

## Use Case: 1 use short description "Load GPS Files"

Author: Austin DeMars

Date: October 24, 2019

### User Story Description

As a user, I want to be able to load up to 10 GPS data files as acquired by a GPS device into the system.

### Identification of Actor(s)

User – Uses GPS device to load tracks and view metrics/plots

### Pre-conditions

User has application opened and running.

### Scenarios

#### Basic/Normal Flow

User	GPS App
1. Presses File/Load	
	2. Presents File Chooser to User
3. Selects a file to be loaded	
	4. Controller passes file to File Reader to read through file and then stores key information in Track object which is added to collection class. Then displays success dialog with track info.
5. Sees dialog message	

#### Alternate Flow 1: Invalid File Chosen

User tries to load an invalid file and an Illegal Argument Exception is thrown.

User	GPS App
1. Presses File/Load	
	2. Presents File Chooser to User
3. Selects file to be loaded	
	4. File is sent to file reader, but the file isn't valid, so an exception is sent. Controller sends error dialog based on exception.
5. Sees error dialog	

## Alternate Flow 2: Missing XML Element

User tries to load a gps file and an XML element is missing so an IOException is thrown

User	GPS App
1. Presses File/Load	
	2. Presents File Chooser to User
3. Selects file to be loaded	
	4. File is sent to file reader. File is read, but XML element is missing. IOException is thrown and an error dialog is created from the controller.
5. Sees error dialog	

## Alternate Flow 3: Invalid/Unreadable Latitude

User tries to load a gps file and a Latitude value is invalid so an IOException is thrown

User	GPS App
1. Presses File/Load	
	2. Presents File Chooser to User
3. Selects file to be loaded	
	4. File is sent to file reader. File is read, but latitude value is invalid or can't be read. IOException is thrown and an error dialog is created from the controller.
5. Sees error dialog	

## Alternate Flow 4: Invalid/Unreadable Longitude

User tries to load a gps file and a Longitude value is invalid so an IOException is thrown

User	GPS App
1. Presses File/Load	
	2. Presents File Chooser to User
3. Selects file to be loaded	
	4. File is sent to file reader. File is read, but longitude value is invalid or can't be read. IOException is thrown and an error dialog is created from the controller.
5. Sees error dialog	

## Alternate Flow 5: Invalid Time Format

User tries to load a gps file, but a time value is invalid and can't be read, so an IOException is thrown

User	GPS App
1. Presses File/Load	
	2. Presents File Chooser to User
3. Selects file to be loaded	
	4. File is sent to file reader. The file is read, but a time value is invalid, so an IOException is thrown to the controller. The controller creates an error dialog
5. Sees error dialog	

## Alternate Flow 6: Invalid/Unreadable Elevation

User tries to load an invalid file and an Illegal Argument Exception is thrown.

User	GPS App
1. Presses File/Load	
	2. Presents File Chooser to User
3. Selects file to be loaded	
	4. File is sent to file reader. File is read, but an elevation value is found to be invalid so an IOException is thrown
5. Sees error dialog	

## Alternate Flow 7: User Cancels File Chooser

User tries to load an invalid file and an Illegal Argument Exception is thrown.

User	GPS App
1. User presses File/Load	
	2. Presents File Chooser to User
3. User cancels file chooser	
	4. Controller closes file chooser without an error occurring
5. User sees main menu	

## Post-conditions

Success dialog appears indicating the name of the track loaded and how many points were loaded.  
Updates the remaining number of allowable tracks to upload.

## Additional Requirements/ Notes

Actor – User

Boundary Elements -Main Menu and Success Dialog

Control Element – Main Controller

Entity Elements – FileReader, TrackHandler (collection class), Track

## Success Dialog Message:

GPS File load successful.

Track name: <name>

Points loaded: <points>

## Error Dialog Messages:

### Invalid File:

Invalid file error

<file> is not supported (must be GPX)

### Read Error:

<Read Error> (Missing XML, Invalid Elevation, etc.) on line <line number>











