

Web Development – Mr. Turner

Project – Virtual Pet

Project Overview

A virtual pet is a computer generated animal that will live over the course of a certain number of days. During the course of its life, its owner (the user) will have to take care of it, feeding it, playing with it, etc...

Display

The display is a control panel for managing and taking care of your pets. The main sections of the display are:

- A list of available pets.
 - The user will have the ability to create and own several pets at once.
 - Build a new pet.
 - Name it
 - Choose its type (boomer, clipper, drupper)
- The pet control panel.
 - Shows the stats of the pet (name, type, health, spirit, hunger, fatigue, cleanliness, age, weight)
 - Gives the player options for interacting with the pet.
 - Feed
 - Play and an input for how long
 - Put the pet to sleep
- The live image of the pet showing its state based on its stats.

Functionality

The page will open with no pets (the user will have to create one).

Each time a pet is created, it will be placed into a text file that has its name. The information that must be stored in the file is:

- Health starting at 100
- Spirit starting at 100
- Hunger starting at 10
- Fatigue starting at 10
- Age starting at 0
- Lifespan starting at the average lifespan for the type of animal.
- Any additional information you deem necessary.

Hunger, Fatigue, Spirit, and Health cannot go above 100. Hunger and Fatigue may never fall below 10.

The values of each of the stats will affect the other stats.

- If the pet's Hunger rises above 50, decrease the pet's health by 10% of its current value every hour.
- If the pet's Hunger rises above 50, increase its fatigue by 10% of its current value every hour.
- If the pet's health drops below 50, it will decrease by 10% of its current value every hour.
- If the pet's health drops below 50, increase its fatigue by 10% of its current value every hour.
- If the pet's fatigue rises above 50, its health will decrease by 10% of its current value every hour.
- If the pet's spirit drops below 50, its fatigue will increase by 10% of its current value each hour.
- If the pet's spirit drops below 50, its health will decrease by 10% of its current value each hour.
- For each day past the pet's lifespan, its maximum health will drop by 10.
- If Health falls below 10, the pet is dead.

There are 3 types of animals available.

- Boomer
 - Lifespan is 7 days.
 - Appetite is 6 hours.
 - Energy is 6.
- Clipper
 - Lifespan is 15 days.
 - Appetite is 2 hours.
 - Energy is 2.
- Drupper
 - Lifespan is 30 days.
 - Appetite is 4 hours.
 - Energy is 4.

How the user takes care of the pet will impact the pet in different ways. Each pet has different requirements.

- Appetite
 - The feeding schedule for your pet is tracked by its appetite.
 - Each hour, the pet's hunger will increase by 10% of its current value multiplied by its appetite.
 - Whenever the pet is fed, reduce its hunger back to 10 and increase its health by 5% of its current value (do not exceed 100).

- If you feed a pet whose hunger is less than 20, reduce its health by 5% of its current value.
- Energy
 - The play schedule for your pet is tracked by its energy.
 - A pet's fatigue will increase by 5% of its current value multiplied by its energy each hour.
 - The program will keep track of the number of hours since the pet has been played with.
 - For each hour past the pet's energy that it has not been played with, its spirit will decrease by 10% of its current value.
 - Each time the pet is played with before the time has elapsed, its fatigue will increase by 20% of its current value.
- Sleep
 - A pet cannot be put to sleep unless its fatigue is at least 40.
 - A pet needs to sleep for twice its energy.
 - When a pet is put to sleep, it cannot be awakened for that time.
 - When a pet wakes up, its fatigue will return to 10.
 - When a pet wakes up, its spirit will increase by 50% of its current value.
 - When a pet wakes up, its health will increase by 10% of its current value.

Enhancements

- Multiple pets
 - Allow the user to create multiple pets and keep track of them by switching back and forth between them.
- Allow the multiple pets to play with each other, having the effects of play on both animals.