CS 351L - *Design of Large Programs*

Project 5 Design

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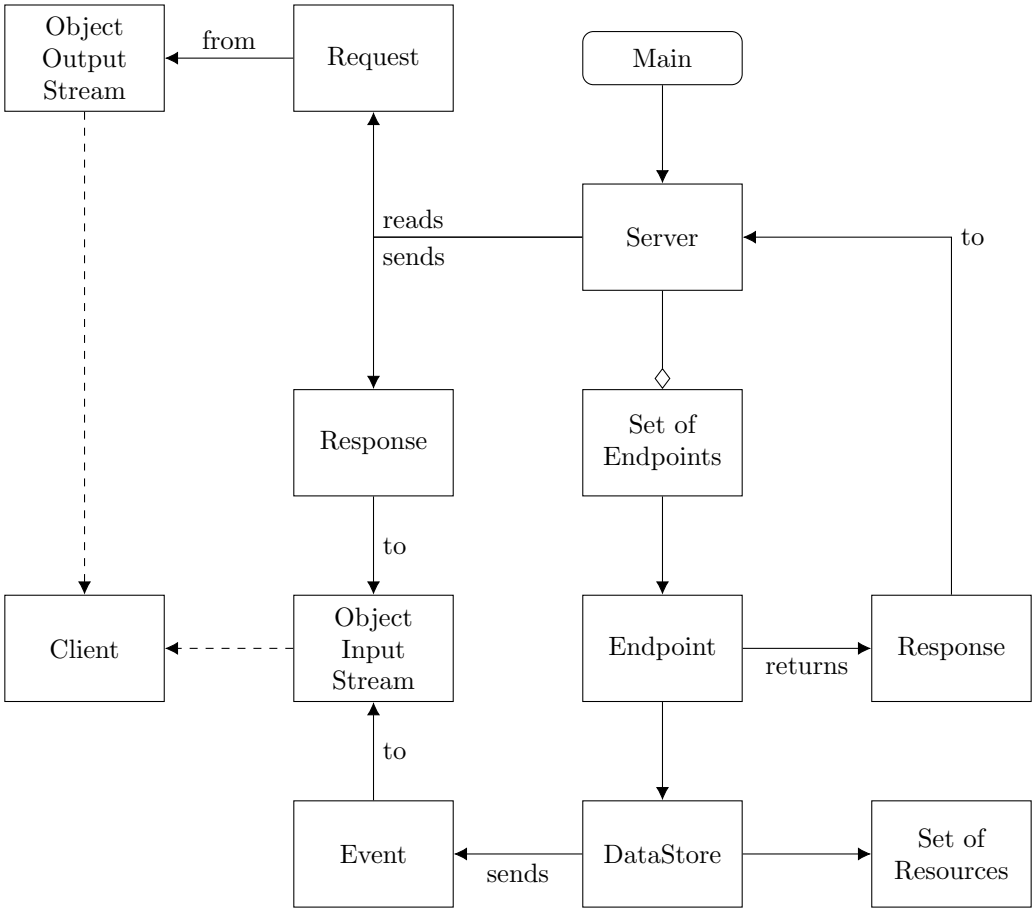
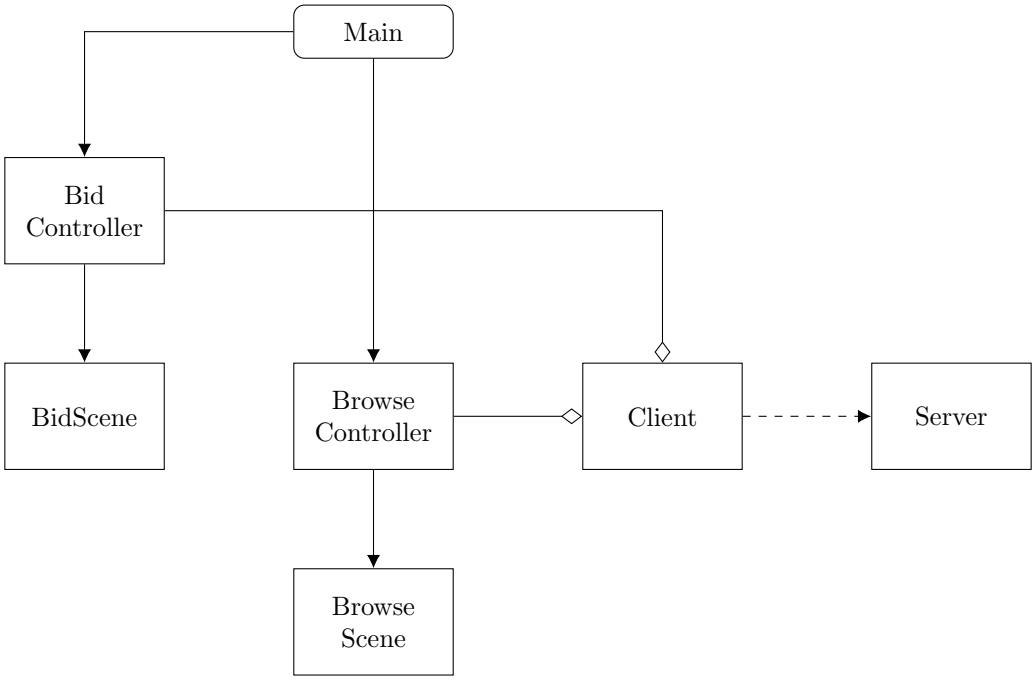
1 Object Diagram

NOTE: dashed line implies cross-network communication

1.1 General Diagram for Server



1.2 Diagram for Agent



1.3 Clarification

- BrowseScene is for observing the list of items, and BidScene is for bidding on an item
- Each Endpoint has a "URL" of sorts that is specified in the Request option, and the Server will route a request to the desired endpoint and return the Response
- A client can "listen" in on a specific resource in the DataStore, and they will be notified upon that resource being changed with an Event object

2 Endpoints

This section specifies each of the endpoints for the server API (for both the bank, the auction house, as well as one that will be shared by both [listen]). The parameters column contains the keys in the parameters hashmap in the Request object. The "Returns" column is the class that will returned as the data in the Response object.

2.1 Shared

Name	Description	URL	Parameters	Returns
Listen	Registers a client as a listener on a given resource	listen	url	null

2.2 Bank

Name	Description	URL	Parameters	Returns
Account Creation	Creates a new Account resource	accounts.create	name, funds	Account
Transfer	Transfers from one account (id1) to another (id2)	accounts.transfer	id1, id2, funds	null
Block	Blocks funds in an account	accounts.block	id, funds	null
Auction House Registration	Registers an auction house (storing IP and port)	auction.register	ip, port	AuctionHouse

2.3 Auction House

Name	Description	URL	Parameters	Returns
Item List	Returns the IDs of each of the items being auctioned	items.list	none	Set of Items
View Item	Returns the item with the specified id	items.get	id	Item
Bid	Makes a bid on a specified item	items.bid	id, funds	null