

Warehouse Inventory System

Use Case Model



Release Version: v1.3

Date: 12/05/23

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Signatory Page

This document accepted by

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Signature(Calvin Caldwell)

Date

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Signature(Micah Gordon)

Date

Revision History

Author	Company	Version	Date	Comments
Micah Gordon	Quackedsoft	1.0	10/27/2023	Initial Draft
Micah Gordon	Quackedsoft	1.2	11/17/2023	Fixed headings for use cases. Updated CRUD
Micah Gordon	Quackedsoft	1.3	12/05/2023	Added scenarios and sequence diagrams.

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Context Diagram

WIS Context Diagram



Operator

New Load
New Transfer Weight Sheet
New Inbound Weigh Sheet
New Lot
Generate Reports
View, filter and/or sort Loads
Edit Loads
View, filter, sort Weight Sheets
Edit Weight Sheets
View, filter, sort Lots
Edit Lots
Close weight sheet
Re open weight sheet
Close Lot
Re open weight sheet
Move inbound weight sheet
Move load

Use Case Model Tables

Use Case ID	Use Case Name	Description
10	Lew Load	Operator has an incoming truck
10a	New Transfer Weight Sheet	Operator must create new transfer weight sheet
10b	New Inbound Weight Sheet	Operator must create new inbound weight sheet
10c	New Lot	Operator must create new lot
20	Report Generation	Operator needs to generate a report for warehouse
30	Loads Data Manip	Operator needs to view and/or change entered load data
30a	Edit Load	
40	Weight Sheets Data Manip	Operator needs to view and/or change entered weight sheet data
40a	Edit Weigh Sheet	
50	Lots Data Manip	Operator needs to view and/or change entered lot data
50a	Edit Lot	
60	Close Weight Sheet	Operator is required to close a weight sheet
60a	Reopen weight sheet	Operator must reopen a closed weight sheet
70	Close Lot	Operator is required to close a lot
70a	Reopen lot	Operator must reopen a closed lot
80	Move Inbound Weight Sheets	Operator moves a weight sheet from one lot to another
90	Move Load	Operator moves a load from one weight sheet to another.

Actor Catalog Table

Name	Type	Description
Operator	Person	Individual operating scale and application.

Features Verification Matrix

Feature #'s	Use Case ID	Use Case Name
1.1-1.2, 2.1-2.2, 3.1- 3.4, 3.6 -3.10	10	New Load
5.1-5.3	20	Reports
4.3, 3.5	30	Load data view, edit, sort, filter
2.3, 4.2	40	Weight sheet data view, edit, sort, filter
4.1, 1.3-1.5	50	Lot data view, edit, sort, filter
2.5-2.6	60	Close/Reopen weight sheet
1.4-1.5	70	Close/Reopen Lot
2.4	80	Move Weight Sheet
3.11	90	Move Load

Use Case Specifications

Use Case 10: Incoming Truck

General Information	
Use Case Name\Number : 10 Subject Area : Load management Description : Operator has an incoming truck	Responsible Analyst : Micah Gordon

Requirements/Feature Trace	
<u>REQ#</u>	<u>Requirements Name and / or Short Description</u>
1.1 - 1.2	New lot creation.
2.1 - 2.2	New Weight Sheet creation.
3.1 – 3.4	Operator must be able to weigh a truck's new load in on a weight sheet.
3.6 – 3.10	Operator must be able to weigh a truck out.

Revision History		
<u>Author</u>	<u>Date</u>	<u>Comments</u>
Micah Gordon	10/23/23	Initial Draft

Insertion Points in other Use Cases (Adds Only)		
<u>Use Case Name</u>	<u>Use Case Number</u>	<u>Step Inserted After</u>
NA		

Actors		
<u>Actor Name</u>	<u>Person/System</u>	<u>Brief Description</u>
Operator	Person	Person operating scale

Pre-Conditions	
#	Description
1	Overview screen is displayed
2	Truck who is not weighed in is ready to be weighed in.

Start Stimulus
Operator clicks new load button

Use Case Main Course Steps			
<u>Number</u>	<u>Description</u>	<u>Adds/Alt Name/Number</u>	<u>Bus Rule#</u>
1	System displays new Load from		
2	Operator presses new Load button		
3	Operator Selects a weight sheet to place load on	New Weight Sheet, New Lot	
4	Operator inputs load data		1 Mandatory vs optional data
5	Operator presses "Weigh In"		
6	System displays Overview screen w/ updated load data for weight sheet.		
7	Operator selects "Weigh Out"		
8	System displays Overview screen w/ updated load data for weight sheet.		2 Calculate tare, net weights

Exception Conditions		
<u>Exception Situations</u>	<u>Action(s) on Exception</u>	<u>Adds\Alt UC #</u>
Scale connection failed during weight in process	System prompts Operator to manually input truck gross weight	N/A
Truck weight <= 0	System prompts Operator to manually input a truck weight greater than 0	N/A

Post-Conditions	
<u>#</u>	<u>Description</u>
1	Load number on weight sheet is incremented.
2	Overview screen is updated.
3	System has updated weight sheet to have new load on it.

Candidate Objects		
<u>Class/Object Name</u>	<u>Descriptions</u>	<u>Possible attributes</u>
Load	Contains all the data for a truck load of a commodity	Id, weight sheet, gross, tare, net, time in, time out, truck id, bill of lading, bin id, moisture %, test weight, protein, notes
Transfer Weight Sheet	Contains all data for a particular transfer weight sheet	Id, weigher (operator), source of load, commodity type, commodity variety, Hauler, Miles, total billed, loads, notes
Inbound Weight Sheet	Contains all the data for inbound weight sheet	Id, weigher (operator), source of load, commodity type, commodity variety, Hauler, Miles, total billed, loads, notes, Lot number
Lot	Contains all the data for a producer's lot.	Id, Producer Id, state id, start date, end date, weight sheets, landlord, Farm number, notes

Assumptions					
<u>#</u>	<u>Assumption</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>

1	Operator has opened the web app	10/23/23	Micah Gordon		
2	Operator has logged in for their warehouse	10/23/23	Micah Gordon		

Issues					
#	Issue	Date Raised	Raised By	Date Verified	Verified By
1	HTML Request scale not ready for test	10/23/23	Micah Gordon		

Other Comments		
Author	Comment	Date
Micah Gordon	Number 4 ALT selection: Operator will check data when they select a weight sheet. If an appropriate weight sheet does not exist, the operator will create a new weight sheet.	10/23/23
Micah Gordon	Number 4 ALT selection: If the Operator must create a new inbound weight sheet, they must check the data to see if they need a new lot. If they need a new lot they must follow alternate to create a new lot.	10/23/23
Micah Gordon	Inbound weight sheets have a lot. Transfer weight sheets do not.	10/23/23

Frequency of Execution			
Frequency:	Minimum: 0	Maximum: 200	Average: (OR)Fixed:
Per:	Hour: <input type="checkbox"/>	Day: <input checked="" type="checkbox"/>	Week: <input type="checkbox"/> Month: <input type="checkbox"/> Other: Seasonally depended

Timing Information							
#	At/ Between	Step(s)	Timing Unit	Minimum	Average	Maximum	Comments
1	Between	2, 3	Seconds	N/A	.5	2	Loads load form
2	Between	3, 4	Seconds	N/A	.5	2	Sys loads weight sheets
3	Between	6, 7	seconds	N/A	.5	2	Sys loads updated overview

Volume Information						
#	Step #	Unit of Measure	Minimum	Average	Maximum	Comments

1	2	Bytes	90			Load weight sheets
2	5	Bytes	180			Sends updated weight sheet to server and returns updated weight sheet for display
3	6	Bytes	180			See 2

Scenario 10

System displays new Load form.

Operator presses “New Load” button.

WeightSheetService gets list of active weight sheets from database.

Operator selects a weight sheet to a place load on

Operator inputs load data

Operator presses “Weigh in”

Load is added to WeightSheet

LoadServices puts the load in database.

WeightSheetService posts the updated WeightSheet.

System displays overview screen with updated load data for weight sheet.

Operator selects “Weight Out”.

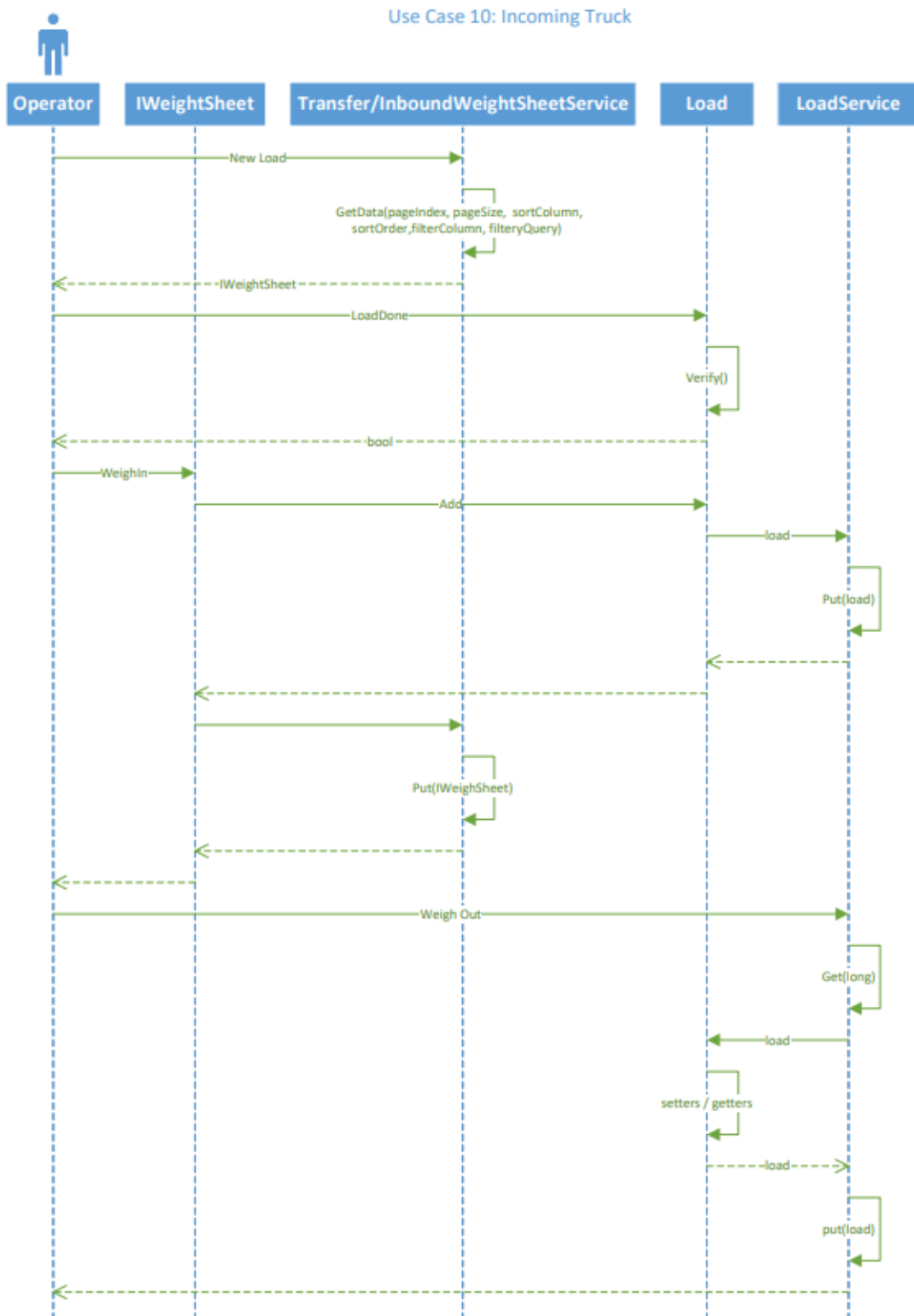
LoadService gets the Load.

Load updates.

LoadService puts the load in database.

System displays Overview screen with updated load data for weight sheet.

Sequence Diagram 10



Use Case 10a: Create New Transfer Weight Sheet

Alternate Course General Information
Alternate Course Name\Number: 10a
Description: Operator creates a new transfer weight sheet,
Reason for Execution: Operator has valid existing transfer weight sheet to use. Non Exception: <input checked="" type="checkbox"/> Exception: <input type="checkbox"/>

Insertion Point
<u>Step Inserted After</u>
3

Pre-Conditions
1. No valid weight sheet exists for the new load. Drive information does not match any existing weight sheet. Max number of loads on existing weight sheets has been exceeded.

Alternate Course Steps			
#	Step Description	Adds Use Case #	Business Rule(s)#
1.	Operator selects "New Transfer Weight Sheet"		
2.	System displays new transfer weight sheet form		
3.	Operator fills out weight sheet form. Clicks "Done"		3 Mandatory vs optional fields
4.	System returns to and displays "New Load" form		

Post-Conditions
1. New weight sheet is added to overview table. New load is put on new weight sheet.

Scenario 10a

Operator selects “New Transfer Weight Sheet”.

System displays new transfer weight sheet form.

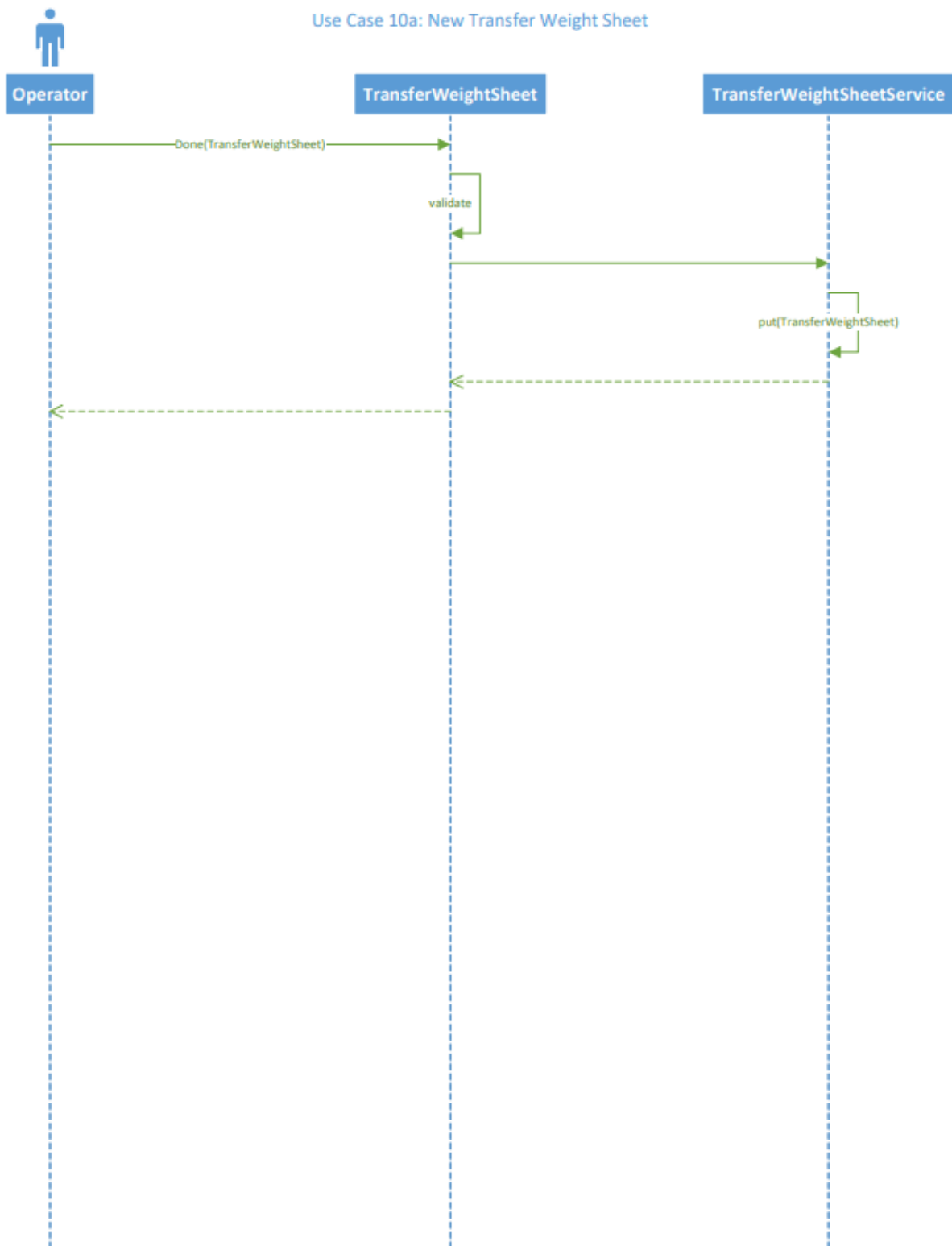
Operator fills out weight sheet form. Clicks “Done”

TransferWeightSheet validates data.

TransferWeightSheetService puts TransferWeightSheet into database.

System returns to display “New Load” form.

Sequence Diagram 10a



Use Case 10b: New Inbound Weight Sheet

Alternate Course General Information	
Alternate Course Name\Number: 10b	
Description: Operator creates a new inbound weight sheet	
Reason for Execution: No valid inbound weight sheet exists for a new load Non Exception: <input checked="" type="checkbox"/> Exception: <input type="checkbox"/>	

Insertion Point	
<u>Step Inserted After</u>	
3	

Pre-Conditions	
1.	Driver information does not match an existing weight sheet.
2.	Driver has indicated a new lot is to be opened
3.	Existing weight sheet is invalid because it has no space left on it.

Alternate Course Steps			
#	Step Description	Adds Use Case #	Business Rule(s)#
1.	Operator selects New "New Inbound Weight Sheet"		
2.	System displays new inbound weight sheet form		
3.	Operator fills out form. Clicks "Done"		4 Mandatory vs optional fields
4.	System returns to and displays "New Load" form		

Post-Conditions	
1.	New weight sheet is added to overview table.
2.	New load is put on new weight sheet.

Scenario 10b

Operator selects “New Inbound Weight Sheet”.

System displays new inbound weight sheet form.

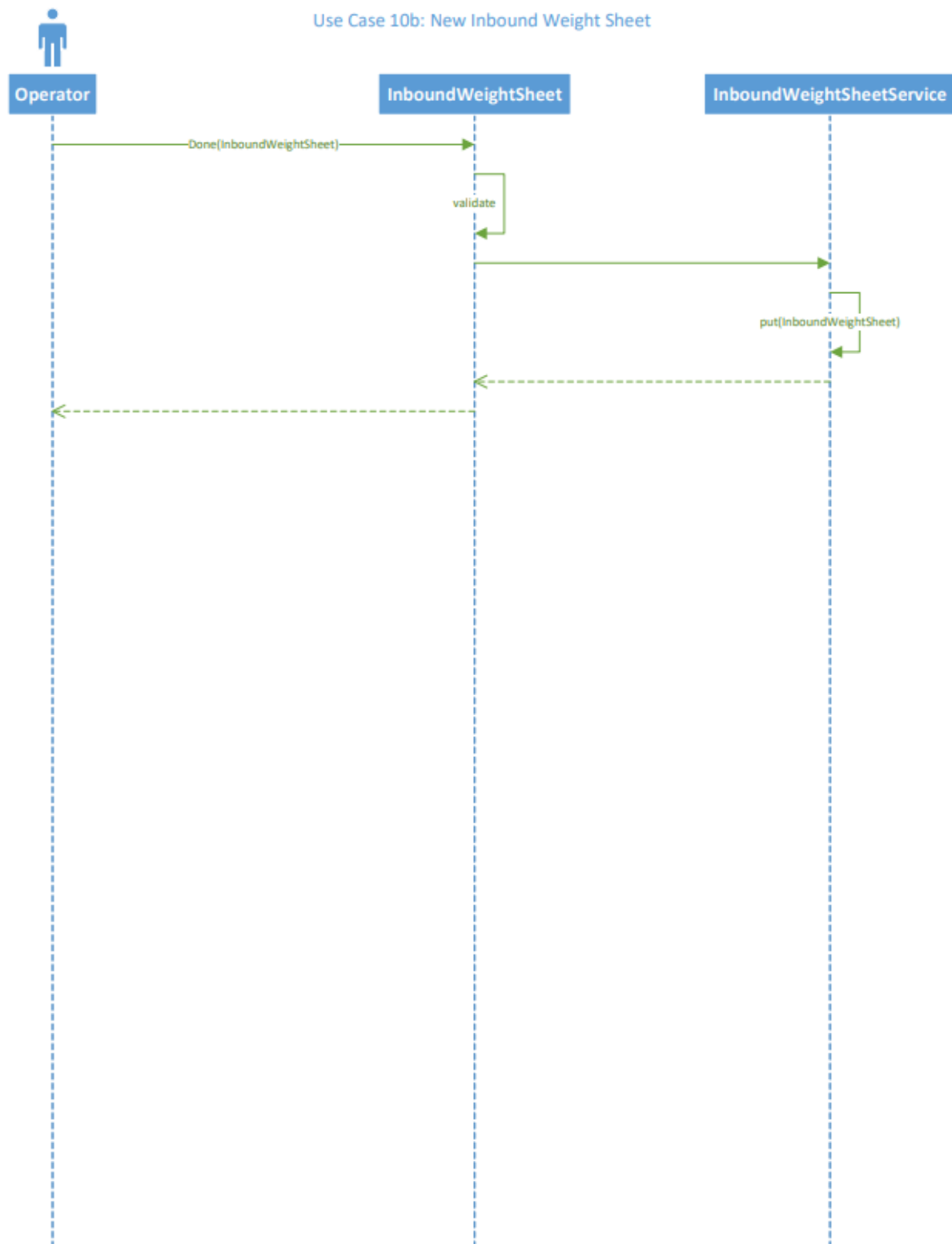
Operator fills out form. Clicks “Done”

InboundWeightSheet validates input data.

InboundWeightSheetService puts InboundWeightSheetService into database.

System returns to and displays “New Load” form.

Sequence Diagram 10b



Use Case 10c: Create New Lot

Alternate Course General Information
Alternate Course Name\Number: 10c
Description: Operator creates new lot
Reason for Execution: Incoming load for inbound weight sheet has no valid lot. Non Exception: <input checked="" type="checkbox"/> Exception: <input type="checkbox"/>

Insertion Point
<u>Step Inserted After</u>
3

Pre-Conditions
1. Driver information does match an existing lot.
2.

Alternate Course Steps			
#	<u>Step Description</u>	<u>Adds Use Case #</u>	<u>Business Rule(s)#</u>
1.	Operator selects "New Lot"		
2.	System displays new lot form		
3.	Operator fills out "New Lot" form. Clicks done		5 mandatory vs optional fields
4.	System redirects operator to "New Inbound Weight Sheet" form		
5.	Operator fills out "New Inbound Weight Sheet" form. Clicks "done"		4 mandatory vs optional fields
6	System returns to "New Load" form		

Post-Conditions
1. New lot is added to overview table.
2. New weight sheet is added to overview table.
3. New load is put on new weight sheet.

Scenario 10c

Operator selects “New Lot”.

System displays new lot form.

Operator fills out “New Lot” form. Clicks done.

Lot validates data enter.

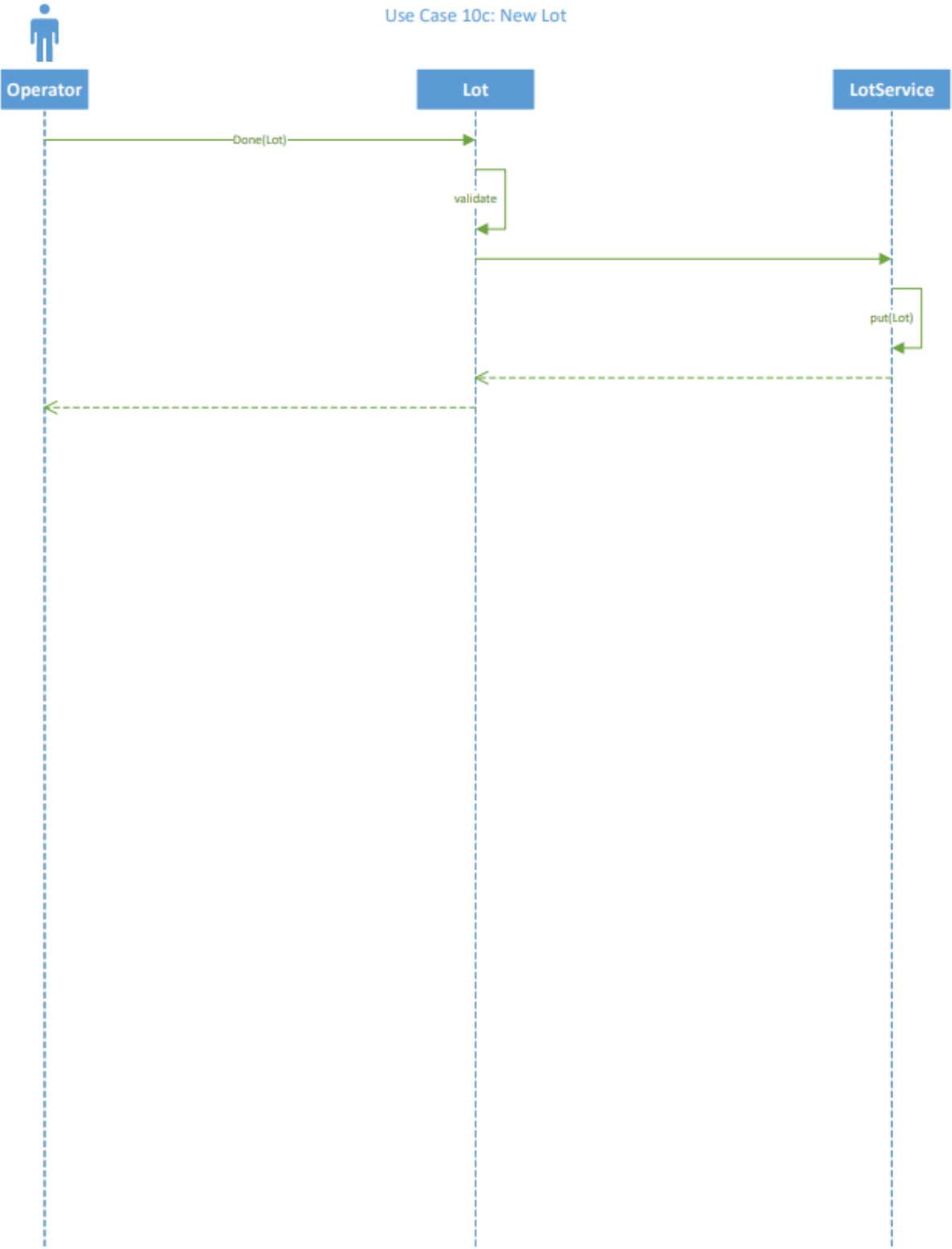
System redirects operator to “New Inbound Weight Sheet” form.

Operator fills out “New Inbound Weight Sheet” form. Clicks “Done”.

System returns to “New Load” form.

LotService puts Lot in the database.

Sequence Diagram 10c



Use Case 20: Reports

General Information	
Use Case Name\Number : 20 Subject Area : Reports Description : Operator generates a report of the warehouse	Responsible Analyst : Micah Gordon

Requirements/Feature Trace	
<u>REQ#</u>	<u>Requirements Name and / or Short Description</u>
5.1 – 5.3	Reports

Revision History		
<u>Author</u>	<u>Date</u>	<u>Comments</u>
Micah Gordon	10-23-23	Initial Draft

Insertion Points in other Use Cases (Adds Only)		
<u>Use Case Name</u>	<u>Use Case Number</u>	<u>Step Inserted After</u>
N/A	N/A	N/A

Actors		
<u>Actor Name</u>	<u>Person/System</u>	<u>Brief Description</u>
Operator	Person	Individual operating scale

Pre-Conditions	
#	Description
1.	Data must exist in the database

Start Stimulus
Operator clicks "Reports" button

Use Case Main Course Steps			
<u>Number</u>	<u>Description</u>	<u>Adds/Alt Name/Number</u>	<u>Bus Rule#</u>
1.	Operator clicks "Reports"		
2.	System displays reports page		
3.	System prompts user for report type		
4.	Operator selects a report type		6 report types
5.	System previews the report		
6.	Operator selects Export report		7 Excel or pdf
7.	System exports report		
8.	System displays overview screen		

Exception Conditions		
<u>Exception Situations</u>	<u>Action(s) on Exception</u>	<u>Adds\Alt UC #</u>
N/A		

Post-Conditions	
<u>#</u>	<u>Description</u>
1.	Data is exported to pdf or excel based on operators sorts and or filters.

Candidate Objects		
<u>Class/ Object Name</u>	<u>Descriptions</u>	<u>Possible attributes</u>
Warehouse	Object containing data and behavior for a warehouse	Bins, Id, district, weight sheets

Assumptions					
<u>#</u>	<u>Assumption</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A				

Issues					
<u>#</u>	<u>Issue</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A				

Other Comments		
<u>Author</u>	<u>Comment</u>	<u>Date</u>
Micah Gordon	Report types can be see in functional requirements 5.4.1, 5.4.3, 5.4.4, and 5.4.5	10/23/23

Frequency of Execution					
Frequency:	Minimum: 1	Maximum:	Average:	(OR)Fixed:	
Per:	Hour: <input type="checkbox"/>	Day: <input checked="" type="checkbox"/>	Week: <input type="checkbox"/>	Month: <input type="checkbox"/>	Other:

Timing Information							
#	At/ Between	Step(s)	Timing Unit	Minimum	Average	Maximum	Comments
1	Between	1, 2	Seconds	N/A		2	Gets data from database
2	Between	4, 5	Seconds	N/A		2	Gets displays filtered data
3	Between	6, 7	Seconds	N/A		5	Exports data

Volume Information						
#	Step #	Unit of Measure	Minimum	Average	Maximum	Comments
1	2	Bytes	100			Estimated
2	5	Bytes	1K			Estimated, depended on DTO & size of report selected
3	7	Bytes	1K			Estimated

Scenario 20

Operator clicks “Reports”.

System displays reports page.

System prompts operator for report type.

Operator selects a report type.

ReportService gets data.

System previews the report.

Operator selects Export Report.

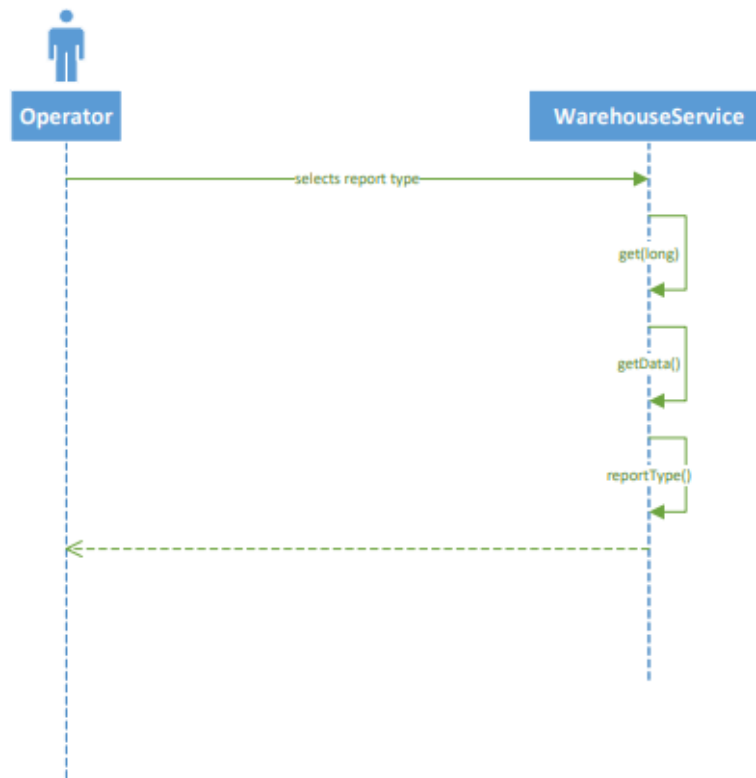
System exports report.

Report exports data Excel or pdf.

System displays overview screen.

Sequence Diagram 20

Use Case 20: Reports



Use Case 30: Load Data Interactions

General Information	
Use Case Name\Number : 30	Responsible Analyst : Micah Gordon
Subject Area : Operator data interactions	
Description : Operator views Loads for warehouse	

Requirements/Feature Trace	
<u>REQ#</u>	<u>Requirements Name and / or Short Description</u>
4.3	Load data is viewable, filterable and sortable
3.5	Load data is editable

Revision History		
<u>Author</u>	<u>Date</u>	<u>Comments</u>
Micah Gordon	10/24/23	Initial Draft

Insertion Points in other Use Cases (Adds Only)		
<u>Use Case Name</u>	<u>Use Case Number</u>	<u>Step Inserted After</u>
N/A		

Actors		
<u>Actor Name</u>	<u>Person/System</u>	<u>Brief Description</u>
Operator	Person	Individual operating scale and application

Pre-Conditions	
#	Description
1	Load data exists in database

Start Stimulus	
Operator clicks "Loads" button	

Use Case Main Course Steps			
<u>Number</u>	<u>Description</u>	<u>Adds/Alt Name/Number</u>	<u>Bus Rule#</u>
1	Operator clicks "Loads" button		
2	System displays Loads page	30a	
3	Operator filters/sorts data		
4	System updates page to match operators filters and/or sorts		
5	Operator clicks "Overview" button		

Exception Conditions		
<u>Exception Situations</u>	<u>Action(s) on Exception</u>	<u>Adds\Alt UC #</u>
N/A	N/A	N/A

Post-Conditions	
<u>#</u>	<u>Description</u>
1	Loads page is consistent with interactions the operator has made
2	Loads page is reset to default filters and sorts when operator navigates away.

Candidate Objects		
<u>Class/Object Name</u>	<u>Descriptions</u>	<u>Possible attributes</u>
N/A	N/A	N/A

Assumptions					
<u>#</u>	<u>Assumption</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
1	There is data in the database	10/24/23	Micah Gordon		

Issues					
<u>#</u>	<u>Issue</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A	N/A	N/A	N/A	N/A

Other Comments		
<u>Author</u>	<u>Comment</u>	<u>Date</u>
Micah Gordon	By default the loads pages should only display "today's date" loads	10/24/23
Micah Gordon	For possible objects Ref Use Case: 10	10/24/23
Micah Gordon	Filter and sort options can be found in Functional Requirements 4.3.2-4.3.3	10/24/23

Frequency of Execution					
Frequency:	Minimum:	Maximum:	Average: 50	(OR)Fixed:	
Per:	Hour: <input type="checkbox"/>	Day: <input checked="" type="checkbox"/>	Week: <input type="checkbox"/>	Month: <input type="checkbox"/>	Other:

Timing Information							
#	At/ Between	Step(s)	Timing Unit	Minimum	Average	Maximum	Comments
1	Between	1, 2	Seconds	n/a		2	Depends on amount of loads that day
2	Between	3, 4	Seconds	n/a		3	Depends on requests
3	Between	4, 5	Seconds	n/a		1.5	

Volume Information						
#	Step #	Unit of Measure	Minimum	Average	Maximum	Comments
1	2	Bytes	0	1k		Estimated with size of api jsons
2	3	Bytes	0	1k		Depends on what filters/sorts used

Scenario 30

Operator clicks “Loads” button.

System displays Loads page.

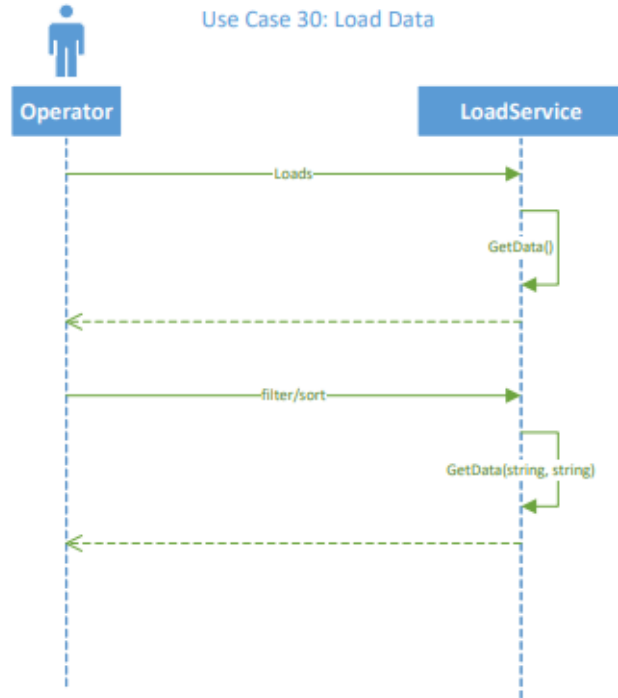
Operator filters/sorts data.

System updates page to match operator filters and/or sorts.

LoadService gets updated IApiResponse.

Operator clicks “Overview” button.

Sequence Diagram 30



Use Case 30a: Edit Load Data

Alternate Course General Information	
Alternate Course Name\Number: 30a	
Description: Edit Load Data	
Reason for Execution: Update needed due to bad or incomplete data	Non Exception: <input checked="" type="checkbox"/> Exception: <input type="checkbox"/>

Insertion Point	
<u>Step Inserted After</u>	
2	

Pre-Conditions	
1.	Load data exists in the data base
2.	Default display is data from "today's date"

Alternate Course Steps			
#	<u>Step Description</u>	<u>Adds Use Case #</u>	<u>Business Rule(s)#</u>
1.	Operator selects a data field and modifies it		1 mandatory / optional
2.	System updated the data shown to operator's input		7 sanitize
3.	Operator navigates away from Loads page		

Post-Conditions	
1.	Valid data has been updated in the database.
2.	New data shows on the overview screen

Scenario 30a

Operator selects a data field and modifies it.

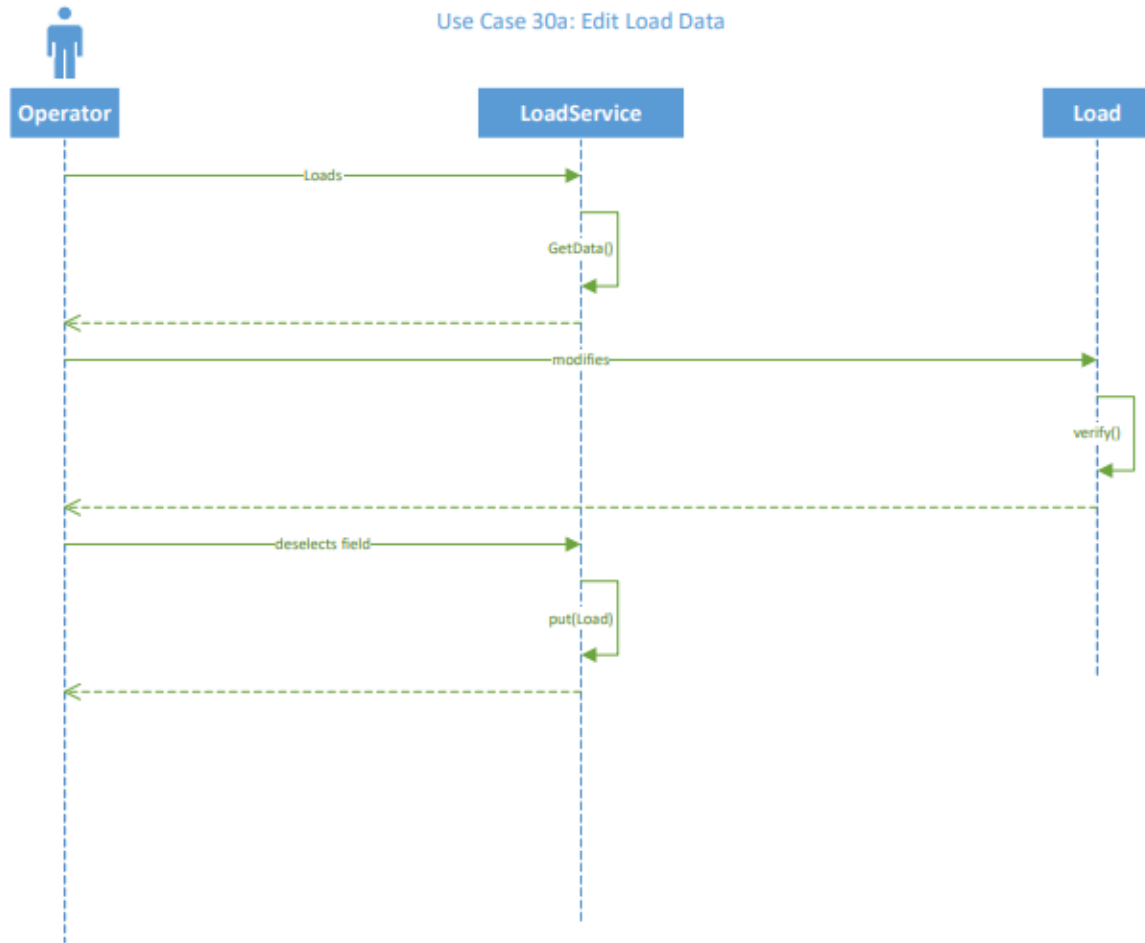
Form verifies Operator input.

System updates the data shown to operator's input.

LoadService puts data.

Operator navigates away from Loads page.

Sequence Diagram 30a



Use Case 40: Weight Sheet Data Interactions

General Information	
Use Case Name\Number : 40 Subject Area : Operator data interactions Description : Operator Interacts with Weight Sheet for warehouse	Responsible Analyst : Micah Gordon

Requirements/Feature Trace	
<u>REQ#</u>	<u>Requirements Name and / or Short Description</u>
2.3	Operator is able to edit weight sheet data
4.2	Operator is able to view, filter and sort weight sheet data

Revision History		
<u>Author</u>	<u>Date</u>	<u>Comments</u>
Micah Gordon	10/24/23	Initial draft

Insertion Points in other Use Cases (Adds Only)		
<u>Use Case Name</u>	<u>Use Case Number</u>	<u>Step Inserted After</u>
N/A	N/A	N/A

Actors		
<u>Actor Name</u>	<u>Person/System</u>	<u>Brief Description</u>
Operator	Person	Individual operating scale and application

Pre-Conditions	
#	Description
1	Weight sheet data exists

Start Stimulus	
Operator clicks "Weight Sheets" button	

Use Case Main Course Steps			
<u>Number</u>	<u>Description</u>	<u>Adds/Alt Name/Number</u>	<u>Bus Rule#</u>
1	Operator clicks "Weight Sheet" button		
2	System displays Weight Sheet page	40a	
3	Operator filters/sorts data		
4	System updates page to match operator filters and/or sorts		
5	Operator clicks "Overview" button		

Exception Conditions		
<u>Exception Situations</u>	<u>Action(s) on Exception</u>	<u>Adds\Alt UC #</u>
N/A	N/A	N/A

Post-Conditions	
<u>#</u>	<u>Description</u>
1	Weight Sheets page is consistent with Operator actions
2	Weight Sheets page is rest to default filters and sorts when operator navigates away

Candidate Objects		
<u>Class/Object Name</u>	<u>Descriptions</u>	<u>Possible attributes</u>
N/A	N/A	N/A

Assumptions					
<u>#</u>	<u>Assumption</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
1	There is data in the database	10/24/23	Micah Gordon		

Issues					
<u>#</u>	<u>Issue</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A	N/A	N/A	N/A	N/A

Other Comments		
<u>Author</u>	<u>Comment</u>	<u>Date</u>
Micah Gordon	By default the loads pages should only display "today's date" loads	10/24/23
Micah Gordon	For possible objects Ref Use Case: 10	10/24/23
Micah Gordon	Filter and sort options can be found in Functional Requirements 4.2.2-4.2.3	10/24/23

Frequency of Execution						
Frequency:	Minimum:	Maximum:	Average:	50	(OR)Fixed:	
Per:	Hour: <input type="checkbox"/>	Day: <input checked="" type="checkbox"/>	Week: <input type="checkbox"/>	Month: <input type="checkbox"/>	Other:	

Timing Information							
#	<u>At/</u> <u>Between</u>	<u>Step(s)</u>	<u>Timing</u> <u>Unit</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>	<u>Comments</u>
1	Between	1, 2	Seconds	n/a		2	Depends on amount of loads that day
2	Between	3, 4	Seconds	n/a		3	Depends on requests
3	Between	4, 5	Seconds	n/a		1.5	

Volume Information						
#	<u>Step #</u>	<u>Unit of</u> <u>Measure</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>	<u>Comments</u>
1	2	Bytes	0	1k		Estimated with size of API json
2	3	Bytes	0	1k		Depends on what filters/sorts used

Scenario 40

Operator Clicks “Weight Sheet” button.

System displays Weight Sheet page.

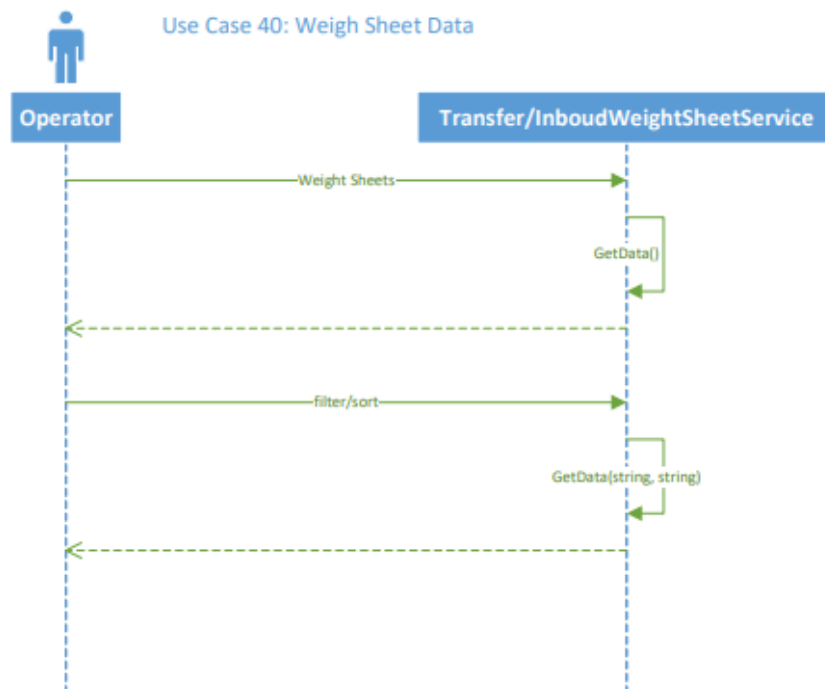
Operator filters/sorts data.

WeightSheetService gets updated IApiResponse.

System updates page to match operator selected filters and/or sorts

Operator clicks “Overview” button.

Sequence Diagram 40



Use Case 40a: Edit Weight Sheet Data

Alternate Course General Information	
Alternate Course Name\Number: 40a	
Description: Edit Weight Sheet Data	
Reason for Execution: Update needed due to bad or incomplete data	Non Exception: <input checked="" type="checkbox"/> Exception: <input type="checkbox"/>

Insertion Point
<u>Step Inserted After</u>
2

Pre-Conditions	
1.	Weight Sheet data exists in the data base
2.	Default display is data from "today's date"

Alternate Course Steps			
#	<u>Step Description</u>	<u>Adds Use Case #</u>	<u>Business Rule(s)#</u>
1.	Operator selects a data field and modifies it		3, 4 mandatory /optional
2.	System updates the data shown to operator's input		7 sanitize
3.	Operator navigates away from Weight Sheets page		

Post-Conditions	
1.	Valid data has been updated in the database
2.	New data shows on the overview screen

Scenario 40a

Operator selects a data field and modifies it.

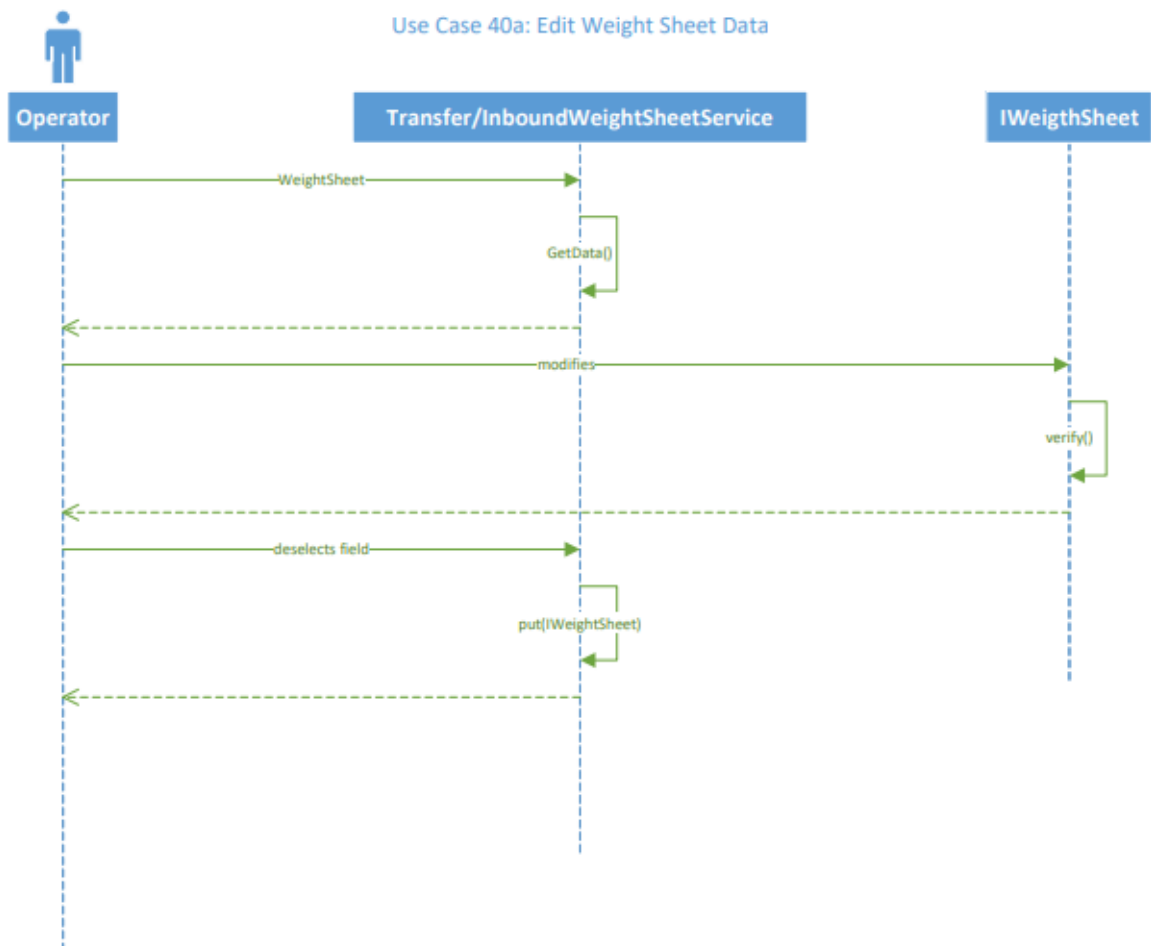
IWeightSheet verifies data modifications.

System updates the data shown to operator's input.

Transfer/InboundWeightSheetService puts data.

Operator navigates away from Weight Sheet page.

Sequence Diagram 40a



Use Case 50: Lot Data Interactions

General Information	
Use Case Name\Number : 50 Subject Area : Operator data interactions Description : Operator views Lots for warehouse	Responsible Analyst : Micah Gordon

Requirements/Feature Trace	
<u>REQ#</u>	<u>Requirements Name and / or Short Description</u>
4.1	Lot data is viewable, filterable and sortable
1.3-1.5	Lot data is editable

Revision History		
<u>Author</u>	<u>Date</u>	<u>Comments</u>
Micah Gordon	10/24/23	Initial Draft

Insertion Points in other Use Cases (Adds Only)		
<u>Use Case Name</u>	<u>Use Case Number</u>	<u>Step Inserted After</u>
N/A	N/A	N/A

Actors		
<u>Actor Name</u>	<u>Person/System</u>	<u>Brief Description</u>
Operator	Person	Individual operating scale and application

Pre-Conditions

#	Description
1	Lot data exists in database

Start Stimulus
Operator clicks "Lots" button

Use Case Main Course Steps			
<u>Number</u>	<u>Description</u>	<u>Adds/Alt Name/Number</u>	<u>Bus Rule#</u>
1	Operator clicks "Lots" button		
2	System displays Lots Page	50a	
3	Operator filters/sorts data		
4	System updates page to match operators filters and/or sorts		
5	Operator clicks "Overview" button		

Exception Conditions		
<u>Exception Situations</u>	<u>Action(s) on Exception</u>	<u>Adds\Alt UC #</u>
N/A	N/A	N/A

Post-Conditions	
<u>#</u>	<u>Description</u>
1	Lots page is consistent with interactions the operator has made.
2	Lots page is reset to default filters and sorts when operator navigates away.

Candidate Objects		
<u>Class/Object Name</u>	<u>Descriptions</u>	<u>Possible attributes</u>
N/A	N/A	N/A

Assumptions					
<u>#</u>	<u>Assumption</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
1	There is data in the database	10/24/23	Micah Gordon		

Issues					
<u>#</u>	<u>Issue</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A	N/A	N/A	N/A	N/A

Other Comments		
<u>Author</u>	<u>Comment</u>	<u>Date</u>
Micah Gordon	By default the loads pages should only display "today's date" loads	10/24/23
Micah Gordon	For possible objects Ref Use Case: 10	10/24/23
Micah Gordon	Filter and sort options can be found in Functional Requirements 4.1.2 – 4.1.3	10/24/23

Frequency of Execution						
Frequency:	Minimum:	Maximum:	Average:	50	(OR)Fixed:	
Per:	Hour: <input type="checkbox"/>	Day: <input checked="" type="checkbox"/>	Week: <input type="checkbox"/>	Month: <input type="checkbox"/>	Other:	

Timing Information							
#	At/ Between	Step(s)	Timing Unit	Minimum	Average	Maximum	Comments
1	Between	1, 2	Seconds	n/a		2	Depends on amount of weight sheets that day
2	Between	3, 4	Seconds	n/a		3	Depends on requests
3	Between	4, 5	Seconds	n/a		1.5	

Volume Information						
#	Step #	Unit of Measure	Minimum	Average	Maximum	Comments
1	2	Bytes	0	1k		Estimated with size of api jsons
2	3	Bytes	0	1k		Depends on what filters/sorts used

Scenario 50

Operator clicks “Lots” button.

System displays Lots page.

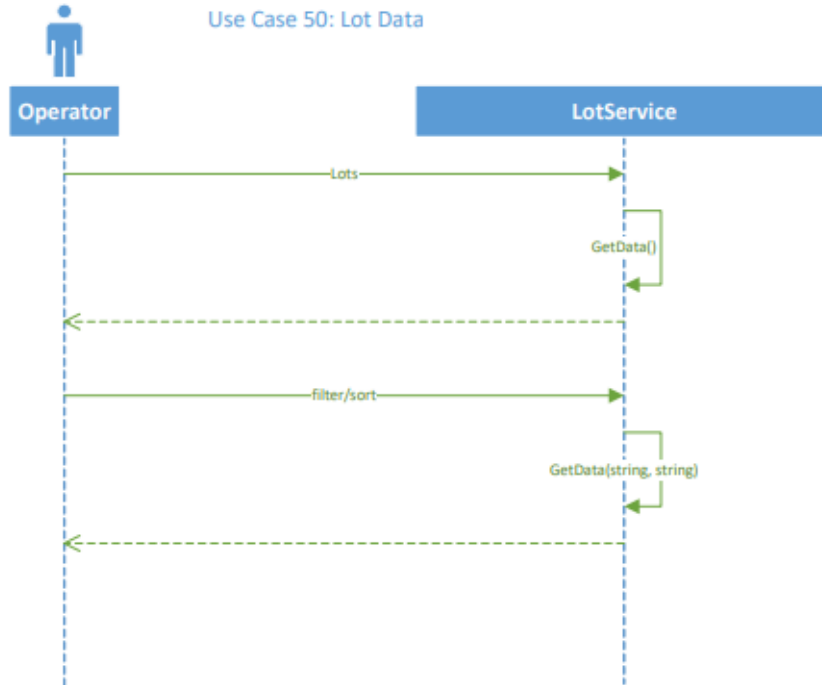
Operator filters/sorts data.

System updates page to match operators filters and/or sorts.

LotService gets updated IApiResponse

Operator clicks “Overview” button.

Sequence Diagram 50



Use Case 50a: Edit Lot Data

Alternate Course General Information	
Alternate Course Name\Number: 50a	
Description: Edit Lot Data	
Reason for Execution: Update needed due to bad or incomplete data	Non Exception: <input type="checkbox"/> Exception: <input type="checkbox"/>

Insertion Point
<u>Step Inserted After</u>
2

Pre-Conditions	
1.	Load data exists in the data base
2.	Default display is data from "today's date"

Alternate Course Steps			
#	<u>Step Description</u>	<u>Adds Use Case #</u>	<u>Business Rule(s)#</u>
1.	Operator selects a data field and modifies it		5 mandatory / optional
2.	System updated the data shown to operator's input		7 sanitize
3.	Operator navigates away from Lots page		

Post-Conditions	
1.	Valid data has been updated in the database.
2.	New data shows on the overview screen

Scenario 50a

Operator selects a data field and modifies it.

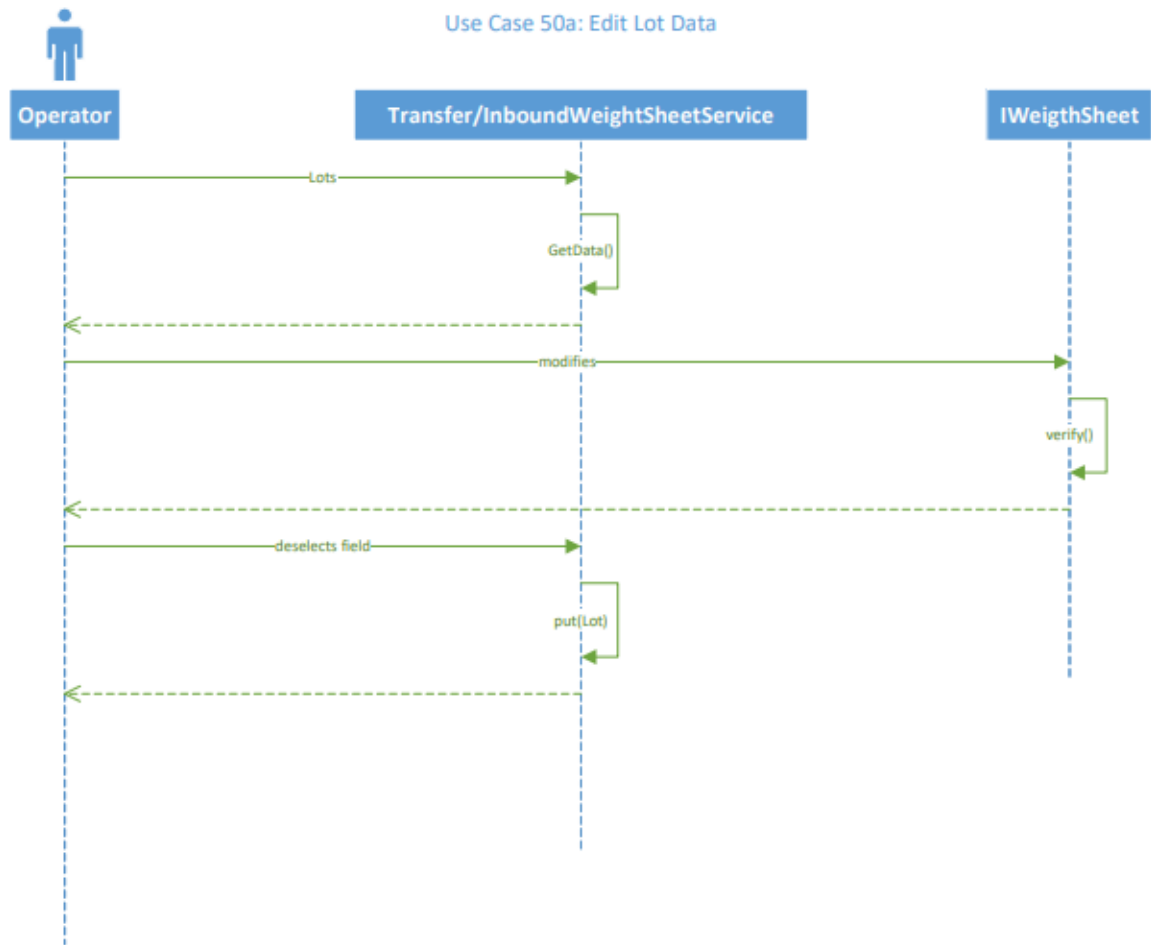
Lot verifies data.

System updates the data shown to match operator's input.

LotService puts data.

Operator navigates away from Lots page.

Sequence Diagram 50a



Use Case 60: Close Weight Sheet

General Information	
Use Case Name\Number : 60 Subject Area : Weight Sheet Behavior Description : Operator is required to close a weight sheet.	Responsible Analyst : Micah Gordon

Requirements/Feature Trace	
<u>REQ#</u>	<u>Requirements Name and / or Short Description</u>
2.5-2.6	Close a weight sheet

Revision History		
<u>Author</u>	<u>Date</u>	<u>Comments</u>
Micah Gordon	10/24/23	Initial Draft

Insertion Points in other Use Cases (Adds Only)		
<u>Use Case Name</u>	<u>Use Case Number</u>	<u>Step Inserted After</u>
N/A	N/A	N/A

Actors		
<u>Actor Name</u>	<u>Person/System</u>	<u>Brief Description</u>
Operator	Person	Individual operating scale and application

Pre-Conditions	
#	Description
1	Must have an existing inbound or transfer weight sheet.

Start Stimulus	
1	Operator clicks "Weight Sheets" button

Use Case Main Course Steps			
<u>Number</u>	<u>Description</u>	<u>Adds/Alt Name/Number</u>	<u>Bus Rule#</u>
1	Operator clicks "Weight Sheets" button		
2	System displays Weight Sheets page		
3	Operator selects a weight sheet		
4	System displays a pop out view of weight sheet		
5	Operator clicks "Close Weight Sheet"		
6	System prompts Operator to confirm		
7	Operator confirms clicks "yes"	60a	
8	System displays Overview		8 remove from active

Exception Conditions		
<u>Exception Situations</u>	<u>Action(s) on Exception</u>	<u>Adds\Alt UC #</u>
Weight sheet closed in error	Operator re-opens weight sheet	60a

Post-Conditions	
<u>#</u>	<u>Description</u>
1	Closed weight sheet is marked as closed in the databsae
2	Closed weight sheet is removed from overview page

Candidate Objects		
<u>Class/Object Name</u>	<u>Descriptions</u>	<u>Possible attributes</u>
N/A	N/A	N/A

Assumptions					
<u>#</u>	<u>Assumption</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A/	N/A/	N/A	N/A	N/A

Issues					
<u>#</u>	<u>Issue</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A	N/A	N/A	N/A	N/A

Other Comments		
<u>Author</u>	<u>Comment</u>	<u>Date</u>
Micah Gordon	Closing a different types a of weight sheets has no effect. BUT closing a inbound will not close the lot. Lots contain many weight sheets	10/24/23
Micah Gordon	For possible objects Ref Use Case: 10	10/24/23

Frequency of Execution					
Frequency:	Minimum:	Maximum: 1	Average:	(OR)Fixed:	
Per:	Hour: <input type="checkbox"/>	Day: <input type="checkbox"/>	Week: <input type="checkbox"/>	Month: <input type="checkbox"/>	Other: weight sheet

Timing Information							
#	At/ Between	Step(s)	Timing Unit	Minimum	Average	Maximum	Comments
1	Between	1, 2	Seconds	n/a		1.5	
2	Between	3, 4	Seconds	n/a		1.5	
3	Between	7, 8	Seconds	n/a		2	More processing needed

Volume Information						
#	Step #	Unit of Measure	Minimum	Average	Maximum	Comments
1	7	Bytes	1			Request to updated database weight sheet is closed

Scenario 60

Operator Clicks “Weight Sheets” button.

System displays Weight Sheet page.

Operator selects a weight sheet.

System displays a pop out view of the weight sheet.

Operator clicks “Close Weight Sheet”.

Transfer/InboundWeightSheet sets closed date.

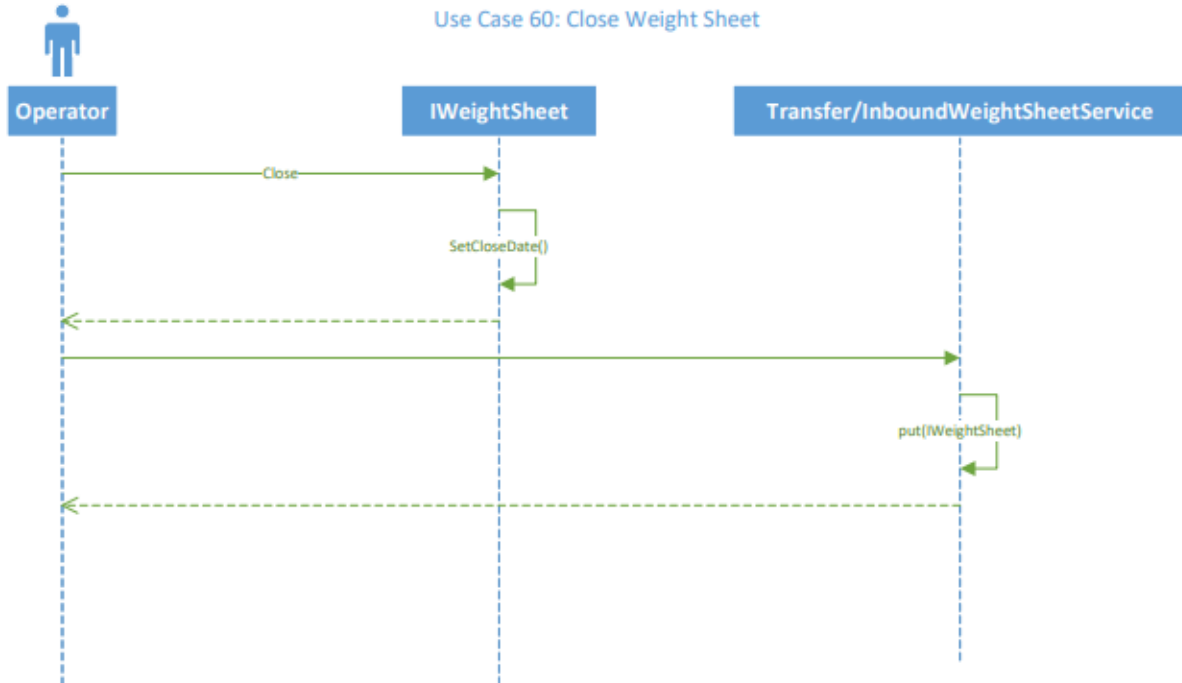
System prompts Operator to confirm.

Operator confirms. Clicks “Yes”.

Transfer/InboundWeighSheetService puts data in data base.

System displays Overview.

Sequence Diagram 60



Use Case 60a: Re-Open Weight Sheet

Alternate Course General Information
Alternate Course Name\Number: 60a
Description: Re open weight sheet
Reason for Execution: Weight sheet was not supposed to be close by Operator Non Exception: <input type="checkbox"/> Exception: <input checked="" type="checkbox"/>

Insertion Point
<u>Step Inserted After</u>
7

Pre-Conditions
1. Weight sheet is closed

Alternate Course Steps			
#	Step Description	Adds Use Case #	Business Rule(s)#
1.	Operator clicks "Weight Sheet"		
2.	System Displays "Weight Sheets" page		
3.	Operator selects the closed weight sheet		
4.	System displays weight sheet popout		
5.	Operator clicks "Re-Open"		
6	System displays Overview page		

Post-Conditions
1. Overview page displays the weight sheet as active again
2. Database is updated to show the weight sheet is open

Scenario 60a

Operator clicks “Weight Sheet”.

System Displays “Weight Sheet” pages.

Operator selects the closed weight sheet.

System displays weight sheet popout.

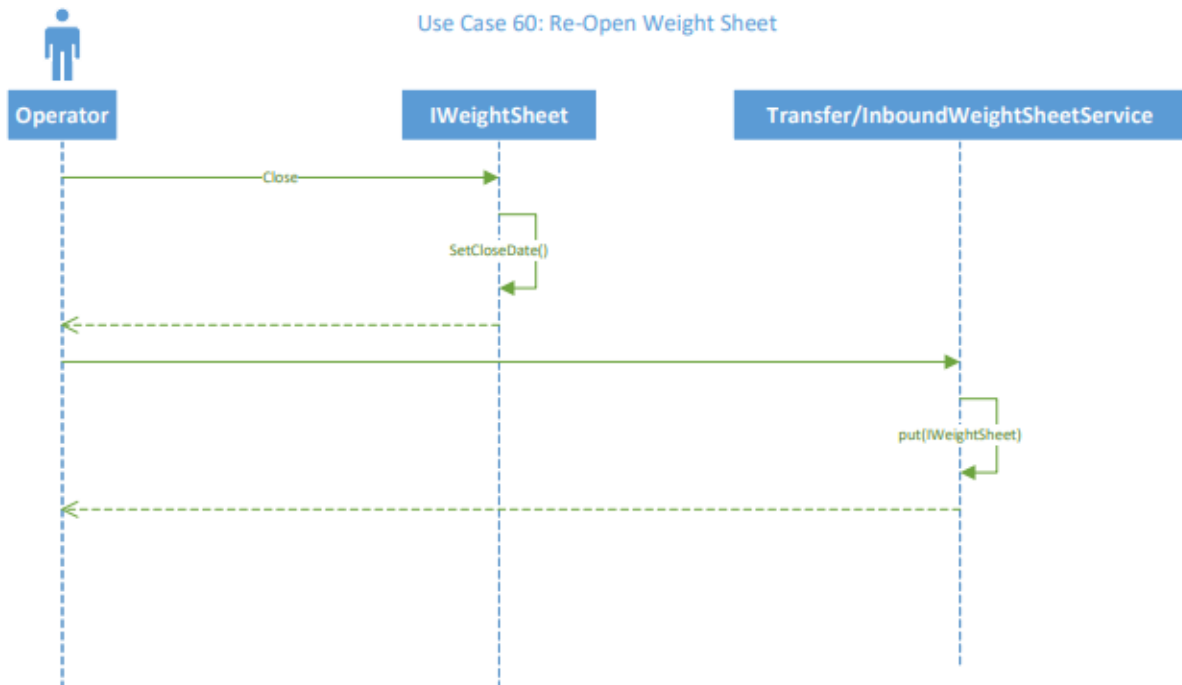
Operator clicks “Re-Open”.

Transfer/InboundWeightSheet sets date closed state to null.

Transfer/InboundWeightSheetService puts data on database.

System displays Overview page.

Sequence Diagram 60a



Use Case 70: Close Lot

General Information	
Use Case Name\Number : 70 Subject Area : Lot Behavior Description : Operator is required to close a lot.	Responsible Analyst : Micah Gordon

Requirements/Feature Trace	
<u>REQ#</u>	<u>Requirements Name and / or Short Description</u>
1.4-1.5	Close a lot

Revision History		
<u>Author</u>	<u>Date</u>	<u>Comments</u>
Micah Gordon	10/24/23	Initial Draft

Insertion Points in other Use Cases (Adds Only)		
<u>Use Case Name</u>	<u>Use Case Number</u>	<u>Step Inserted After</u>
N/A	N/A	N/A

Actors		
<u>Actor Name</u>	<u>Person/System</u>	<u>Brief Description</u>
Operator	Person	Individual operating scale and application

Pre-Conditions	
#	Description

1	Existing open lot
---	-------------------

Start Stimulus	
Operator clicks "Lots" button	

Use Case Main Course Steps			
<u>Number</u>	<u>Description</u>	<u>Adds/Alt Name/Number</u>	<u>Bus Rule#</u>
1	Operator clicks "Lots" button		
2	System displays Lots page		
3	Operator selects a Lots		
4	System displays a pop out view of Lots		
5	Operator clicks "Close Lots"		
6	System prompts Operator to confirm		
7	Operator confirms clicks "yes"	70a	
8	System displays Overview		8 remove from active

Exception Conditions		
<u>Exception Situations</u>	<u>Action(s) on Exception</u>	<u>Adds\Alt UC #</u>
Lot closed in error	Operator re-opens weight sheet	70a

Post-Conditions	
<u>#</u>	<u>Description</u>
1	Closed lot is marked as closed in the database
2	All weight sheets on the closed lot are closed as well

Candidate Objects		
<u>Class/Object Name</u>	<u>Descriptions</u>	<u>Possible attributes</u>
N/A	N/A	N/A

Assumptions					
<u>#</u>	<u>Assumption</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A	N/A	N/A	N/A	N/A

Issues					
<u>#</u>	<u>Issue</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A	N/A	N/A	NA	N/A

Other Comments		
<u>Author</u>	<u>Comment</u>	<u>Date</u>
Micah Gordon	For possible objects Ref Use Case: 10	10/24/23

Frequency of Execution					
Frequency:	Minimum:	Maximum: 1	Average:	(OR)Fixed:	
Per:	Hour: <input type="checkbox"/>	Day: <input type="checkbox"/>	Week: <input type="checkbox"/>	Month: <input type="checkbox"/>	Other: IOT

Timing Information							
#	<u>At/</u> <u>Between</u>	<u>Step(s)</u>	<u>Timing</u> <u>Unit</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>	<u>Comments</u>
1	Between	1, 2	Seconds	n/a		1.5	
2	Between	3, 4	Seconds	n/a		1.5	
3	Between	7, 8	Seconds	n/a		2	More processing needed

Volume Information						
#	<u>Step #</u>	<u>Unit of</u> <u>Measure</u>	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>	<u>Comments</u>
1	7	Bytes	1			Request to updated database weight sheet is closed

Scenario 70

Operator Clicks “Lots” button.

System displays Lot page.

Operator selects a Lot.

System displays a pop out view of the Lot.

Operator clicks “Close Lot”.

Lot sets closed date.

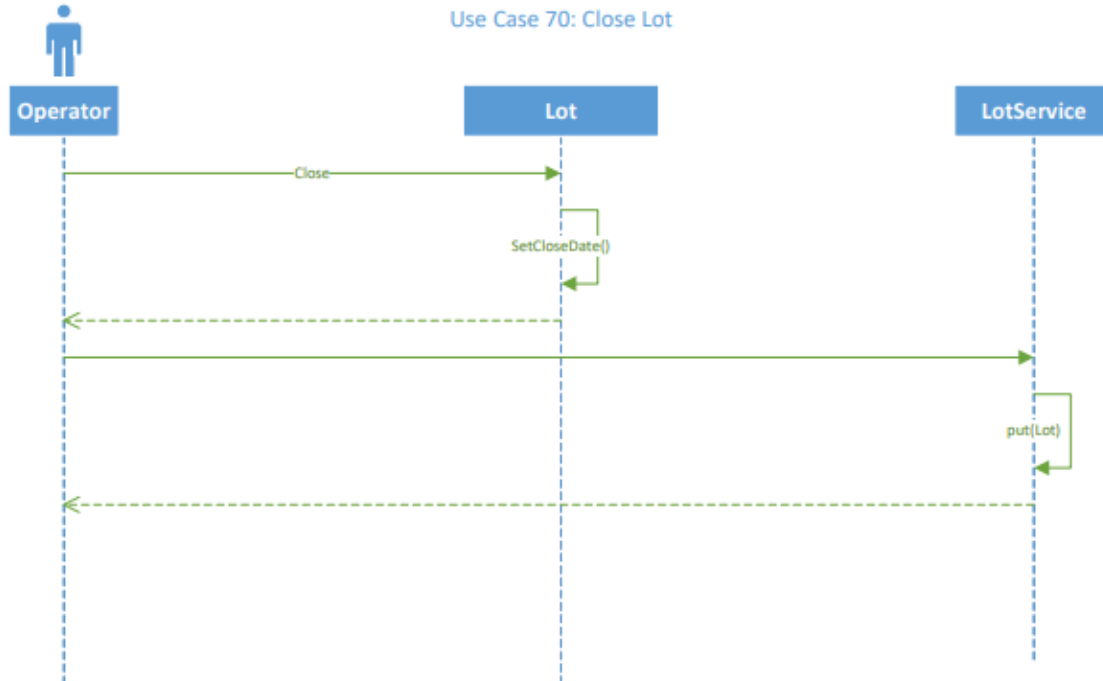
System prompts Operator to confirm.

Operator confirms. Clicks “Yes”.

LotService puts data in data base.

System displays Overview.

Sequence Diagram 70



Use Case 70a: Re-Orpen Lot

Alternate Course General Information	
Alternate Course Name\Number: 70a	
Description: Re open lot	
Reason for Execution: Lot was not supposed to be close by Operator	Non Exception: <input type="checkbox"/> Exception: <input checked="" type="checkbox"/>

Insertion Point	
<u>Step Inserted After</u>	
7	

Pre-Conditions	
1.	Lot was closed

Alternate Course Steps			
#	Step Description	Adds Use Case #	Business Rule(s)#
1.	Operator clicks "Lot"		
2.	System Displays "Lots" page		
3.	Operator selects the closed lot		
4.	System displays Lot popout		
5.	Operator clicks "Re-Open"		
6	System displays Overview page		

Post-Conditions	
1.	Overview page displays the lot as active again
2.	Database is updated to show the lot is open

Scenario 70a

Operator clicks “Lot”.

System Displays “Lot” pages.

Operator selects the closed Lot.

System displays Lot popout.

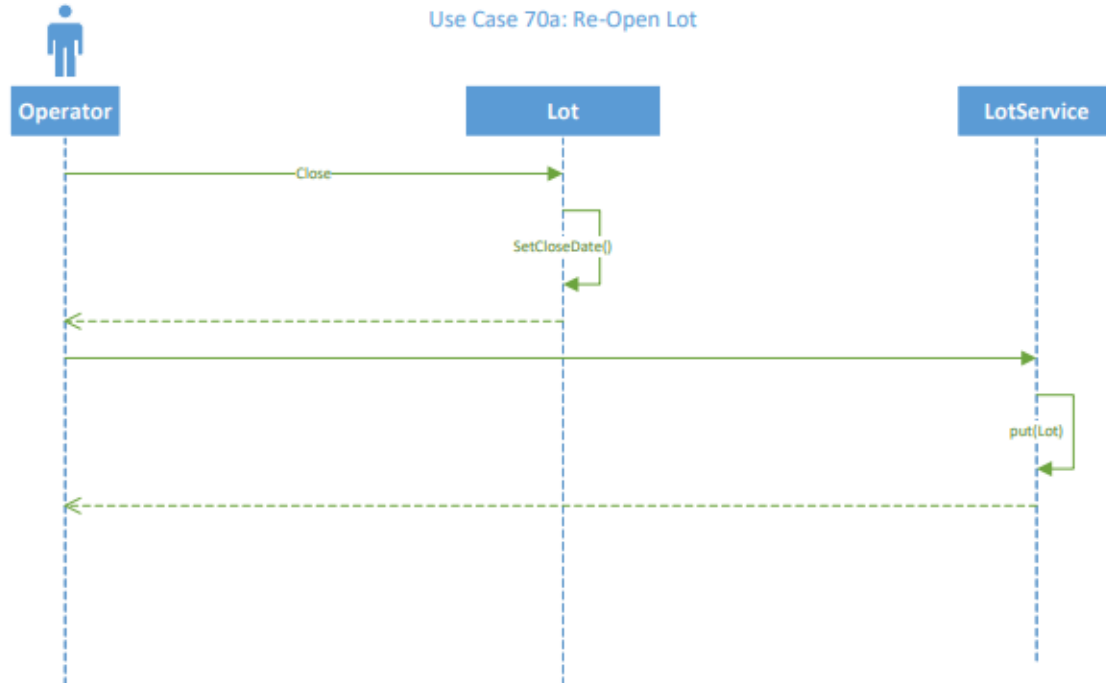
Operator clicks “Re-Open”.

Lot sets date closed state to null.

Lot Service puts data on database.

System displays Overview page.

Sequence Diagram 70a



Use Case 80: Move Inbound Weight Sheet

General Information	
Use Case Name\Number : 80 Subject Area : Corrections Description : Operator can move an inbound weight sheet from one lot to another	Responsible Analyst : Micah Gordon

Requirements/Feature Trace	
<u>REQ#</u>	<u>Requirements Name and / or Short Description</u>
2.4	Move Weight Sheet

Revision History		
<u>Author</u>	<u>Date</u>	<u>Comments</u>
Micah Gordon	10/24/23	Initial Draft

Insertion Points in other Use Cases (Adds Only)		
<u>Use Case Name</u>	<u>Use Case Number</u>	<u>Step Inserted After</u>
N/A	N/A	N/A

Actors		
<u>Actor Name</u>	<u>Person/System</u>	<u>Brief Description</u>
Operator	Person	Individual operating scale and application

Pre-Conditions	
#	Description
1	Two Lots open lots exist.
2	Weight sheet type is Inbound
3	Overview screen displayed

Start Stimulus
Operator selects a weight sheet from the overview table

Use Case Main Course Steps			
<u>Number</u>	<u>Description</u>	<u>Adds/Alt Name/Number</u>	<u>Bus Rule#</u>
1	Operator selects an inbound weight sheet		
2	System Displays weight sheet details pop out window		
3	Operator clicks "Move" button		
4	System Displays table of lots		
5	Operator selects a lot to move the weight sheet to		
6	Operator selects "Move"		
7	System Displays Confirm message		
8	Operator clicks "Yes"		
9	System displays Overview screen with weight sheet on different lot		

Exception Conditions		
<u>Exception Situations</u>	<u>Action(s) on Exception</u>	<u>Adds\Alt UC #</u>
N/A	NA/	N/A

Post-Conditions	
<u>#</u>	<u>Description</u>
1	Weight sheet removed for original lot
2	Weight sheet is added to selected lot
3	Database is updated with change

Candidate Objects		
<u>Class/Object Name</u>	<u>Descriptions</u>	<u>Possible attributes</u>
N/A	N/A	N/A

Assumptions					
<u>#</u>	<u>Assumption</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A	N/A	N/A	N/A	N/A

Issues					
<u>#</u>	<u>Issue</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A	N/A	N/A	N/A	N/A

Other Comments		
<u>Author</u>	<u>Comment</u>	<u>Date</u>
N/A	N/A	N/A

Frequency of Execution					
Frequency:	Minimum: 0	Maximum: 100	Average:	(OR)Fixed:	
Per:	Hour: <input type="checkbox"/>	Day: <input checked="" type="checkbox"/>	Week: <input type="checkbox"/>	Month: <input type="checkbox"/>	Other:

Timing Information							
#	At/ Between	Step(s)	Timing Unit	Minimum	Average	Maximum	Comments
1	Between	1, 2	Seconds	N/A		1.5	
2	Between	3, 4	Seconds	N/A		1.5	
3	Between	6, 7	Seconds	N/A		.5	
4	Between	8, 9	Seconds	N/A		1	

Volume Information						
#	Step #	Unit of Measure	Minimum	Average	Maximum	Comments
1	8	Bytes	5			S.W.A.G.

Scenario 80

Operator selects an Inbound Weight Sheet.

InboundWeightSheetService gets weight sheet.

System displays Weight Sheet details pop up window.

Operator clicks “Move” button.

System Displays table of lots.

LotService gets all lots.

Operator selects a lot to move the weight sheet to.

Operator selects “Move”.

System displays confirm message.

Operator clicks “yes”.

InboundWeightSheet moves to different lot.

Original lot removes weight sheet from its list.

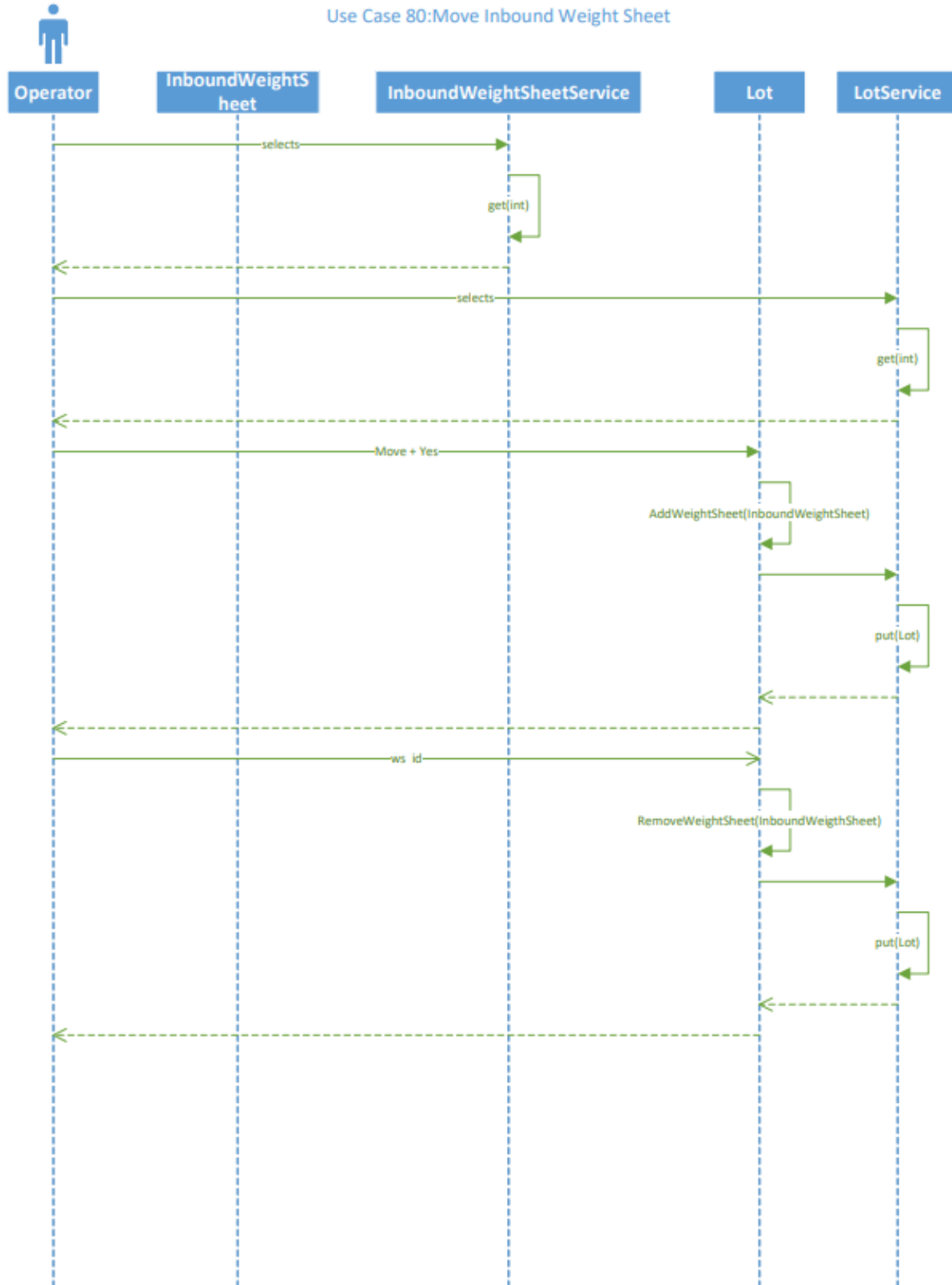
Updates data base using LotService

InboundWeightSheetService sends to database.

LotServices sends to database.

System displays Overview screen with weight on sheet on different lot.

Sequence Diagram 80



Use Case 90: Move Load

General Information	
Use Case Name\Number : 90 Subject Area : Corrections Description : Operator can move an load from one weight sheet to another	Responsible Analyst : Micah Gordon

Requirements/Feature Trace	
<u>REQ#</u>	<u>Requirements Name and / or Short Description</u>
3.11	Move Load

Revision History		
<u>Author</u>	<u>Date</u>	<u>Comments</u>
Micah Gordon	10/25/23	Initial Draft

Insertion Points in other Use Cases (Adds Only)		
<u>Use Case Name</u>	<u>Use Case Number</u>	<u>Step Inserted After</u>
N/A	N/A	N/A

Actors		
<u>Actor Name</u>	<u>Person/System</u>	<u>Brief Description</u>
Operator	Person	Individual operating scale and application

Pre-Conditions	
#	Description
1	At least two open weight sheets
2	Overview screen displayed

Start Stimulus			
Operator selects a weight sheet form the overview table			

Use Case Main Course Steps			
<u>Number</u>	<u>Description</u>	<u>Adds/Alt Name/Number</u>	<u>Bus Rule#</u>
1	Operator selects a weight sheet		
2	System displays weight sheet details pop up window		
3	Operator selects a load on the weight sheet		
4	System displays load pop up window		
5	Operator clicks move		
6	System displays weight sheet table		
7	Operator clicks move		
8	System prompts for confirmation		
9	Operator confirms		
10	System displays overview screen		

Exception Conditions		
<u>Exception Situations</u>	<u>Action(s) on Exception</u>	<u>Adds\Alt UC #</u>
N/A	N/A	N/A

Post-Conditions	
<u>#</u>	<u>Description</u>
1	Load is removed from original weight sheet
2	Load is added to selected weight sheet
3	Database is updated with change

Candidate Objects		
<u>Class/Object Name</u>	<u>Descriptions</u>	<u>Possible attributes</u>
N/A	N/A	N/A

Assumptions					
<u>#</u>	<u>Assumption</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A	N/A	N/A	N/A	N/A

Issues					
<u>#</u>	<u>Issue</u>	<u>Date Raised</u>	<u>Raised By</u>	<u>Date Verified</u>	<u>Verified By</u>
	N/A	N/A	N/A	N/A	N/A

Other Comments		
<u>Author</u>	<u>Comment</u>	<u>Date</u>
N/A	N/A	N/A

Frequency of Execution					
Frequency:	Minimum: 0	Maximum:	Average: 100	(OR)Fixed:	
Per:	Hour: <input type="checkbox"/>	Day: <input checked="" type="checkbox"/>	Week: <input type="checkbox"/>	Month: <input type="checkbox"/>	Other:

Timing Information							
#	At/ Between	Step(s)	Timing Unit	Minimum	Average	Maximum	Comments
1	Between	1, 2	Seconds	N/A		1.5	
2	Between	3, 4	Seconds	N/A		1.5	
3	Between	5, 6	Seconds	N/A		1.5	
4	Between	7, 8	Seconds	N/A		1	
5	Between	9, 10	Seconds	N/A		1.5	

Volume Information						
#	Step #	Unit of Measure	Minimum	Average	Maximum	Comments
1	9	Bytes	5			S.W.A.G.

Scenario 90

Operator selects a weight sheet.

Transfer/InboundWeightSheetService gets weight sheet.

System displays weight sheet details pop up window.

Operator selects a load on the weight sheet.

LoadService retrives load.

System displays load pop up window.

Operator clicks move.

System displays weight sheet table.

Operator clicks move.

System prompts for confirmation.

Operator confirms.

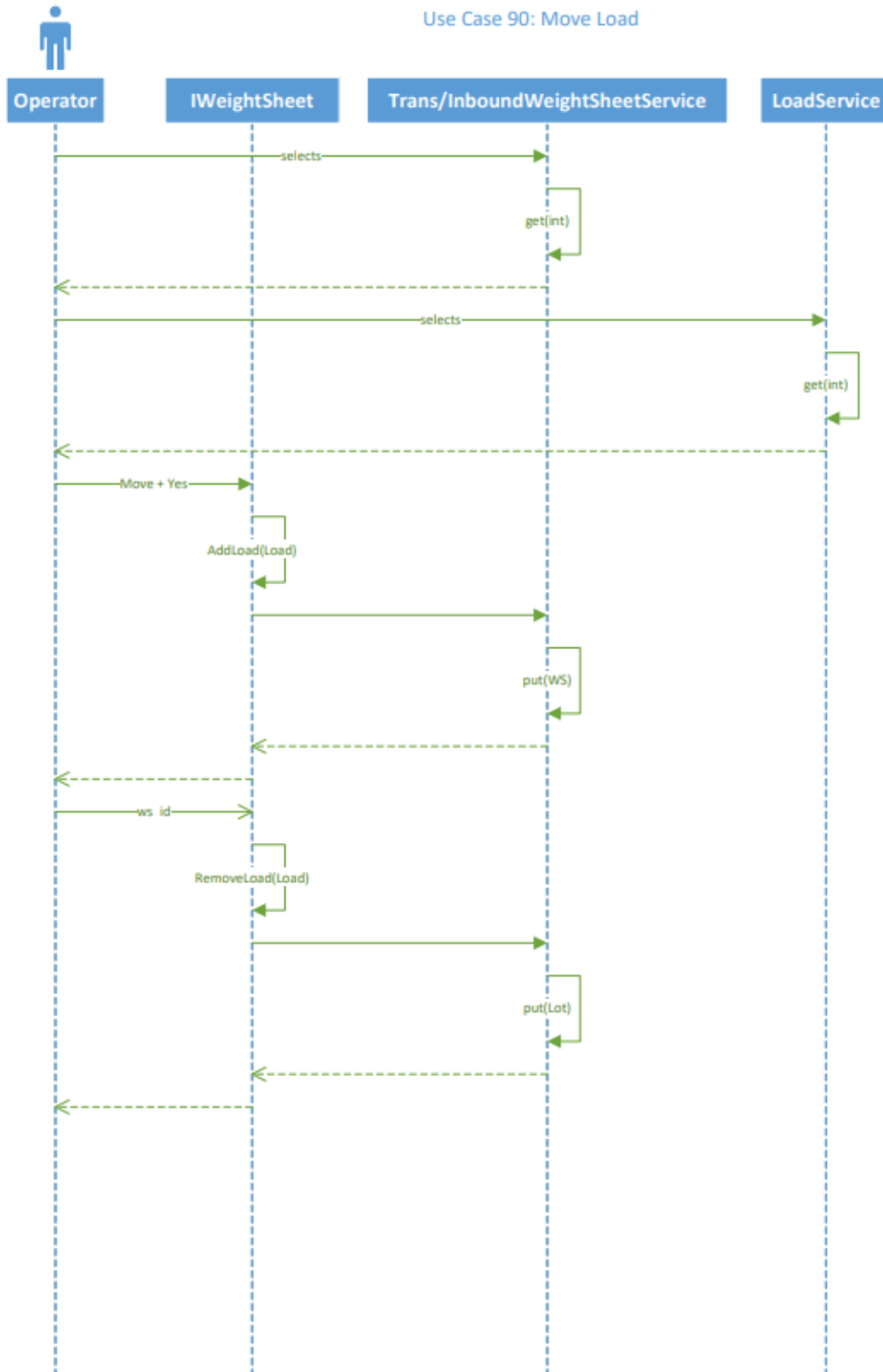
Load moves to a different IWeightSheet.

Load removed from original IWeightSheet.

Transfer/InboundWeightSheetService sends to database.

System displays overview screen.

Sequence Diagram 90



Crud matrix

CRUD Matrix

Use Case ID	Use Case Name	Bin	CommodityService	Commodity	CommodityType
10	New Load	U	RC	R	RC
20	Reports	R		R	
30	Load data view, edit, sort, filter				
40	Weight sheet data view, edit, sort, filter	R	RC	R	RC
50	Lot data view, edit, sort, filter				
60	Close/Reopen weight sheet				
70	Close/Reopen				
80	Move Weight Sheet				
90	Move Lot				

Use Case ID	Use Case Name	District	DistrictService	IApiResult	InboundWeightSheet
10	New Load				C

20	Reports	R	RC		
30	Load data view, edit, sort, filter				CRU
40	Weight sheet data view, edit, sort, filter				CRU
50	Lot data view, edit, sort, filter				CRU
60	Close/Reopen weight sheet				U
70	Close/Reopen Lot				U
80	Move Weight Sheet				U
90	Move Lot				

Use Case ID	Use Case Name	InboundWeightSheet Service	IService	Load	Lot	LotService
10	New Load	U		C		
20	Reports	R		R	R	R
30	Load data view, edit, sort, filter	RU		RU		
40	Weight sheet data view, edit, sort, filter	RU				
50	Lot data view, edit, sort, filter				RU	CRU
60	Close/Reopen weight sheet	U				
70	Close/Reopen Lot				U	CR

80	Move Weight Sheet	U			U	CR
90	Move Lot				U	CR

Use Case ID	Use Case Name	Producer	TransferWeightSheet	TransferWeightSheetService
10	New Load		U	CU
20	Reports	R	R	CR
30	Load data view, edit, sort, filter			
40	Weight sheet data view, edit, sort, filter		RU	CR
50	Lot data view, edit, sort, filter	R		
60	Close/Reopen weight sheet		RU	CR
70	Close/Reopen Lot			
80	Move Weight Sheet		U	CR
90	Move Lot			

Use Case ID	Use Case Name	Warehouse	WarehouseService
10	New Load	U	CR
20	Reports	R	CR
30	Load data view, edit, sort, filter		

40	Weight sheet data view, edit, sort, filter		
50	Lot data view, edit, sort, filter		
60	Close/Reopen weight sheet		
70	Close/Reopen Lot		
80	Move Weight Sheet		
90	Move Lot		

Low Fidelity Ui

 Overview

Loads

Weight Sheets

Lots

Reports

Overview

New Load

Lot Type	Total Loads	In Yard	Source/Producer	Weight Sheet Id	Commodity Type	Commodity Variety	Notes	Lot Id
Inbound	3	1	A Farmer down the road	1412561234	SWH White Wheat	N/A		4651651615
Transfer	4	0	WW Seed Plant	1412524980	RHW Hard Red Winter	N/A	Mixed	N/A

 Overview

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Loads

Load Id	Truck Id	Gross (lbs)	Tare (lbs)	Net (lbs)	Time in	Time out	Bol	Bin	Moisture	Test Weight	Protein	Notes
265465136	300	105,000	37,000	68,000	08:05	08:09	158115	GP	10.2	60.5	9.5	
115687468	412H	148,000	0	0	15:05		N/A	214	N/A	58.4	11.9	FTSP

Weight Sheets

Weight Sheet Id	Type	Total Loads	Source/Producer	Commodity Type	Commodity Variety	Hauler	Miles	Billed	Notes
126546513	Inbound	2	A Farmer Down the Road	SWH Soft White Wheat					Done for day
115687468	Transfer	5	WW Seed Plant	HRW Hard Red Winter					

Lots

Lot Id ▾	Source	Commodity Type	Commodity Variety	Active Weight Sheets	Total Weight Sheets	Open Date	Close Date	Landlord	Farm Number
0117234515	300	105,000	37,000	68,000	08:05	08:09	158115	GP	10.2
0117234516	412H	148,000	0	0	15:05		N/A	214	N/A

↑

Overview

Loads

Weight Sheets

Lots

Reports

Reports

Intake Reports

Transfer Reports

Daily Weight Sheet Reports

Daily Commodity Report

Producer Commodity Delivery Report

Generate Report

↑

Overview

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New Load

Cancel

Load Number: 5165487

Field	Input
Truck Id	
Gross	Scale Input
Tare	Scale Input
Net	Scale Input
Bin	
Moisture	
Test Weight	
Protein	
Bill of Lading Number	
Notes	

Weigh In

Weigh Out

New Weight Sheet

Move

Lot Type	Total	Lot Id
Inbound	3	4651651615
Transfer	4	N/A

Overview

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Edit Load

Cancel

Load Number: 5165487

Field	Input
Truck Id	132
Gross	101,220 lbs
Tare	32,486 lbs
Net	68,734 lbs
Bin	Steel Tank
Moisture	4.8 %

Field	Input
Test Weight	63.2 lbs/bu
Protein	9.8 12% MB
Bill of Lading Number	
Date	05/10/2023
Time In	08:15 AM
Time Out	08:24 AM

Notes:

Weigh In

Weigh Out

New Weight Sheet

Move

Lot Type	Total
Inbound	3
Transfer	4

Lot Id
4651651615
N/A

Overview

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Weight Sheets

New Inbound Weight Sheet

Cancel

Weight Sheet Id: 17235421345

Field	Input
Type	Inbound
Lot	
Hauler	
One Way Miles	
Notes	

Done

Close

New Lot

Move

Weight Sheet Id	Type
126546513	Inbound
115687468	Transfer

Billed	Notes
	Done for day

Overview

Loads

Weight Sheets

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Weight Sheets

Weight Sheet Id: 17235421345

Field

Input

Type

Inbound

Lot

123798574

Hauler

One Way Miles

Total Loads

8

Field

Input

Close

YES

Date Opened

04/05/2023

Date Closed

04/16/2023

Net Intake (lbs)

600,000

Net Intake (bu)

10,000

Notes:

Open

Close

New Lot

Move

Billed

Notes

Done for day

Overview

Loads

Weight Sheets

Lots

Reports

Weight Sheets

New Transfer Weight Sheet

Weight Sheet Id: 17235421345

Field

Input

Type

Transfer

Source

Commodity Type

Commodity Variety

Bill of Lading

Hauler

One Way Miles

Notes

Done

Close

New Lot

Move

Billed

Notes

Done for day

Overview

Loads

Weight Sheets

Lots

Reports

Weight Sheet Id

Type

126546513

Inbound

115687468

Transfer

Field

Input

Type

Transfer

Source

WW Seed Plant

Hauler

Commodity Type

Commodity Variety

One Way Miles

Field

Input

Total Loads

2

Close

NO

Date Opened

04/05/2023

Date Closed

N/A

Net Intake (lbs)

60,000

Net Intake (bu)

1,000

Notes:

Open

Close

New Lot

Move

Cancel

Billed

Notes

Done for day

Overview

Loads

Weight Sheets

Lots

Reports

Lot Id

Source

0117234515

300

0117234516

412H

Field

Input

Producer

Commodity Type

Commodity Variety

State of Origin

Landlord

FSA Farm Number

Notes

Done

Close

Cancel

Landlord

Farm Number

GP

10.2

214

N/A

↑

Overview

Market Statistics

Reports

Lots

Lot Id ▾	Source
0117234515	300
0117234516	412H

Lot Id: 17235421

Field

Input

Producer

HT Farming Corp, Rea ▾

Commodity Type

SHW White Wheat ▾

Commodity Variety

▾

State of Origin

WA ▾

Weight Sheets

5

Active Weight Sheets

1

FSA Farm Number

154b-c15s

Field

Input

Landlord

Dennis Rea

Is Open

Yes

Date Opened

06/21/2023

Date Closed

Total Intake (lbs)

1,023,480,580

Total Intake (bu)

17,058,010

Notes:

Open

Close

Cancel

Landlord	Farm Number
GP	10.2
214	N/A

Glossary

Appendix A. Business Rules

1. New Load mandatory versus optional data
 - a. Mandatory
 - i. Truck Identifier
 - b. Optional
 - i. Destination Bin
 - ii. Test weight
 - iii. Moisture
 - iv. Protein
 - v. Bill of lading number
 - vi. Notes
2. Calculating tare and net weights. $\text{Net} = \text{gross} - \text{tare}$. Net is the weight of the product unload. Gross is the weight of the truck plus commodity before unloading. Tare is the weight of the truck after it has been unloaded.
3. New Transfer Weight Sheet mandatory versus optional data
 - a. Mandatory
 - i. Source
 - ii. Commodity Type
 - b. Optional
 - i. Commodity Variety
 - ii. Bill of Lading
 - iii. Hauler
 - iv. One Way Miles
 - v. Notes
4. New Inbound Weight Sheet mandatory versus optional data
 - a. Mandatory
 - i. Lot
 - b. Optional
 - i. Bill of Lading
 - ii. Hauler
 - iii. One Way Miles
 - iv. Notes
5. New Lot mandatory versus optional data
 - a. Mandatory
 - i. Producer
 - ii. State of Origin
 - iii. Commodity Type
 - b. Optional
 - i. Commodity Variety
 - ii. Landlord
 - iii. FSA Farm Number
 - iv. Notes
6. Report types

- a. Operator has the option of choosing one or more reports
 - i. Intake
 - ii. Transfer
 - iii. Daily Weight Sheet
 - iv. Daily Commodity
 - v. Producer Commodity Delivery
- 7. Operator can't remove mandatory data. Scrub for SQL injection.
- 8. If closed, update database. Re query database and update model and view.