
Project Part 6: Final Report & Code Completion

This Project Part asks you to complete the work on your semester project.

Create a **report** that documents the final state of your system. List these questions in your document with your answers.

1. Name: Auction collecting game
2. Project description: A collecting game that uses auction system. Player uses auction to collect animals using in game money.
3. List the features that were implemented (table with ID and title).

Req. ID	Requirements	Description
1	Player can collect animal	Player earns an animal when player wins the auction that he/she joined.
2	Player can view animals in animal book	Animal book has list of animals. The animal book has short description of each animal.
3	Player can buy decorations for player's home.	There are decoration items that player can buy with in-game money to decorate his/her home.
4	Player can buy background for player's home.	There are background items that player can buy with in-game money to decorate his/her home.
5	Player can see Item/Animal that player owns	Player can see Item, background and animal that player owns in player's inventory.
6	Player can see current gold player owns	On the top left side of player home, player's current gold is displayed

4. List the features were not implemented (table with ID and title).

Req. ID	Requirements	Description
1	Player can save progress	When player click save button, game will make a savefile that saves current progress of game.
2	Player can place animals in player's	Player can place animals that he/she

	home in the game	currently has in certain places at his/her home.
3	Player can earn gold (in-game money) by leave the game open	Player earns in game money per second by leave game open on screen.
4	Player competes with A.I. players on auction	Auction is where player can collect animals. Auction need more than 1 person to start, there will be 2-4 A.I. players in auction who competes with human player.
5	Player can edit his/her game home.	Player can decorate certain part of his/her home with items from shop.
6	Animal played in player's home gives player bonus.	Animals have different bonuses for when they are placed at player's home. Most common bonus is bonus gold per second or minute.
7	Player can sell Animal for gold.	This is another way to collect gold which is sell animals you won from auction. This will remove the animal from your pet list, but will not erase animal book.

5. Show your final class diagram.

What changed? Why? If it did not change much, then discuss how doing the design up front helped in the development.

A lot of things got changed, I removed Main_Screen and Player_Home classes because frontend deals with those without interacting with python classes. I also deleted AI_Player and Savedata classes because I didn't have time to implement those. As some classes got deleted, new classes are included in final class diagram. Since I don't have main class, I made BackgroundSet, Itemset, AuctionBase classes for making instances of Background, Item and Auction.

For each design pattern implemented,

- Show the classes from your class diagram that implement each design pattern.
- Show the class diagram for the design pattern.
- Explain how you implemented the design pattern, why you selected that design pattern.

I used one Factory design pattern which consists AuctionSlot, AuctionSlot1, AuctionSlot2, AuctionSlot3, AuctionFactory and Auction Base Classes. I decided to make Auction with Factory design pattern

because each auction goes in different slot in frontend and I needed to make separate session for each of the auction.

6. What have you learned about the process of analysis and design now that you have stepped through the process to create, design and implement a system?

I learned design pattern can help making functionality and make code nice and neat.