Use Case: 1

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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

Pre-conditions

User has application opened and running.

Scenarios

Basic/Normal Flow

User	GPS App
1. User presses File/Load	
	2. Presents File Chooser to User
3. User selects a file to be loaded	
	4. Reads through file and then stores key information in Track object which is added to collection class. Then displays success dialog with track info.
5. User sees dialog message	

Alternate Flow 1: Invalid File Chosen

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

Actor1	GPS App
1. User presses File/Load	
	2. Presents File Chooser to User
3. User selects file to be loaded	
	4. File is sent to file reader, but the file isn't valid, so an exception is sent. Controller uses it for an error dialog
5. User 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

Actor1	GPS App
1. User presses File/Load	
	2. Presents File Chooser to User
3. User 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. User 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

Actor1	GPS App
1. User presses File/Load	
	2. Presents File Chooser to User
3. User 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. User 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

Actor1	GPS App
1. User presses File/Load	
	2. Presents File Chooser to User
3. User 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. User 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 IOExcption is thrown

Actor1	GPS App
1. User presses File/Load	
	2. Presents File Chooser to User
3. User selects file to be loaded	
	4. File is sent to file reader. The file is read, but a time value is invalid, so an IO Exception is thrown to the controller. The controller creates an error dialog
5. User sees error dialog	

Alternate Flow 6: Invalid/Unreadable Elevation

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

Actor1	GPS App
1. User presses File/Load	
	2. Presents File Chooser to User
3. User 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. User sees error dialog	

Alternate Flow 7: User Cancels File Chooser

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

Actor1	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

N/A

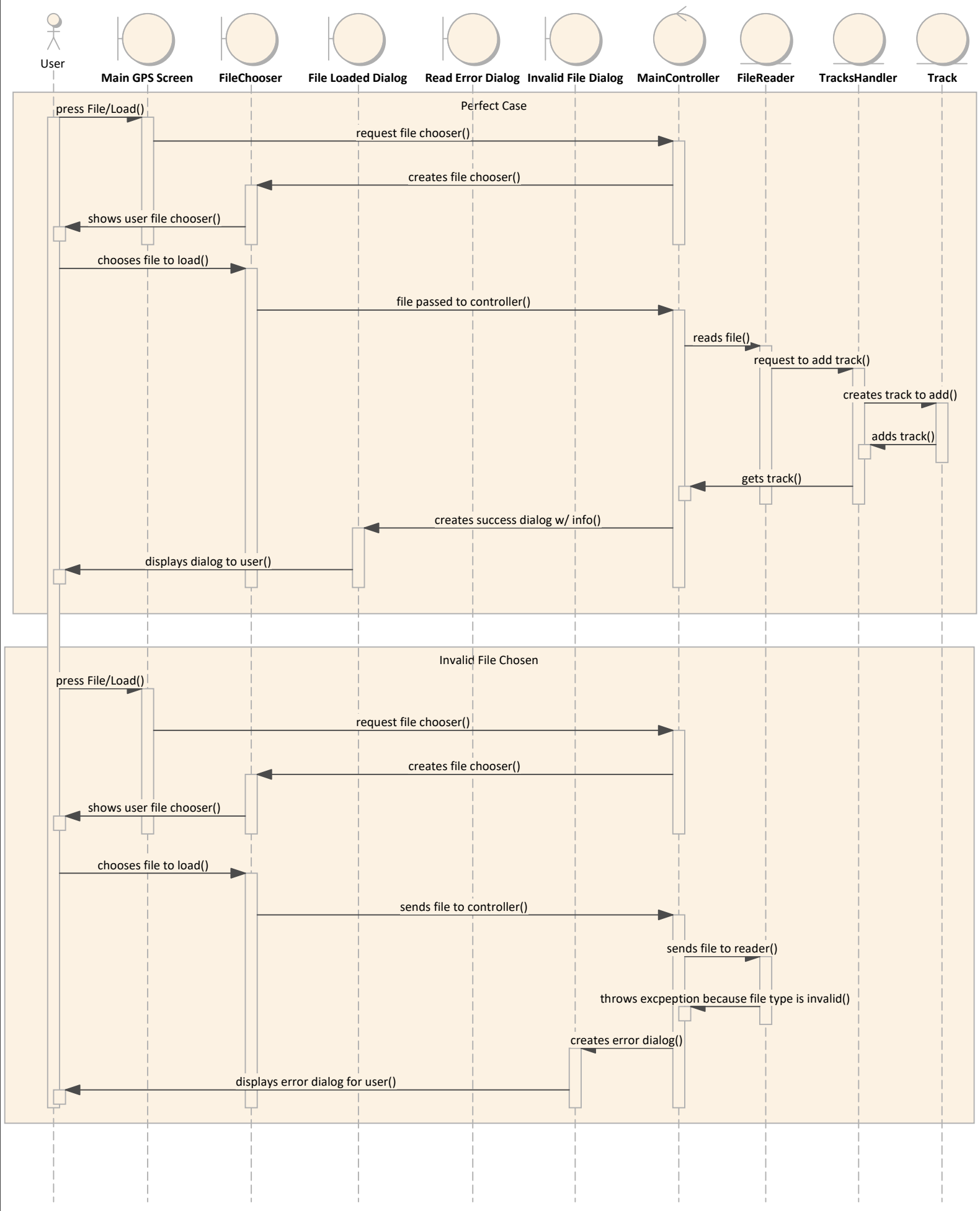
Success Dialog Message:

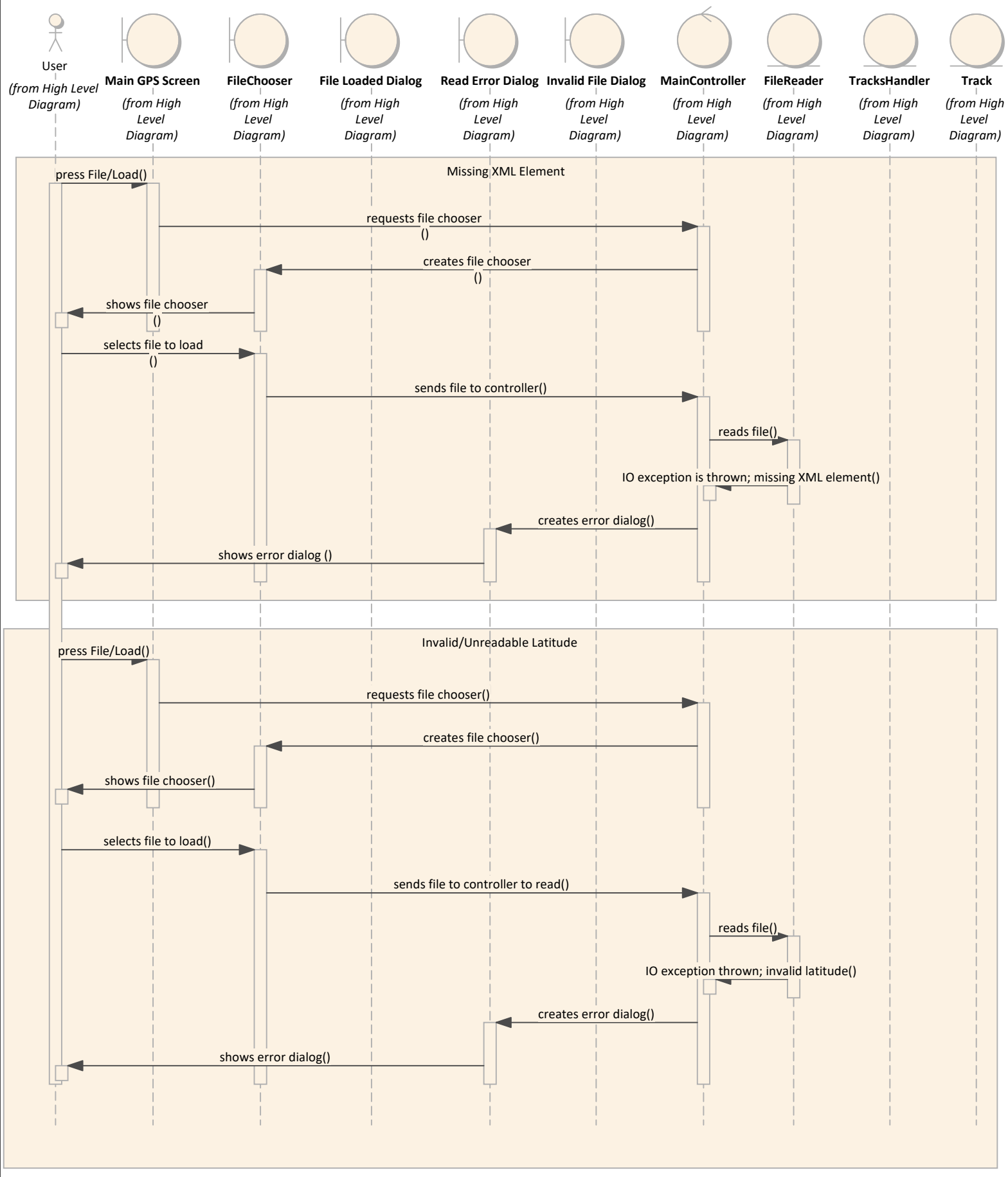
GPS File load successful.
Track name: <name>
Points loaded: <points>

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>


User
Main GPS Screen
FileChooser
File Loaded Dialog
Read Error Dialog
Invalid File Dialog
MainController
FileReader
TracksHandler
Track
Perfect Case
press File/Load()
request file chooser()
creates file chooser()
shows user file chooser()
chooses file to load()
file passed to controller()
reads file()
request to add track()
creates track to add()
adds track()
gets track()
creates success dialog w/ info()
displays dialog to user()
Invalid File Chosen
press File/Load()
request file chooser()
creates file chooser()
shows user file chooser()
chooses file to load()
sends file to controller()
sends file to reader()
throws excpeption because file type is invalid()
creates error dialog()
displays error dialog for user()


User
(from High Level Diagram)
Main GPS Screen
(from High Level Diagram)
FileChooser
(from High Level Diagram)
File Loaded Dialog
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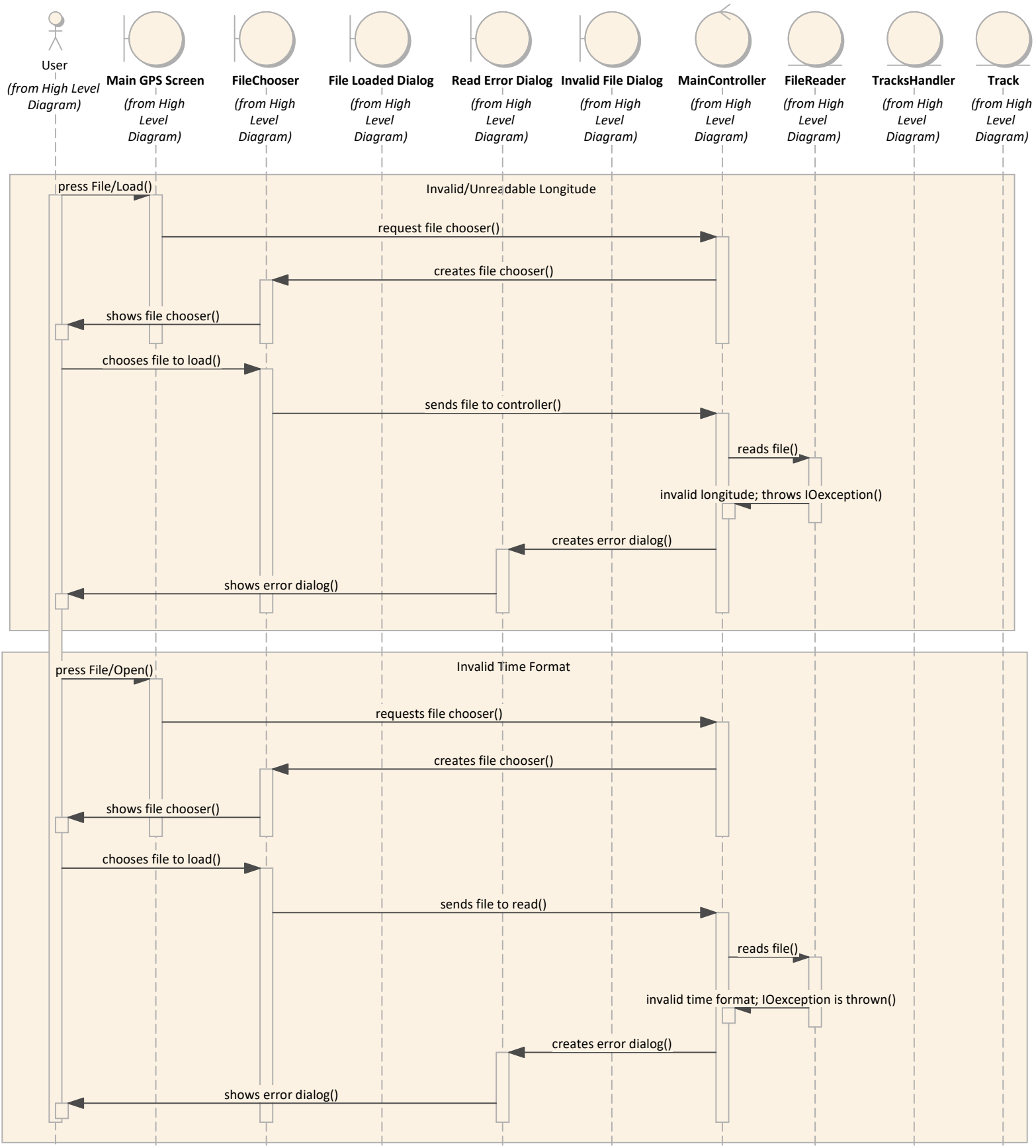
Read Error Dialog
(from High Level Diagram)
Invalid File Dialog
(from High Level Diagram)
MainController
(from High Level Diagram)
FileReader
(from High Level Diagram)
TracksHandler
(from High Level Diagram)
Track
(from High Level Diagram)
Missing XML Element
press File/Load()
requests file chooser ()
creates file chooser ()
shows file chooser ()
selects file to load ()
sends file to controller()
reads file()
IO exception is thrown; missing XML element()
creates error dialog()
shows error dialog ()
Invalid/Unreadable Latitude
press File/Load()
requests file chooser()
creates file chooser()
shows file chooser()
selects file to load()
sends file to controller to read()
reads file()
IO exception thrown; invalid latitude()
creates error dialog()
shows error dialog()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Read Error Dialog
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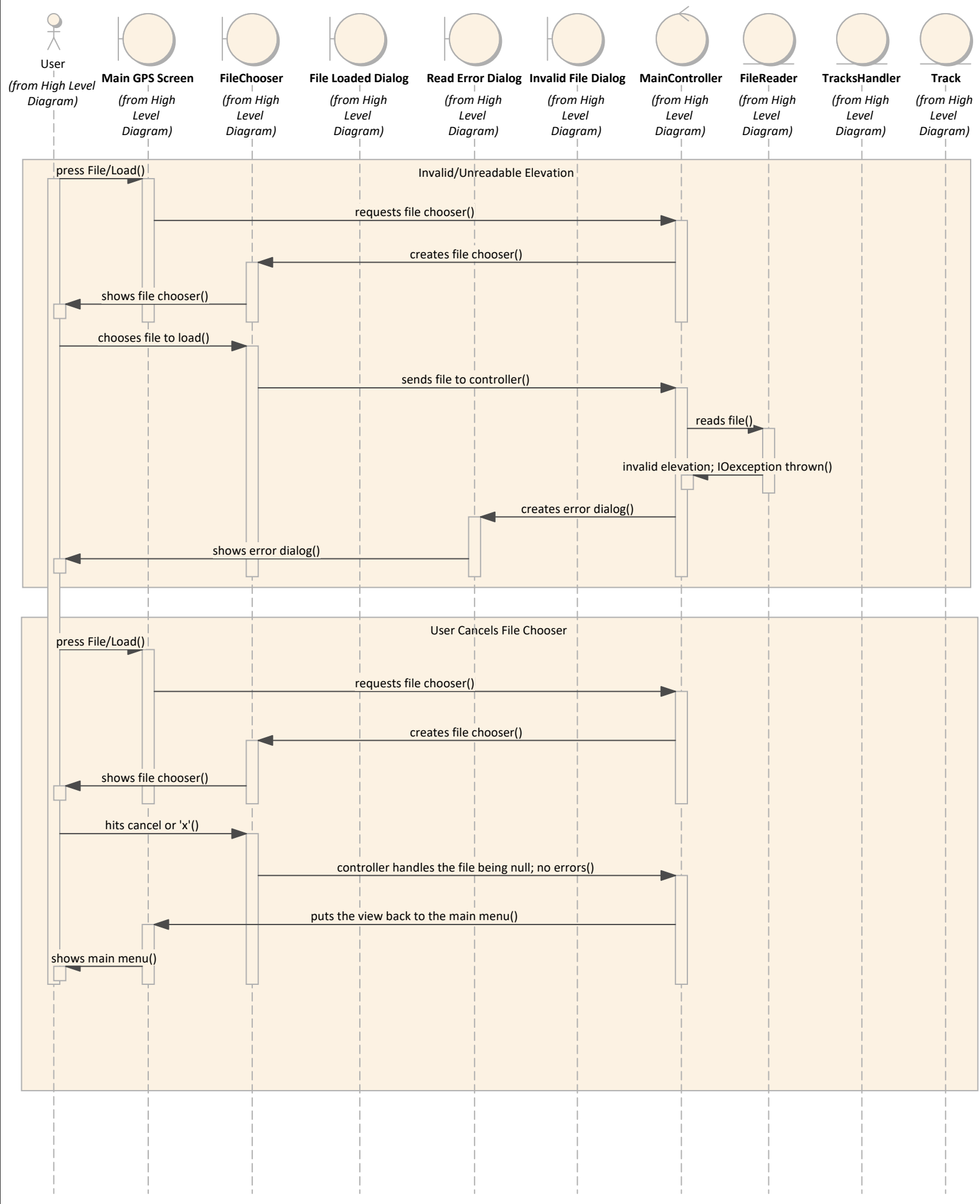
(from High Level Diagram)
MainController
(from High Level Diagram)
FileReader
(from High Level Diagram)
TracksHandler
(from High Level Diagram)
Track
(from High Level Diagram)
Invalid/Unreadable Longitude
press File/Load()
request file chooser()
creates file chooser()
shows file chooser()
chooses file to load()
sends file to controller()
reads file()
invalid longitude; throws IOexception()
creates error dialog()
shows error dialog()
Invalid Time Format
press File/Open()
requests file chooser()
creates file chooser()
shows file chooser()
chooses file to load()
sends file to read()
reads file()
invalid time format; IOexception is thrown()
creates error dialog()
shows error dialog()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Main GPS Screen
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FileChooser
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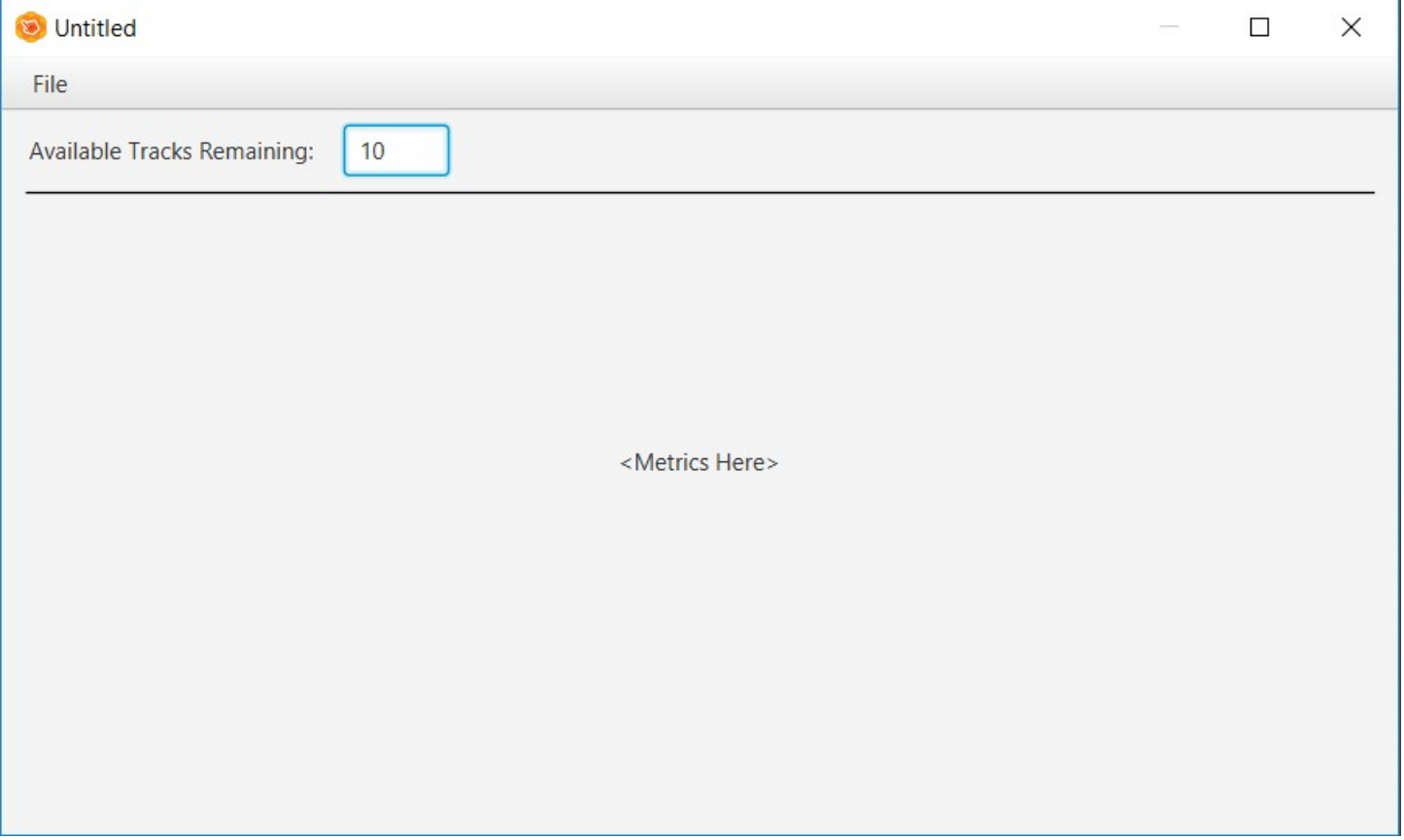
Read Error Dialog
(from High Level Diagram)
Invalid File Dialog
(from High Level Diagram)
MainController
(from High Level Diagram)
FileReader
(from High Level Diagram)
TracksHandler
(from High Level Diagram)
Track
(from High Level Diagram)
Invalid/Unreadable Elevation
press File/Load()
requests file chooser()
creates file chooser()
shows file chooser()
chooses file to load()
sends file to controller()
reads file()
invalid elevation; IOexception thrown()
creates error dialog()
shows error dialog()
User Cancels File Chooser
press File/Load()
requests file chooser()
creates file chooser()
shows file chooser()
hits cancel or 'x'()
controller handles the file being null; no errors()
puts the view back to the main menu()
shows main menu()


Untitled
File
Available Tracks Remaining:
10
<Metrics Here>