Airline Flight Reservation Server

Release 2

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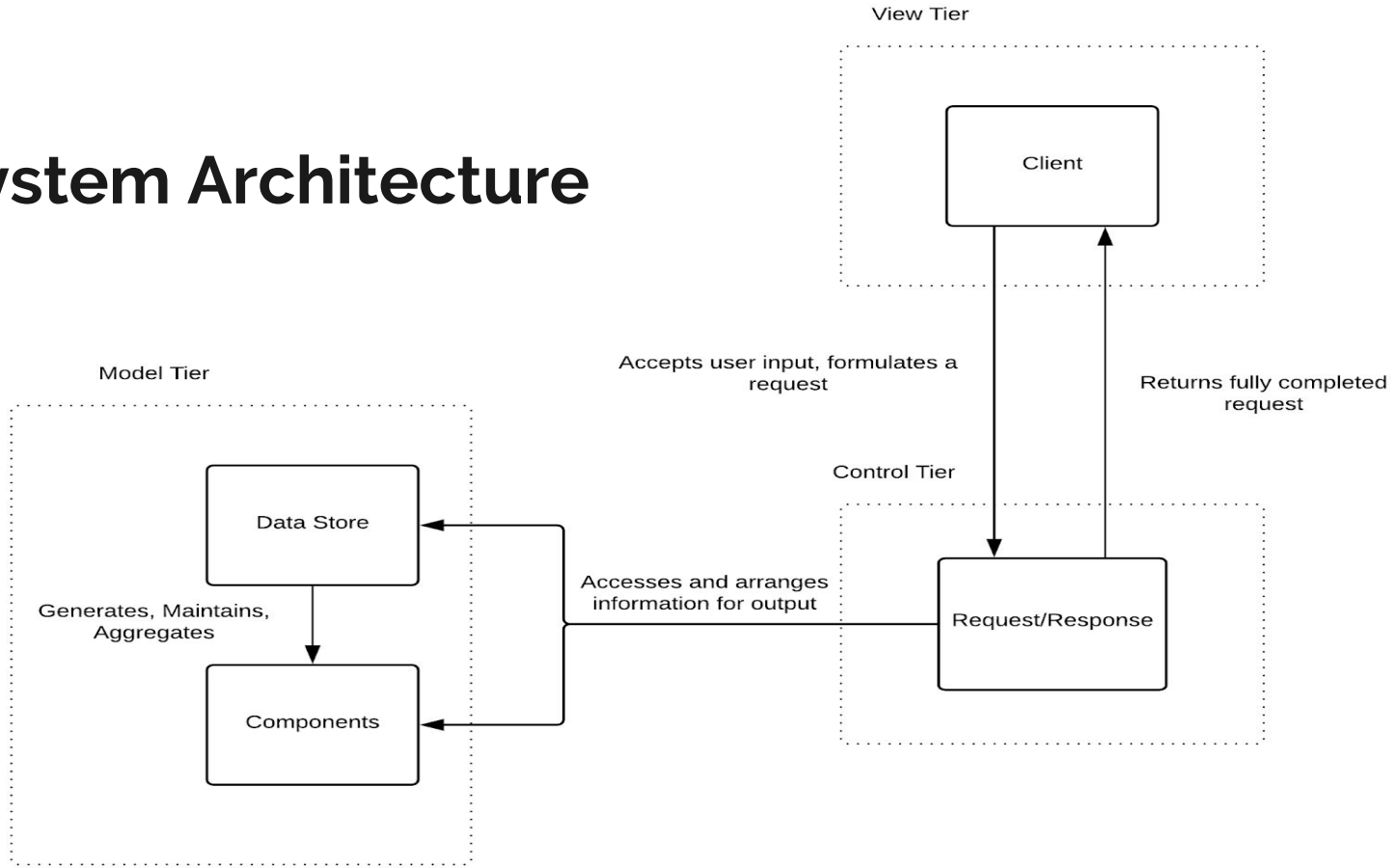
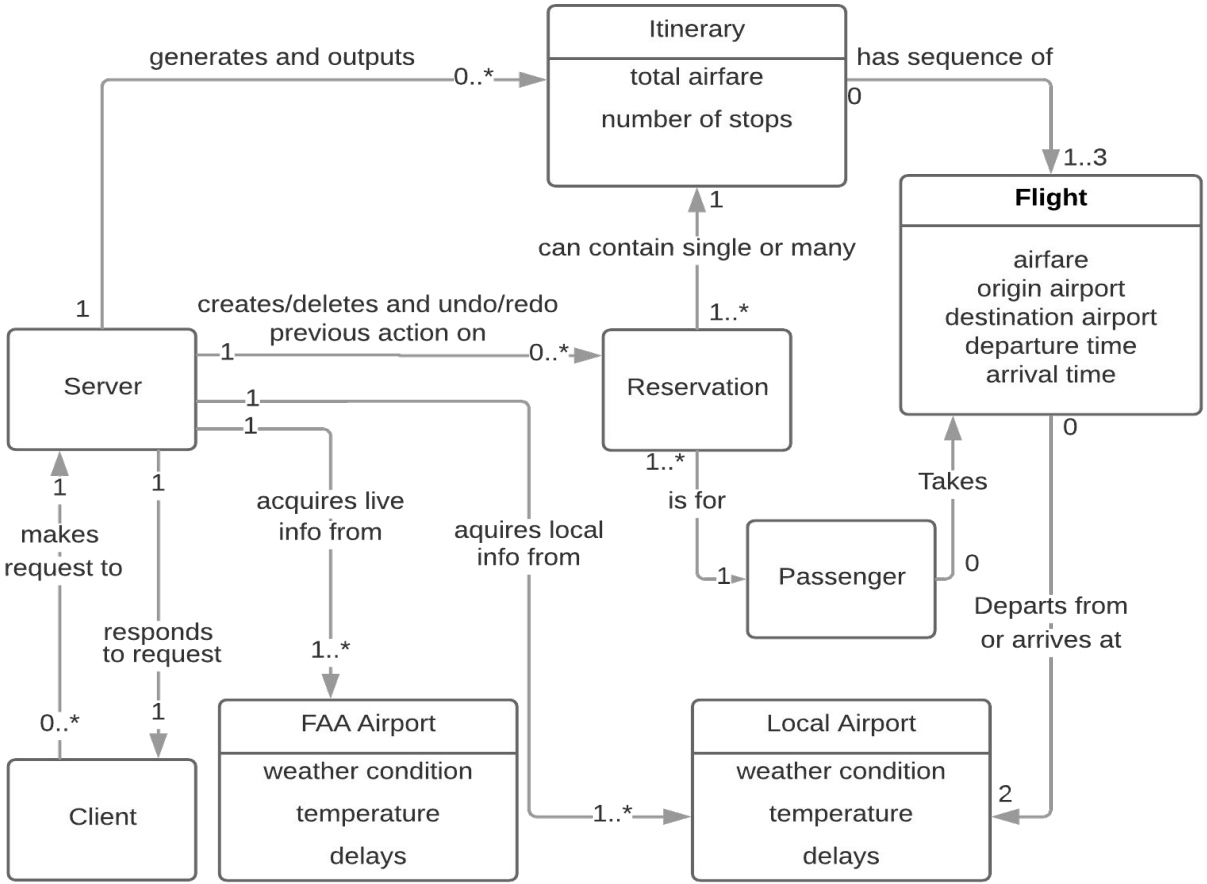
Updates for Release 2

- ➔ **New Undo/Redo Subsystem:** Stateful commands are tracked and stored.
- ➔ **New FAA Web Service Subsystem:** Supports switching between local and FAA data services
- ➔ **Expanded Client Subsystem:** Added a GUI
- ➔ **Multiple Clients:** Utilized observer pattern to allow different model components to track the creation and deletion of new clients and their Id's.

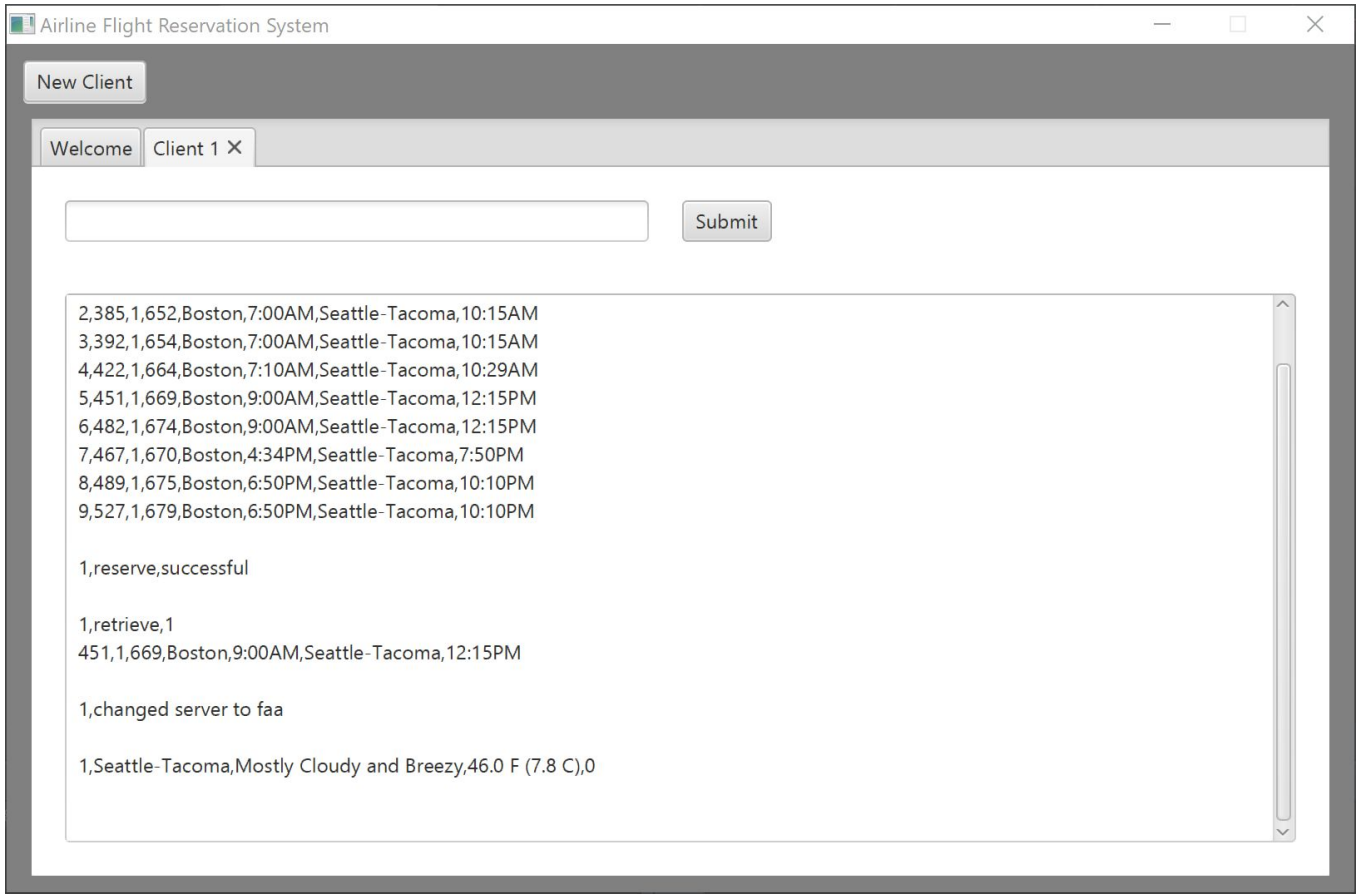
System Architecture



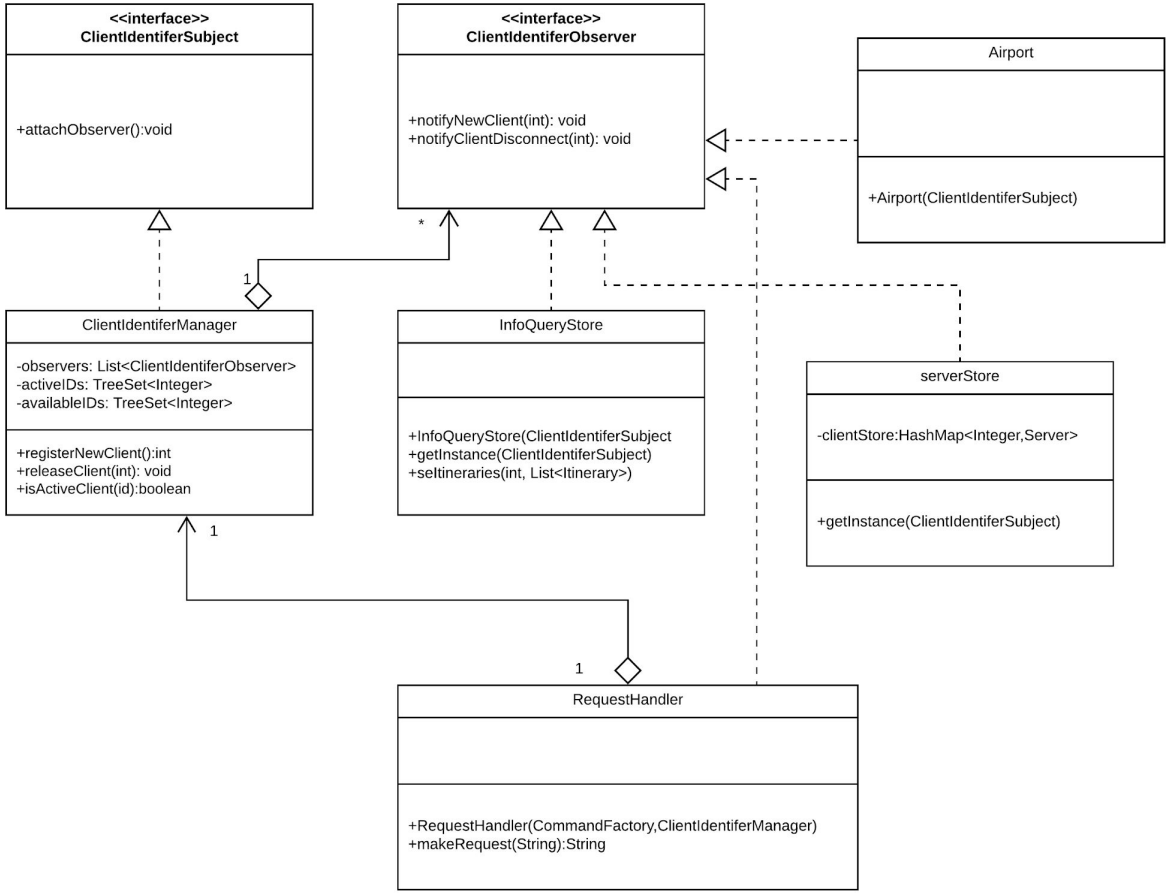
Domain Model



Client GUI


Airline Flight Reservation System
New Client
Welcome
Client 1
Submit
2,385,1,652,Boston,7:00AM,Seattle-Tacoma,10:15AM
3,392,1,654,Boston,7:00AM,Seattle-Tacoma,10:15AM
4,422,1,664,Boston,7:10AM,Seattle-Tacoma,10:29AM
5,451,1,669,Boston,9:00AM,Seattle-Tacoma,12:15PM
6,482,1,674,Boston,9:00AM,Seattle-Tacoma,12:15PM
7,467,1,670,Boston,4:34PM,Seattle-Tacoma,7:50PM
8,489,1,675,Boston,6:50PM,Seattle-Tacoma,10:10PM
9,527,1,679,Boston,6:50PM,Seattle-Tacoma,10:10PM
1,reserve,successful
1,retrieve,1
451,1,669,Boston,9:00AM,Seattle-Tacoma,12:15PM
1,changed server to faa
1,Seattle-Tacoma,Mostly Cloudy and Breezy,46.0 F (7.8 C),0

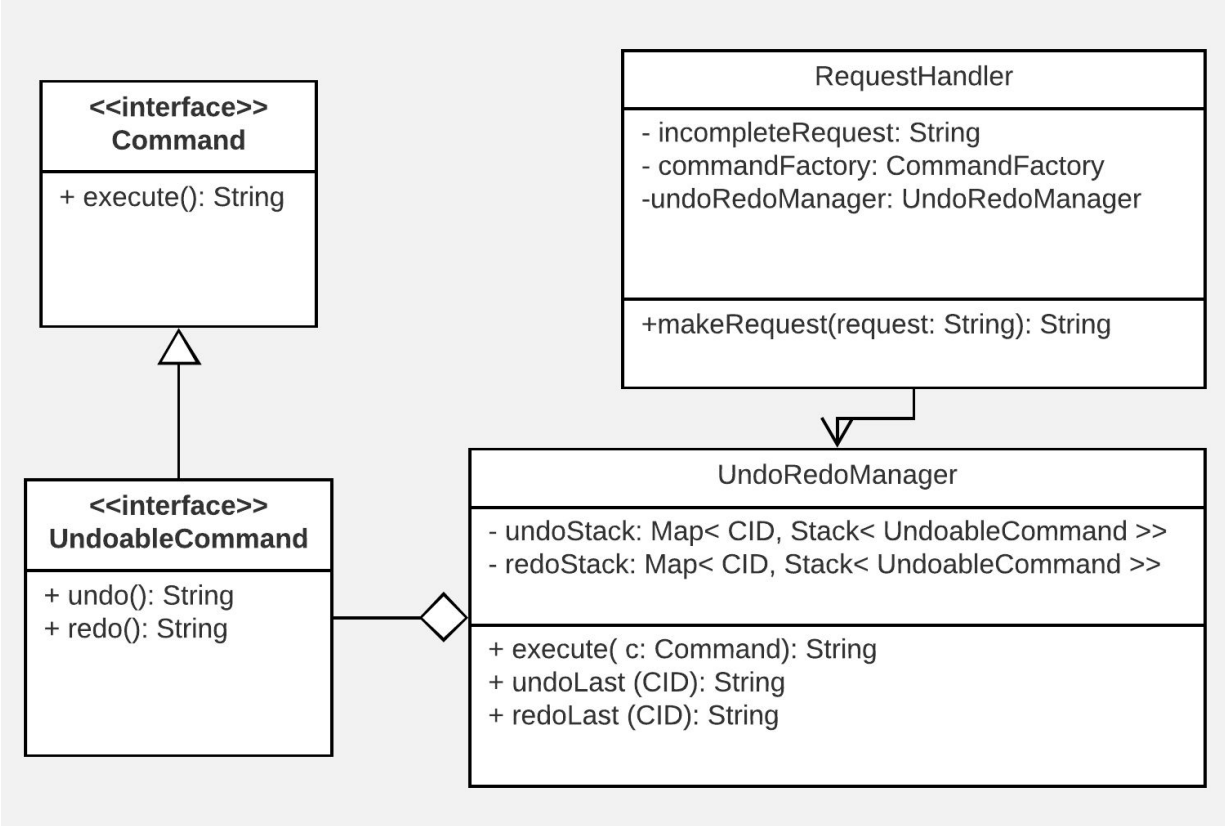
Multi clients



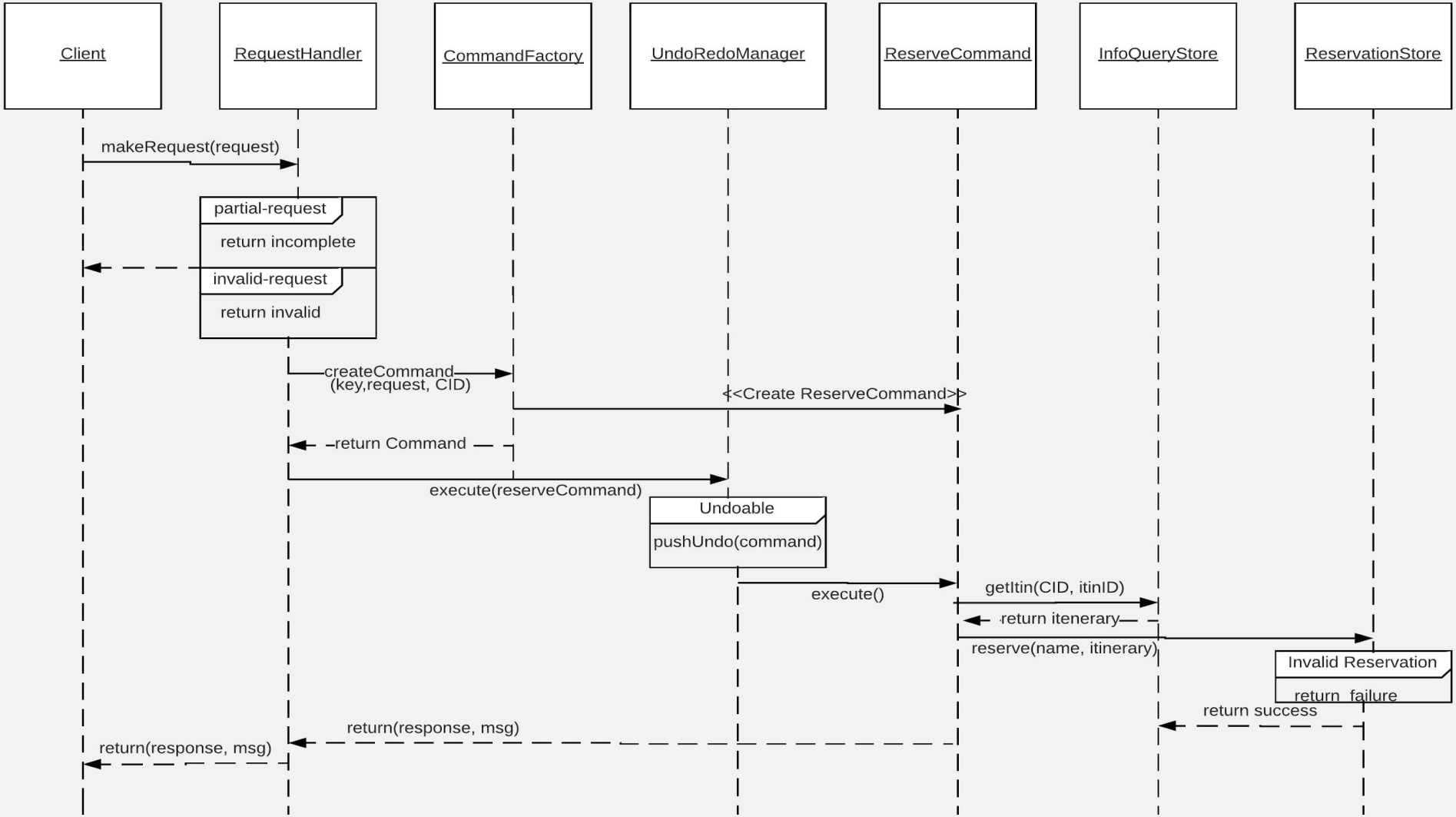
Undo / Redo

- ➔ The Undo / Redo functionality is responsible for storing state changing commands in order to undo a command, or redo a previously undid command. A command is state changing if it changes any of the data Stores (ie: Reserve, Delete).

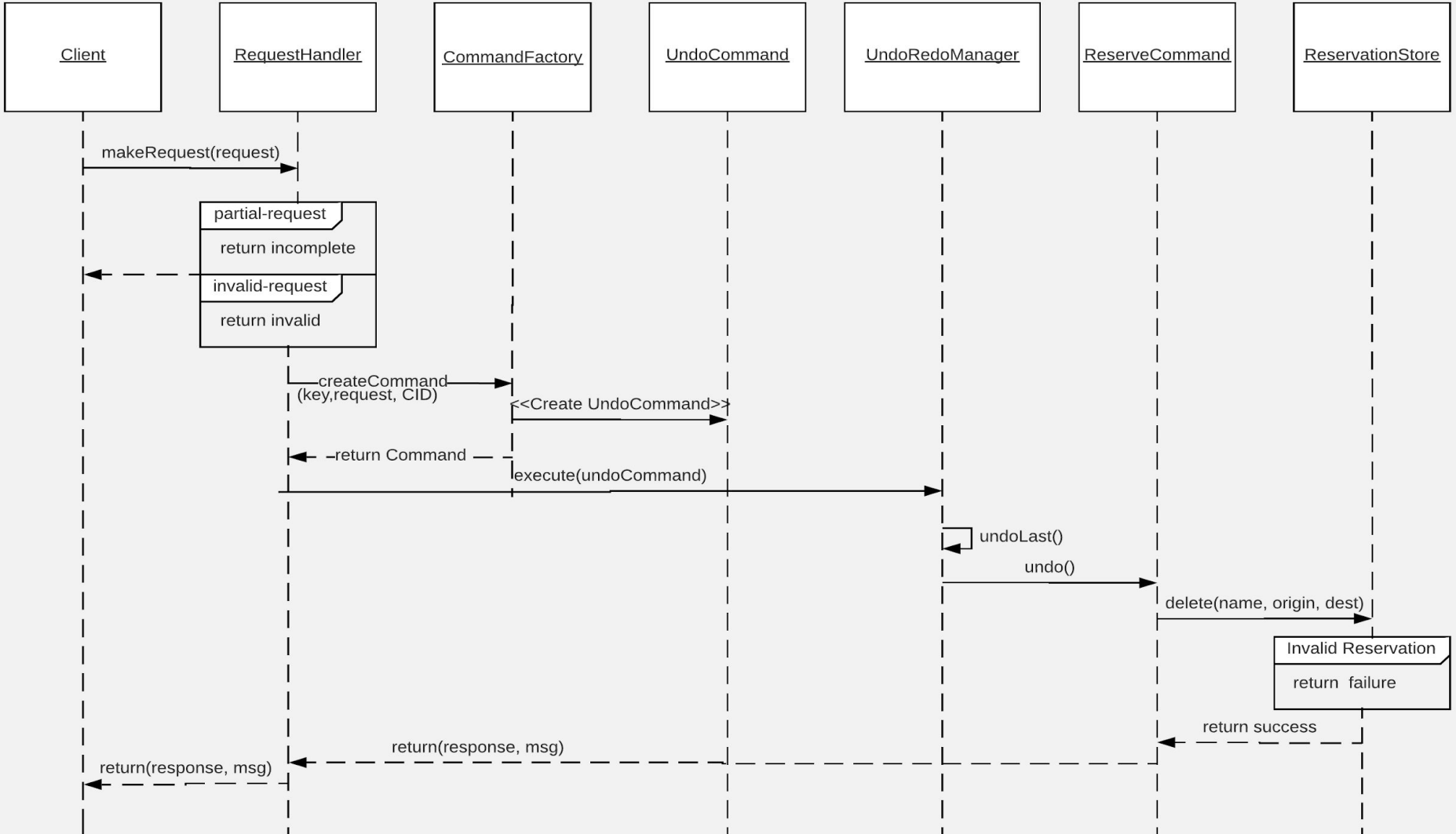
Undo/Redo UML



Adding a Reservation


Client
RequestHandler
CommandFactory
UndoRedoManager
ReserveCommand
InfoQueryStore
ReservationStore
makeRequest(request)
partial-request
return incomplete
invalid-request
return invalid
createCommand
(key,request, CID)
<<Create ReserveCommand>>
return Command
execute(reserveCommand)
Undoable
pushUndo(command)
execute()
getItin(CID, itinID)
return itenerary
reserve(name, itinerary)
Invalid Reservation
return failure
return success
return(response, msg)
return(response, msg)

Undoing a Reservation

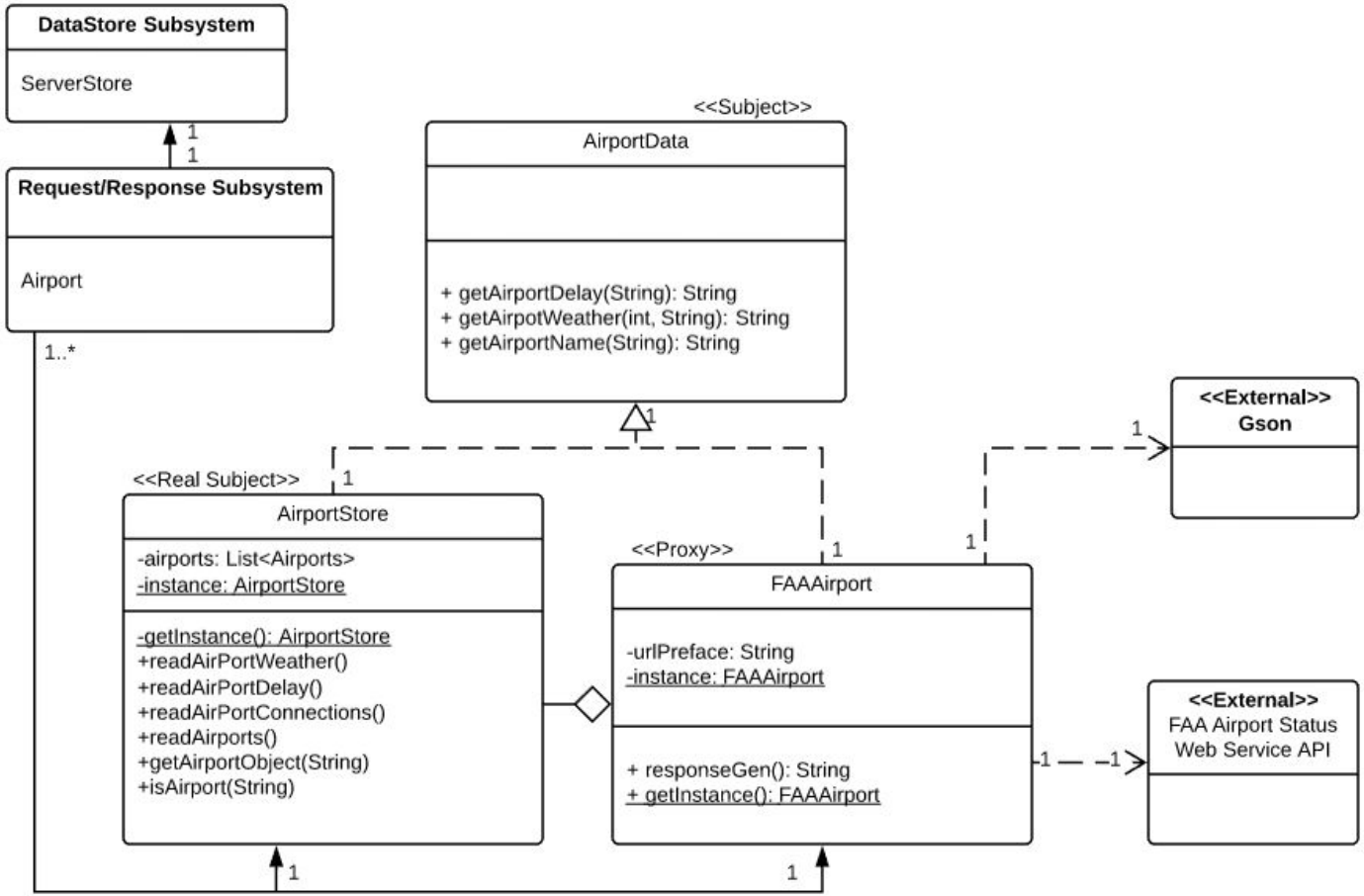

Client
RequestHandler
CommandFactory
UndoCommand
UndoRedoManager
ReserveCommand
ReservationStore
makeRequest(request)
partial-request
return incomplete
invalid-request
return invalid
createCommand
(key,request, CID)
<<Create UndoCommand>>
return Command
execute(undoCommand)
undoLast()
undo()
delete(name, origin, dest)
Invalid Reservation
return failure
return success
return(response, msg)
return(response, msg)

FAA Web Service

- ➔ Supports switching between local and FAA data services.

- ➔ Uses Proxy Pattern for FAA Airport lookups when getting airport names.

FAA Web Service UML (Proxy Pattern)



Implementation Status

- All of the features laid out in the requirements documents are finished
- Testing on edge cases not fully complete

Questions / Comments?