SENG201 Virtual Pets report

Students

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Packages & classes & Structure

Our Virtual pets game had 5 main packages: Game, Food, Pet, Player, GUI. Inheritance is used in the Food, Pet and Toy classes as each of these have subclasses. For example each subclass of Pet represents a different species of purchasable pet. All six species inherit the attributes and methods of the Pet class. Inheritance and package/class separation was essential in designing this game as the main class in both the command line and GUI both communicate with the player class in order to create new players and from there each player has its attributes such as their pet array and toy array filled in by creating new food and toy objects. A single player contained their own individual pet and toy array which themselves were filled with objects inheriting their parent classes attributes. With such a setup, a player had full control over his/her inventory and pets.

Unit tests

Unit test coverage was minimum. Player, Pet and Toy test classes were created to test basic things. For example in the Player, tests are done to check whether a players funds were deducted after purchasing a snack or toy and if the toy and snack arrays were added correctly to their respective array lists. Pet tested if the pet stats were corrected edited and tested if essential methods such as use toilet were working. Toy tests covered if the toys use value was decreasing as intended in relation to the pet using it. It passed all these basic tests however, there is a lot we were not able to cover simply due to lack of time and planning around the unit testing part of the assignment.

Feedback

The assignment was a good challenge to us both as it needed good communication and teamwork to accomplish. We both learned a lot about Java and object orientated programming as we made the game together. We both agreed that this has been the biggest project given to either of us. It required 2 weeks straight of meeting up in the labs to complete the game to a standard we are proud of.

We worked well together with organizing parts to work and communicated our design choices and ideas well. However we started a few weeks late, leaving less time to do it especially during the weeks before the end of term which made it very stressful. Next time we could improve on the time management of

such a large scale project by starting sooner and getting a daily routine started earlier during the development stage of the game. We both had a very good pace in the final two weeks of development; finishing the GUI implementation of the game in a week. In order to have ample time to complete all that was initially planned, we agreed we should have started work on the assignment during the holiday.

Overall it was a difficult and tedious project but very helpful in teaching us about Java and we found it very satisfying to be able to run and play that we created ourselves.

Contribution

Chuan 50 %

Key contributions:

- ForCommandLine: Main game setup to get all the code to run to together.
- Designed and created all pet, toy and food icons and wallpapers for the GUI.
- Created the PetOptionsGUI, PetStatsGUI and PetStoreGUI.
- Wrote all of the javadoc for player, pet, food, toy and GUI classes.
- Report writing, unittests, compiling all the files together for submission
- Finding most of the common bugs in loops and progress of the main game and general debugging.

Brooke 50 %

Key contributions:

- Most of the Inheritance classes
- Creating a lot of the GUI windows
- Getting most of the GUI to run properly
- General debugging and getting the game to run at a good level