

ID2209 – Distributed Artificial Intelligence and Intelligent Agents

Assignment 2 – FIPA

Group 24

Name: Adithya and Shounak

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Species

Auctioneer Agent

Its responsible for starting the auction and informing the participants and calls for proposals

- The first one to accept the offered price will be announced as the winner.
- If everyone rejects, the auctioneer will reduce the price by a random value.
- Finally, if the price drops below the minimum price set by the auctioneer, the auction ends.

Participant Agent

This agent was responsible for participating in the auction when the auctioneer's agent started it.

- It will take the price offered by the auctioneer
- Acceptance depends if it is less than or equal to what the participant is willing to pay, else it will reject it.

Dutch Auction

```
Auctioneer0 Going for... 2297!!!
Found a winner! won for 2242
participant0: No Thanks!Not Interested
participant1: No Thanks!Not Interested
participant2: No Thanks!Too High
participant3: No Thanks!Too High
participant4: No Thanks!Too High
participant5: No Thanks!Too High
participant6: No Thanks!Too High
participant7: No Thanks!Not Interested
participant8: No Thanks!Too High
participant9: No Thanks!Too High
Auctioneer0 No one likes this price, let's drop it!
Auctioneer0 Going for... 2198!!!
participant0: No Thanks!Not Interested
participant1: No Thanks!Not Interested
participant2: No Thanks!Too High
participant3: No Thanks!Too High
participant4: No Thanks!Too High
participant5: No Thanks!Too High
participant6: No Thanks!Too High
participant7: No Thanks!Not Interested
participant8: No Thanks!Too High
participant9: No Thanks!Too High
Auctioneer0 No one likes this price, let's drop it!
Auctioneer0 Going for... 2130!!!
participant0: No Thanks!Not Interested
participant1: No Thanks!Not Interested
participant2: I accept!!!
participant3: No Thanks!Too High
participant4: No Thanks!Too High
participant5: No Thanks!Too High
participant7: No Thanks!Not Interested
participant8: No Thanks!Too High
participant9: No Thanks!Too High
Found a winner! won for 2130
```

Vickery

```
Auction Starting Everyone!!!2
Auctioneer0 Going for... 2974!!!
submit sealed bids
Auction Starting Everyone!!!2
Auctioneer1 Going for... 2726!!!
submit sealed bids
participant0: No Thanks!Too High
participant1Sealed bid
participant2Sealed bid
participant3Sealed bid
participant4: No Thanks!Too High
participant5Sealed bid
participant6: No Thanks!Not Interested
participant7: No Thanks!Too High
participant8: No Thanks!Not Interested
participant9: No Thanks!Too High
1747
1750
1800
Found a winner sealed auction! won for 1800
participant0: No Thanks!Too High
participant1Sealed bid
participant2Sealed bid
participant3Sealed bid
participant4: No Thanks!Too High
participant5Sealed bid
participant6: No Thanks!Not Interested
participant7: No Thanks!Too High
participant8: No Thanks!Not Interested
participant9: No Thanks!Too High
2205
2332
2465
Found a winner sealed auction! won for 2465
```

Sealed Bid

```
Auction Starting Everyone!!!2
Auctioneer0 Going for... 2974!!!
submit sealed bids
Auction Starting Everyone!!!2
Auctioneer1 Going for... 2726!!!
submit sealed bids
participant0: No Thanks!Too High
participant1Sealed bid
participant2Sealed bid
participant3Sealed bid
participant4: No Thanks!Too High
participant5Sealed bid
participant6: No Thanks!Not Interested
participant7: No Thanks!Too High
participant8: No Thanks!Not Interested
participant9: No Thanks!Too High
1747
1750
1800
Found a winner sealed auction! won for 1800
participant0: No Thanks!Too High
participant1Sealed bid
participant2Sealed bid
participant3Sealed bid
participant4: No Thanks!Too High
participant5Sealed bid
participant6: No Thanks!Not Interested
participant7: No Thanks!Too High
participant8: No Thanks!Not Interested
participant9: No Thanks!Too High
2205
2332
2465
Found a winner sealed auction! won for 2465
```

Type of Auction	Auction 1 SP	Auction 2 SP	Average Starting Price	Average Selling Price	Gain for Auctioneer	Loss for Participant
Dutch	2130	2242	1750	2070	232	872
Seal-bid	1800	2465			125	765
Vickery	2200	1562			378	262

Results :

Since all of them generate randomized values, we cannot determine the most preferred type of auction. For example in a sealed bid, the participant agent can generate a value from 1500 to 2500. It does not take into account the value and the demand of the product at stake.