: Tells program to exit()

Alternate Flow

User → GUI: Draw menu selected()

GUI → Controller: Switches to draw screen()

Controller → Track Handler: Asks for loaded GPX files()

Track Handler → Controller: Returns loaded GPX files()

User → GUI: Switches menu()

GUI → Controller: Tells controller menu switch has been selected()

Controller → GUI: clears the page and switches view()

Use Case: 3. As a user, I want to be able to graphically view up to 10 tracks as a 2D plot.

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User Story Description

The user selects the draw menu option after loading the desired tracks. The screen then goes to the draw UI and the user can select which loaded track files to display on the graph and table. After displaying this information, they quit the application or load different tracks.

Identification of Actor(s)

The only actor in these cases is the user who is running the program.

Pre-conditions

The only precondition for this use case is that the user has loaded at least one track.

Scenarios

Basic/Normal Flow

Actor1	System
1. The user selects the draw option	
	2. The UI switches to the draw Screen
3. The user clicks the boxes of the tracks that they want to show	
	4. the graph and the table show the data from the selected Tracks
5. The user quits the program	

Alternate Flow 1: User Changes view before graph finishes plotting

This will be encountered if the user starts to load a graph but selects a different menu option before it finishes loading.

Actor1	System
1. The user selects the draw option	
	2. The UI switches to the draw Screen
3. The user clicks the boxes of the tracks that they want to show	
	4. The graph starts to plot the data
5. The user changes views	
	6. the system stops plotting, resets, and switches views

Post-conditions

A Graph is displayed, and the view will switch when the user achieves their goal.

Additional Notes

The only actor is the user, the boundary element is the GUI. The control element is the controller class of the GUI that is the boundary element. The Entity element is the Tracks Handler class which stores the information from the GPX files.

Nouns and verbs used to identify potential methods and objects are in red.

File

Load
Metrics
Draw
Quit

Name	Distance

No content in table

110

100

90

80

70

60

50

40

30

20

10

0

☐ Name of File 1   ☐ Name of File 6

☐ Name of File 2   ☐ Name of File 7

☐ Name of File 3   ☐ Name of File 8

☐ Name of File 4   ☐ Name of File 9

☐ Name of File 5   ☐ Name of File 10