

Warehouse Inventory System

Object Model



Release Version: v1.1

Date: 12/05/23

Responsible Analyst: Micah Gordon

Email: micah.gordon@oit.edu

Signatory Page

This document accepted by

X_____

Signature(Calvin Caldwell)

Date

X_____

Signature(Micah Gordon)

Date

Revision History

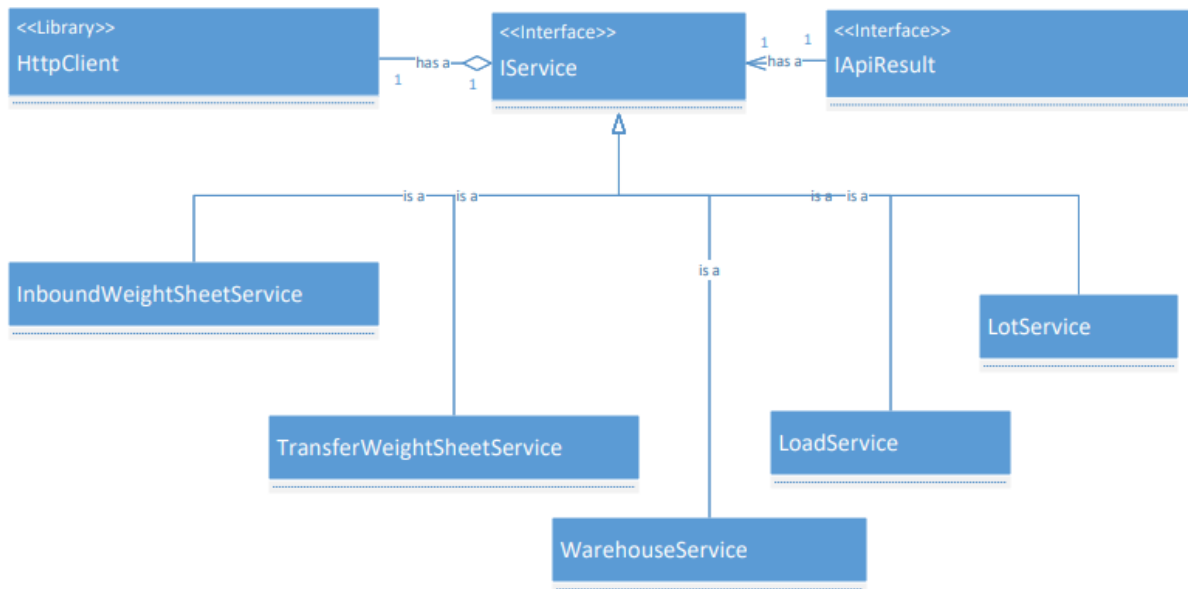
Author	Company	Version	Date	Comments
Micah Gordon	Quackedsoft	1.0	11/27/2023	Initial Draft
Micah Gordon	Quackedsoft	1.1	12/05/2023	Added verify function to operator manipulated objects. Small errors in UML

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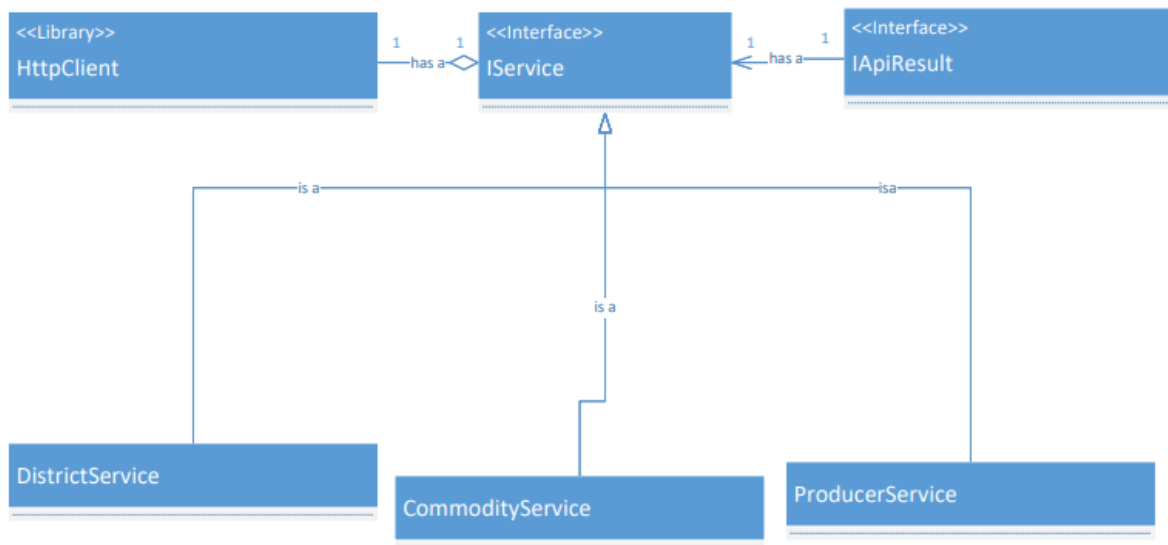
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Executive UML Diagram

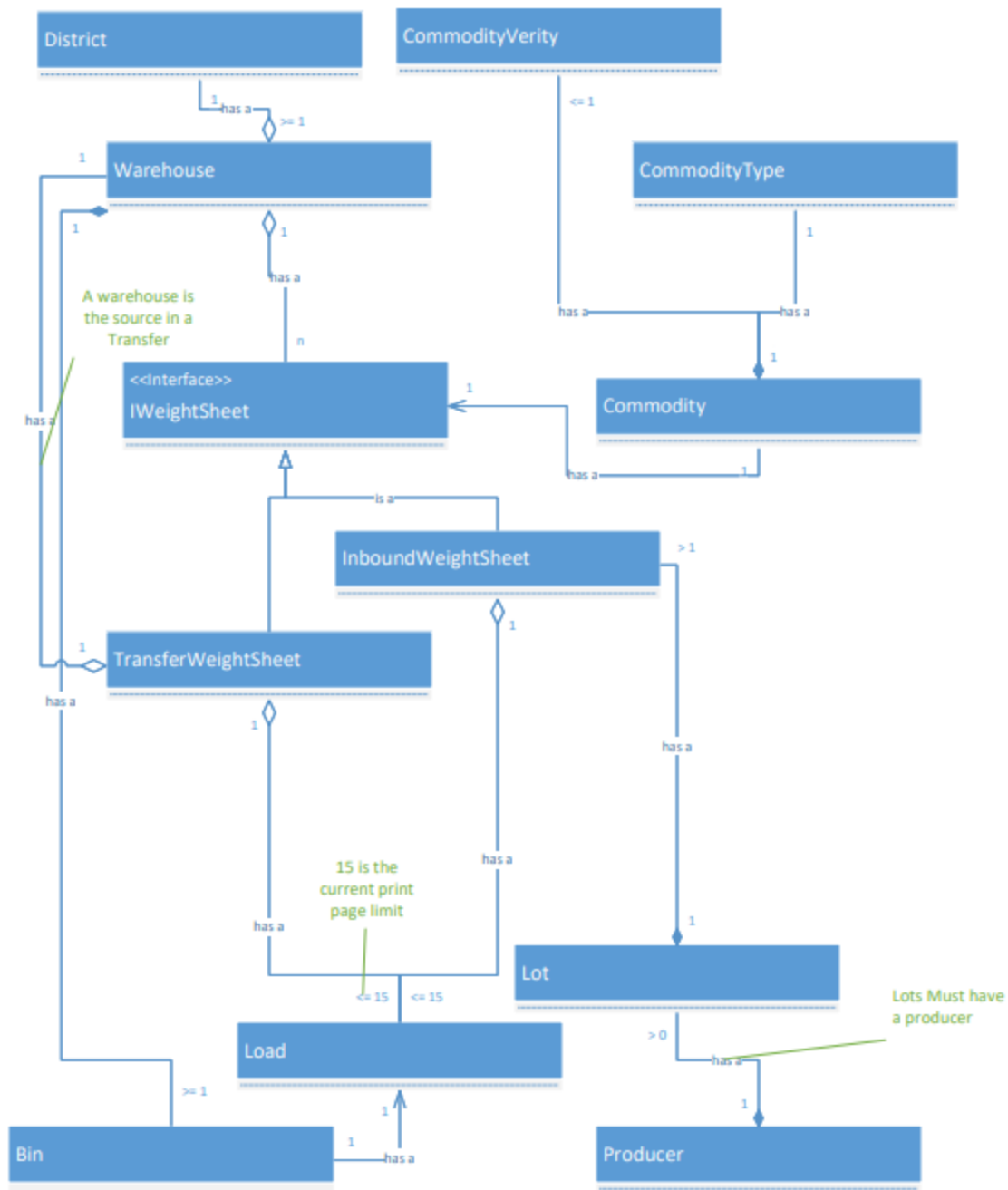
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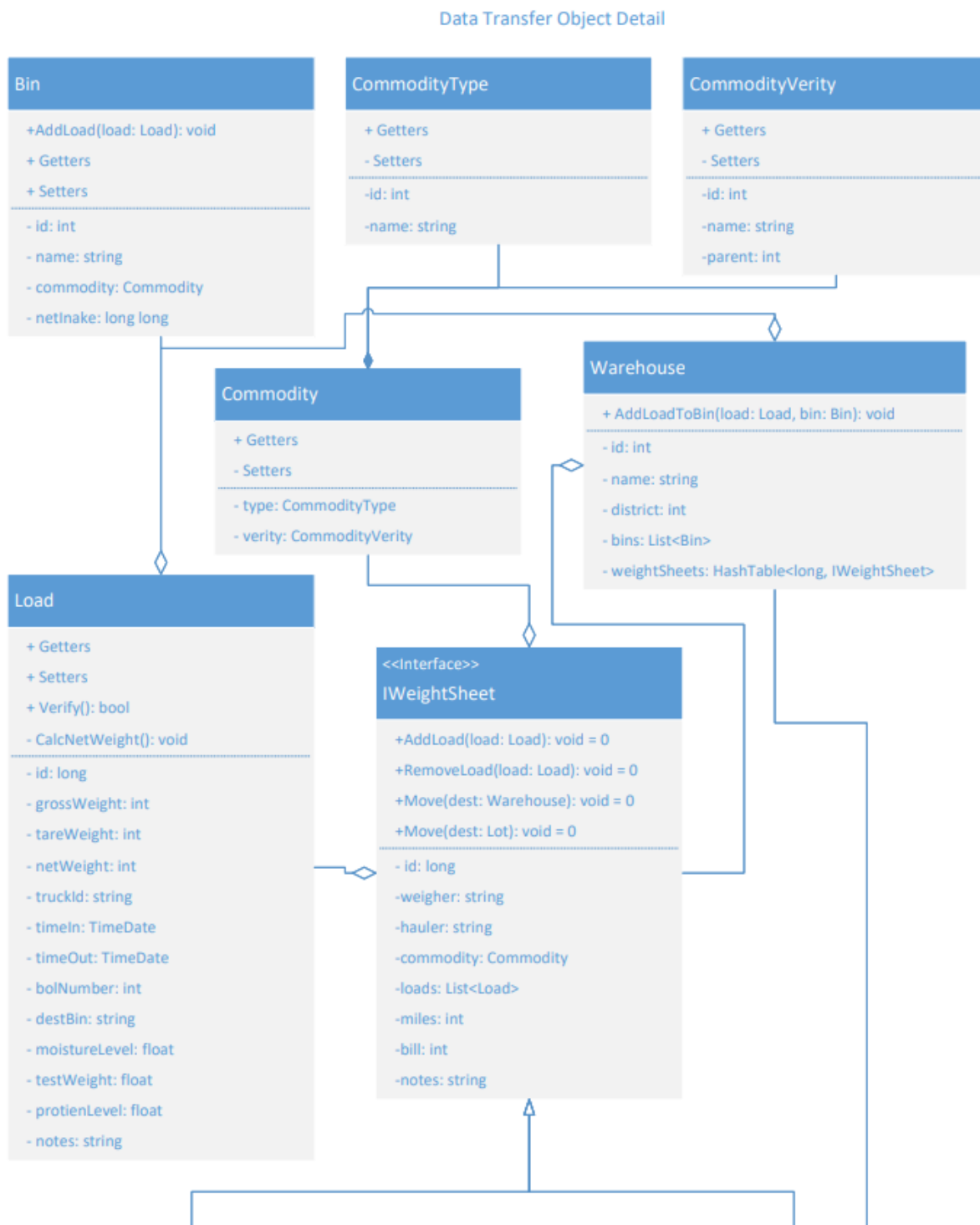
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Data Transfer Objects and Internal Relationships

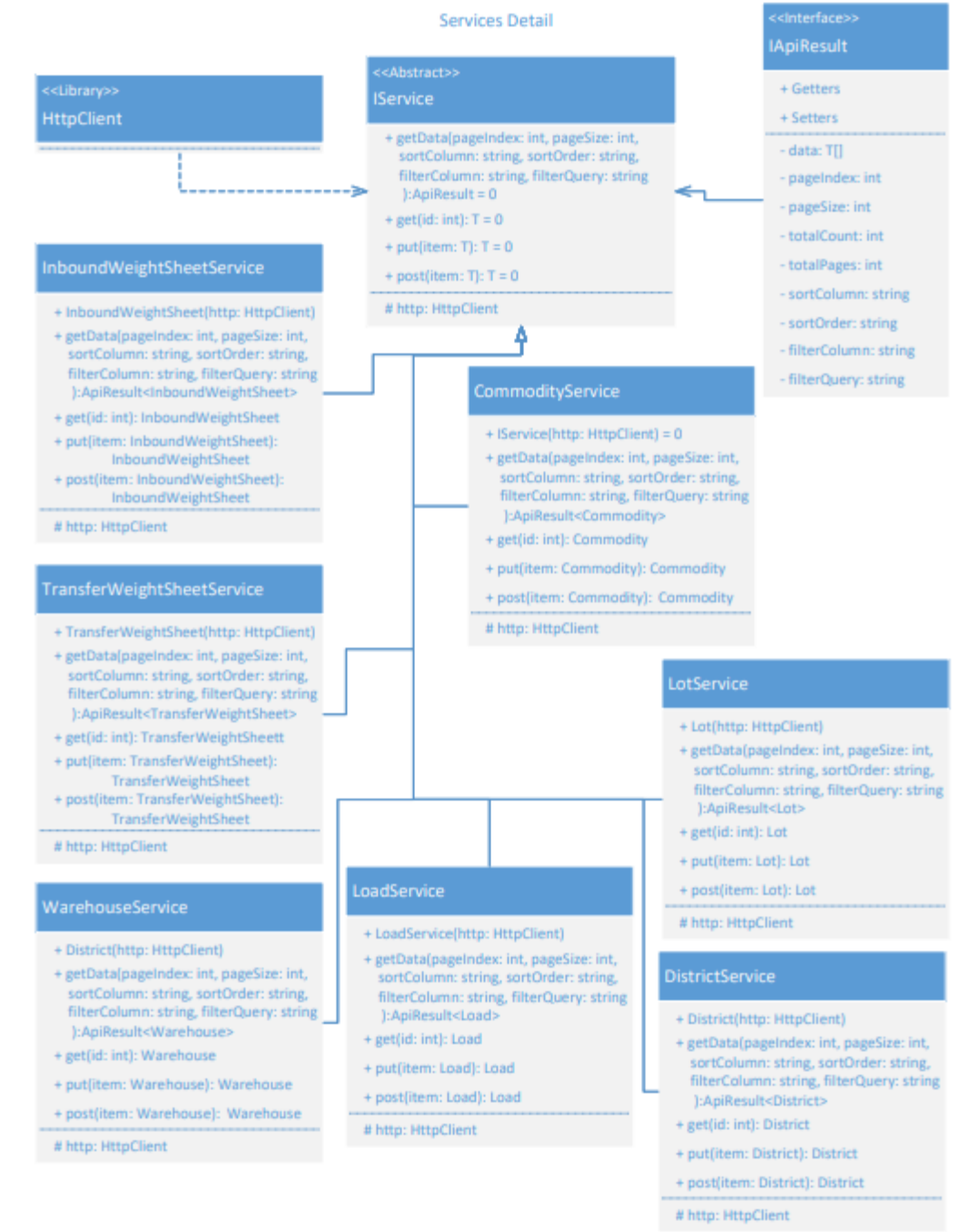


Detailed UML Diagram



Weight Sheet Detail Page 2





Class Specifications

Bin

Class Information		
Class Name: Bin	Abstract Type: N/A	Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps
20	Reports	7

Public Methods		
Signature	Preconditions	Post Conditions
Void AddLoad(load weight)	weight > 0 and Load commodity type matches bin's commodity type	netIntake += weight

Protected Methods		
Signature	Preconditions	Post Conditions
N/A		

Private Methods		
Signature	Preconditions	Post Conditions
N/A		

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Int	N	Instance	Private	Unique id for the bin
Name	String	N	Instance	Private	Human readable name for bin
Commodity	Commodity	Y	Instance	Private	What commodity type is stored in the bin
netIntake	Long	N	Instance	Private	How much commodity in pounds has been added to the bin.

CommodityService

Class Information		
Class Name:	CommodityService	
	Abstract Type: N/A	Persistence: N/A

Concurrency	
Threading Issue	Description
N/A	N/A

Major Exceptions		
Name	Trigger	Action
MixException	Load and bin's commodity types don't match	Exit function inform operator

Instance Information			
Minimum	Maximum	Mean	Fixed
1	N/A	N/A	N/A

General Comments		
Author	Date	Comment
Micah Gordon	11/17/2023	Primary a Model object not a lot of behavior.

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10b	New inbound weight sheet	3
10c	New Lot	5
80	Move inbound weight sheet	9

Public Methods		
Signature	Preconditions	Post Conditions
Commodity(HttpClient http)	N/A	New Commodity
Commodity GetData(int pageIndex, int pageSize, string sortColumn, string sortOrder, string filter column, string filterQuery)	Backend Running	Creates Commodity(s) from JSON return
Commodity Get(int id)	Backend Running	Creates a Commodity from JSON return
Commodity Put(Commodity item)	Backend Running	Modifies database

Commodity Post(Commodity item)	Backend Running	Modifies database

Protected Methods		
Signature	Preconditions	Post Conditions
N/A		

Private Methods		
Signature	Preconditions	Post Conditions
N/A		

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
http	HttpClient	Y	Instance	protected	Network interfacing

Concurrency	
Threading Issue	Description
N/A	

Major Exceptions		
Name	Trigger	Action
N/A		

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A			

General Comments		
Author	Date	Comment

CommodityType

Class Information		
Class Name:	CommodityType	
	Abstract Type: N/A	Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10a	New Transfer Weight Sheet	3
10b	New Inbound Weight Sheet	3

Public Methods		
Signature	Preconditions	Post Conditions
Getters		
Setters		

Protected Methods		
Signature	Preconditions	Post Conditions
N/A		

Private Methods		
Signature	Preconditions	Post Conditions
N/A		

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Int	N	Instance	Private	Unique id number for commodity
Name	String	N	Instance	Private	Name of commodity

Concurrency	
Threading Issue	Description
N/A	

Major Exceptions		
Name	Trigger	Action
N/A		

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A			

General Comments		
Author	Date	Comment

CommodityVerity

Class Information		
Class Name:	CommodityVerity	
	Abstract Type: N/A	Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10a	New Transfer Weight Sheet	3
10b	New Inbound Weight Sheet	3

Public Methods		
Signature	Preconditions	Post Conditions
Getters		
Setters		

Protected Methods		
Signature	Preconditions	Post Conditions
N/A		

Private Methods		
Signature	Preconditions	Post Conditions
N/A		

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Int	N	Instance	Private	Unique id number fore variety
Name	String	N	Instance	Private	Name of verity
parentId	Int	N	Instance	Private	Id number of commodity type

Concurrency	
Threading Issue	Description
N/A	

Major Exceptions		
Name	Trigger	Action
N/A		

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A			

General Comments		
Author	Date	Comment

District

Class Information		
Class Name: District	Abstract Type: N/A	Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps
N/A	N/A	N/A

Public Methods		
Signature	Preconditions	Post Conditions
Setters		
Getters		

Protected Methods		
Signature	Preconditions	Post Conditions
N/A		

Private Methods		
Signature	Preconditions	Post Conditions
N/A		

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Int	N	Instance	Private	Identification number for district
Name	String	N	Instance	private	Human useable identification
Warehouses	List<warehouse>	Y	Instance	Private	Contains all the warehouses which belong to the district.

Concurrency	
Threading Issue	Description
N/A	N/A

Major Exceptions		
Name	Trigger	Action
N/A		

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A			

General Comments		
Author	Date	Comment
Micah Gordon	11/17/2023	Data base object. Useful for reports. Little behavior. Just setters and Getters

DistrictService

Class Information		
Class Name: District	Abstract Type: N/A	Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps
N/A	N/A	N/A

Public Methods		
Signature	Preconditions	Post Conditions
Setters		
Getters		

Protected Methods		
Signature	Preconditions	Post Conditions
N/A		

Private Methods		
Signature	Preconditions	Post Conditions
N/A		

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Int	N	Instance	Private	Identification number for district
Name	String	N	Instance	private	Human useable identification
Warehouses	List<warehouse>	Y	Instance	Private	Contains all the warehouses which belong to the district.

Concurrency	
Threading Issue	Description
N/A	N/A

Major Exceptions		
Name	Trigger	Action
N/A		

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A			

General Comments		
Author	Date	Comment
Micah Gordon	11/17/2023	Data base object. Useful for reports. Little behavior. Just setters and Getters

IApiResult

Class Information		
Class Name: IApiResult	Abstract Type: Yes	Persistence: N/A

Trace-ability Information		
Use Case ID	Use Case Name	Steps
N/A	N/A	N/A

Public Methods		
Signature	Preconditions	Post Conditions
Getters		
Setters		

Protected Methods		
Signature	Preconditions	Post Conditions
N/A		

Private Methods (If I told you I would have to kill you 😊)		
Signature	Preconditions	Post Conditions
N/A		

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Data	T	Y	Instance	Private	Data section of JSON return from backend API
pageIndex	Int	N	Instance	Private	Index into total number of pages
pageSize	Int	N	Instance	Private	Number of items returned in data pre-page
totalCount	Int	N	Instance	Private	Total number of items returned in data
totalPage	Int	N	Instance	Private	Total number of possible pages
sortColumn	String	N	Instance	Private	Nullable. Gives option to sort return

sortOrder	String	N	Instance	Private	Nullable. Gives option for ASC or DSC sorting of data return
filterColumn	String	N	Instance	Private	Self doc
filterQuery	String	N	Instance	Private	Self doc

Concurrency	
Threading Issue	Description
N/A	

Major Exceptions		
Name	Trigger	Action
N/A		

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A			

General Comments		
Author	Date	Comment
Micah Gordon	11/17/23	sleepy

InboundWeightSheet

Class Information		
Class Name:	InboundWieghtSheet	
	Abstract Type: N/A	Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps

Public Methods		
Signature	Preconditions	Post Conditions
Void AddLoad(Load load) = 0	N/A	N/A
Void RemoveLoad(Load load) = 0	N/A	N/A
Void Move(Warehouse dest) = 0	N/A	N/A
Void Move(Lot dest) = 0	N/A	N/A
Bool Verify()		Returns true if all mandatory fields have valid values.

Protected Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Private Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Long	N	Instance	Private	Unique id number
Weigher	String	N	Instance	Private	Name of scale Operator
Hauler	String	N	Instance	Private	Nullable. Name of hauler for weight sheet
Commodity	Commodity	Y	Instance	Private	What commodity is being hauled
Loads	List<Load>	Y	Instance	Private	Contains the loads brought in on the weight sheet
Miles	Int	N	Instance	Private	1 way trip for hauler
Bill	Int	N	Instance	Private	For Hauler
Notes	String	N	Instance	Private	For Operator to leave notes
Lot	Lot	Y	Instance	Private	Lot (field) loads are coming from

Concurrency	
Threading Issue	Description
N/A	N/A

Major Exceptions		
Name	Trigger	Action
N/A	N/A	N/A

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A	N/A	N/A	N/A

General Comments		
Author	Date	Comment
Micah Gordon	11/17/2023	Lots are not 1:1 with fields. A single field can have many lots; although this is uncommon.

InboundWeightSheetService

Class Information		
Class Name:	InboundWeightSheetService	
	Abstract Type: N/A	Persistence: N/A

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10b	New inbound weight sheet	3
10c	New Lot	5
80	Move inbound weight sheet	9

Public Methods		
Signature	Preconditions	Post Conditions
InboundWeightSheet(HttpClient http)	N/A	New InboundWeightSheet
ApiResponse InboundWeightSheet GetData (int pageIndex, int pageSize, string sortColumn, string sortOrder, string filterColumn, string filterQuery)	Backend Running	Creates InboundWeightSheet(s) from JSON return
InboundWeightSheet Get(int id)	Backend Running	Creates a InboundWeightSheet from JSON return
InboundWeightSheet Put(InboundWeightSheet item)	Backend Running	Modifies database
InboundWeightSheet Post(InboundWeightSheet item)	Backend Running	Modifies database

Protected Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Private Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Attributes					
Name	Type	Object (Y/N)	Instance/ Static	Visibility	Description
http	HttpClient	Y	Instance	protected	Network interfacing

Concurrency	
Threading Issue	Description
N/A	N/A

Major Exceptions		
Name	Trigger	Action
N/A	N/A	N/A

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A	N/A	N/A	N/A

General Comments		
Author	Date	Comment
N/A	N/A	N/A

IService

Class Information		
Class Name: IService	Abstract Type: Yes	Persistence: N/A

Trace-ability Information		
Use Case ID	Use Case Name	Steps
N/A	N/A	N/A

Public Methods		
Signature	Preconditions	Post Conditions
IService(HttpClient http) = 0	N/A	N/A
ApiResponse GetData(int pageIndex, int pageSize, string sortColumn, string sortOrder, string filter column, string filterQuery) = 0	N/A	N/A
T Get(int id)	N/A	N/A
T Put(T item)	N/A	N/A
T post(T item)	N/A	N/A

Protected Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Private Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
http	HttpClient	Y	Instance	Protected	Http object for interacting with RestAPI

Concurrency	
Threading Issue	Description
N/A	N/A

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Major Exceptions		
Name	Trigger	Action
N/A	N/A	N/A

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A	N/A	N/A	N/A

General Comments		
Author	Date	Comment
Micah Gordon	11/17/2023	Abstract class that all services are built around. Does the data base interactions.

IWeightSheet

Class Information		
Class Name: IWeightSheet	Abstract Type: yes	Persistence: N/A

Trace-ability Information		
Use Case ID	Use Case Name	Steps
N/A	N/A	N/A

Public Methods		
Signature	Preconditions	Post Conditions
Void AddLoad(Load load) = 0	N/A	N/A
Void RemoveLoad(Load load) = 0	N/A	N/A
Void Move(Warehouse dest) = 0	N/A	N/A
Void Move(Lot dest) = 0	N/A	N/A

Protected Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Private Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Long	N	Instance	Private	Unique id number
Weigher	String	N	Instance	Private	Name of scale Operator
Hauler	String	N	Instance	Private	Nullable. Name of hauler for weight sheet
Commodity	Commodity	Y	Instance	Private	What commodity is being hauled
Loads	List<Load>	Y	Instance	Private	Contains the loads brought in on the weight sheet
Miles	Int	N	Instance	Private	1 way trip for hauler
Bill	Int	N	Instance	Private	For Hauler
Notes	String	N	Instance	Private	For Operator to leave notes

Concurrency	
Threading Issue	Description
N/A	N/A

Major Exceptions		
Name	Trigger	Action
N/A	N/A	N/A

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A	N/A	N/A	0

General Comments		
Author	Date	Comment
Micah Gordon	11/17/2023	I know abstracts don't get instance, but easier for me to think about them. May refactor either to no instance vars or to just a parent class. Hauler exists for extendibility.

Load

Class Information		
Class Name: Load	Abstract Type: No	Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10	Incoming Truck	4, 8
20	Reports	5, 7
30	Load Data Interactions	2
30a	Edit Load Data	2
90	Move Load	4, 8

Public Methods		
Signature	Preconditions	Post Conditions
Void SetMoistureLevel(float value)	Value > 0 or Value < 100	moistureLevel is equal to value
Void SetProtein(float value)	Value > 0 or Value < 100	proteinLevel is equal to value
Void SetTestWeight(float value)	Value > 0	testWeight is equal to value
Bool Verify()		Returns true if all mandatory data has valid data set.

Protected Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Private Methods		
Signature	Preconditions	Post Conditions
Int CalcNetWeight()	Tare and Gross Weight > 0	netWeight = Gross - Tare

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
id	Long	N	Instance	Private	Identification number of the load
grossWeight	Int	N	Instance	Private	Gross weight of the load
tareWeight	Int	N	Instance	Private	Tare weight of the load
netWeight	Int	N	Instance	Private	Net weight of the load.
truckId	String	N	Instance	Private	Truck number or driver name. Truck numbers can have letters in it.
timeIn	Time Date	Y	Instance	Private	Time the truck was weight in
timeOut	Time Date	Y	Instance	Private	Time the truck was weight out
bolNumber	Long	N	Instance	Private	Nullable. Hauler would have a BoL if hauler for a source/producer

destBin	Bin	Y	Instance	Private	Destination bin for the load.
moistureLevel	Float	N	Instance	Private	Nullable. Moisture percent level for the load
protienLevel	Float	N	Instance	Private	Nullable. Protein percent level. (12% moisture basis)
testWeight	Float	N	Instance	Private	Nullable. Pounds per Bushel (lbs/bu)
billOfLadingId	Int	N	Instance	Private	Nullable. BoL id number
notes	String	N	Instance	Private	Nullable. Notes for recording comments.

Concurrency	
Threading Issue	Description
N/A	N/A

Major Exceptions		
Name	Trigger	Action
Calculation Exception	Calling CalcNetWeight if tareWeight or grossWeight is 0 <	Inform operator. Cancel exit function
MoistureOutOfBounds	Moisture level is < 0 or > 100	Inform operator. Cancel exit function
ProtienOutOfBounds	Protein level is < 0 or > 100	Inform operator. Cancel exit function
TestWeightOutOfBounds	Test weight level is < 0	Inform operator. Cancel exit function

Instance Information			
Minimum	Maximum	Mean	Fixed
0	Approaches countably infinite	50	N/A

General Comments		
Author	Date	Comment
Micah Gordon	11/15/23	Primarily a data model object. Most behavior is getter and setters. Exceptions are for when setter is used and the data is out of reasonable range.

Lot

Class Information		
Class Name: Lot	Abstract Type: N/A	Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10c	New Lot	3

Public Methods		
Signature	Preconditions	Post Conditions
Setters		
Getters		
Bool verify()	N/A	Returns true if objects mandatory data is set to valid values.
Void addWeightSheet(InboundWeightSheet ws)	N/A	List of InboundWeightsheet is incremented by one.

Protected Methods		
Signature	Preconditions	Post Conditions

Private Methods		
Signature	Preconditions	Post Conditions

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Long	N	Instance	Private	Unique id for lot
producerId	Long	N	Instance	Private	Producer unique id for lot
stateId	String	N	Instance	Private	2 char code for the state of origin.
startDate	DateTime	Y	Instance	Private	Date the lot was opened
endDate	DateTime	Y	Instance	Private	Date the lot was closed
weightSheets	HashTable <InboundWeightSh>	Y	Instance	Private	Table of lots weight sheets
farmNum	String	N	Instance	Private	Alpha numeric string to id FSA number
Notes	String	N	Instance	Private	For any comments/notes

Concurrency	
Threading Issue	Description
N/A	

Major Exceptions		
Name	Trigger	Action
N/A		

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A			

General Comments		
Author	Date	Comment
Micah Gordon	11/17/2023	Data Transfer Object setters and getters

LotService

Class Information		
Class Name: LotService	Abstract Type: N/A	Persistence: N/A

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10b	New inbound weight sheet	3
10c	New Lot	5
80	Move inbound weight sheet	9

Public Methods		
Signature	Preconditions	Post Conditions
Lot(HttpClient http)	N/A	New Lot
Lot GetData(int pageIndex, int pageSize, string sortColumn, string sortOrder, string filter column, string filterQuery)	Backend Running	Creates Lot(s) from JSON return
Lot Get(int id)	Backend Running	Creates a Lot from JSON return
Lot Put(Lot item)	Backend Running	Modifies database
Lot Post(Lot item)	Backend Running	Modifies database

Protected Methods		
Signature	Preconditions	Post Conditions
N/A		

Private Methods		
Signature	Preconditions	Post Conditions
N/A		

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
http	HttpClient	Y	Instance	protected	Network interfacing

Concurrency	
Threading Issue	Description
N/A	

Major Exceptions		
Name	Trigger	Action
N/A		

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A			1

General Comments		
Author	Date	Comment
Micah Gordon	11/17/2023	I need to do more research into if these services are static it makes sense if they were.

Producer

Class Information		
Class Name: Producer	Abstract Type: N/A	Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10c	New Lot	3

Public Methods		
Signature	Preconditions	Post Conditions
Getters		
Setters		

Protected Methods		
Signature	Preconditions	Post Conditions
N/A		

Private Methods		
Signature	Preconditions	Post Conditions
N/A		

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Int	N	Instance	Private	Unique id of the producer
Name	String	N	Instance	Private	Name of the producer
Lots	HashTable <Lots>	Y	Instance	Private	Table of all the lots the producer has.

Concurrency	
Threading Issue	Description
N/A	N/A

Major Exceptions		
Name	Trigger	Action
N/A	N/A	N/A

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A	N/A	1	N/A

General Comments		
Author	Date	Comment
Micah Gordon	11/17/2023	Data Base object. Primary function to have the information needed in data base.

TransferWeightSheet

Class Information		
Class Name: TransferWeightSheet		
Abstract Type: N/A		Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10a	New Transfer Weight Sheet	3

Public Methods		
Signature	Preconditions	Post Conditions
Void AddLoad(Load load)	N/A	Load is added to list of loads
Void RemoveLoad(Load load)	Load of matching id must exist in the list of loads	Load is removed from list
Void Move(Warehouse dest) = 0	N/A	N/A
Void Move(Lot dest) = 0	N/A	N/A

Protected Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Private Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Long	N	Instance	Private	Unique id number
Weigher	String	N	Instance	Private	Name of scale Operator
Hauler	String	N	Instance	Private	Nullable. Name of hauler for weight sheet
Commodity	Commodity	Y	Instance	Private	What commodity is being hauled
Loads	List<Load>	Y	Instance	Private	Contains the loads brought in on the weight sheet
Miles	Int	N	Instance	Private	1 way trip for hauler
Bill	Int	N	Instance	Private	For Hauler
Notes	String	N	Instance	Private	For Operator to leave notes
Source	Warehouse	Y	Instance	Private	Where the loads for sheet come from

Concurrency	
Threading Issue	Description
N/A	N/A

Major Exceptions		
Name	Trigger	Action
N/A	N/A	N/A

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A	N/A	25	N/A

General Comments		
Author	Date	Comment

TransferWeightSheetService

Class Information		
Class Name:	TransferWeightSheetService	
	Abstract Type: N/A	Persistence: N/A

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10b	New inbound weight sheet	3
10c	New Lot	5
80	Move inbound weight sheet	9

Public Methods		
Signature	Preconditions	Post Conditions
TransferWeightSheet(HttpClient http)	N/A	New TransferWeightSheet
TransferWeightSheet GetData(int pageIndex, int pageSize, string sortColumn, string sortOrder, string filter column, string filterQuery)	Backend Running	Creates TransferWeightSheet(s) from JSON return
TransferWeightSheet Get(int id)	Backend Running	Creates a TransferWeightSheet from JSON return
TransferWeightSheet Put(TransferWeightSheet item)	Backend Running	Modifies database
TransferWeightSheet Post(TransferWeightSheet item)	Backend Running	Modifies database

Protected Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Private Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
http	HttpClient	Y	Instance	protected	Network interfacing

Concurrency	
Threading Issue	Description
N/A	

Major Exceptions		
Name	Trigger	Action
N/A		

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A			

General Comments		
Author	Date	Comment

Warehouse

Class Information		
Class Name: Warehouse	Abstract Type: N/A	Persistence: Yes

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10a	New Transfer Weight Sheet	4
10b	New Inbound Weight Sheet	4
20	Reports	1-8

Public Methods		
Signature	Preconditions	Post Conditions
Void AddLoadToBin(Load load, Bin bin)	Bin and load's commodity types match	Bin increases amount stored by net weight of load

Protected Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Private Methods		
Signature	Preconditions	Post Conditions
N/A	N/A	N/A

Attributes					
Name	Type	Object (Y/N)	Instance/Static	Visibility	Description
Id	Int	N	Instance	Private	Identification number for warehouse
Name	String	N	Instance	Private	Human readable name for warehouse
District	Int	N	Instance	Private	What district warehouse is in
Bins	List<Bins>	Y	Instance	Private	Bins/containers that hold stuff in the warehouse
weightSheets	HashTable<long, IWeightSheet>	Y	Instance	Private	Weight sheets associated with the warehouse.

Concurrency	
Threading Issue	Description
N/A	N/A

Major Exceptions		
Name	Trigger	Action
MixException	Bin Commodity and load Commodity types don't match	Inform the operator.

Instance Information			
Minimum	Maximum	Mean	Fixed
1	N/A	N/A	N/A

General Comments		
Author	Date	Comment
Micah Gordon	11/17/2023	Warehouse is a container class which exist to allow for extendibility for the future.
Micah Gordon	11/17/2023	For updating bins and weight sheets: lambda functions exist through getters

WarehouseService

Class Information		
Class Name: WarehouseService	Abstract Type: N/A	Persistence: N/A

Trace-ability Information		
Use Case ID	Use Case Name	Steps
10b	New inbound weight sheet	3
10c	New Lot	5
80	Move inbound weight sheet	9

Public Methods		
Signature	Preconditions	Post Conditions
Warehouse(HttpClient http)	N/A	New Warehouse
Warehouse GetData(int pageIndex, int pageSize, string sortColumn, string sortOrder, string filter column, string filterQuery)	Backend Running	Creates Warehouse(s) from JSON return
Warehouse Get(int id)	Backend Running	Creates a Warehouse from JSON return
Warehouse Put(Warehouse item)	Backend Running	Modifies database
Warehouse Post(Warehouse item)	Backend Running	Modifies database

Protected Methods		
Signature	Preconditions	Post Conditions
N/A		

Private Methods		
Signature	Preconditions	Post Conditions
N/A		

Attributes					
Name	Type	Object (Y/N)	Instance/ Static	Visibility	Description
http	HttpClient	Y	Instance	protected	Network interfacing

Concurrency	
Threading Issue	Description

N/A	

Major Exceptions		
Name	Trigger	Action
N/A		

Instance Information			
Minimum	Maximum	Mean	Fixed
N/A			

General Comments		
Author	Date	Comment