



Assignment 2

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Add Merch to Festival



- New types of agents: auctioneers
- Auctioneers should pop up at least once per simulation.
- They should communicate only by FIPA protocol!
 - Please do not use `ask` or any other way!
- They sell some items to auction winners.
- You need to implement “Dutch” auction
 - Auctioneer starts the offer with much higher price than the expected market value.
 - If no one wants to buy for the set price, they reduce the price at selected interval.
 - The auctioneer decides how much he reduces the price in every round.
 - If the price is reduced below the auctioneer minimum threshold, the auction is cancelled.
- FIPA protocol specification of Dutch auction as well as other FIPA protocols can be found at <https://www.jncet.org/Manuscripts/Volume-5/Special%20Issue-2/Vol-5-special-issue-2-M-32.pdf>

Goals



- More experience with agents in GAMA
- Introduction to message passing and FIPA protocol
- Experience working with agent negotiation
- Simulating and practicing in an auction

Extra Effort and Challenges!



- This assignment has two challenges!

Challenge 1: Multiple Auctions in the Festival



- Allow having multiple auctions at the same time.
- Agents will only join the auction if they are interested in the genre (e.g., cloths, CDs, etc)

1 point is awarded for clear and complete demonstration of this

Challenge 2: Different Auction Settings



- In addition to the dutch auction, implement two or more types of auctions that agents can participate in.
 - E.g., English auction, Sealed bid auction, Vickrey auction, etc.
- Compare the gained value of all 3 methods for both auctioneer and the buyers, and report your findings which is more favorable.

1 point is awarded for clear and complete demonstration of this