

Playful Pet

Exercise

In this exercise you will make a simple "game". In this, so called game, we will create our pet (it can be a dog or a cat) and our pet can play, speak, eat, sleep and wake up. All these actions will be invoked on a click of a button. But, there are some things to take into account. The pet has an energy level and a hunger level. This is something like the famous tamagotchis or as we called them "chipichans". At first you may think that this is hard to make at the level that you are now, but I'm intentionally pushing you a little bit, because that's how we learn.

A LITTLE HELP: All you gotta do is make some classes, make HTML buttons and wire those buttons with the corresponding action.

NOTE: Don't waste too much time on the styles

NOTE: You may do it on a single page

TIP: Use classes

1. When I open the page, I must create my pet, it can be either a dog or a cat (****TIP**:** Buttons can be useful).
 - dog actions: `play`, `speak` (woof), `eat`, `sleep`, `wakeup`, dog properties: `hunger`, `energy`
 - cat actions: `play`, `speak` (meow), `eat`, `sleep`, `wakeup`, cat properties: `hunger`, `energy`
2. When the pet is created, the pets properties are initialized as following:
 - `hunger` is 0 units, $0 \leq \text{`hunger`} \leq 10$ (**can't go below 0 and above 10**)
 - `energy` is 10 units, $0 \leq \text{`energy`} \leq 10$ (**can't go below 0 and above 10**)
3. I can do any of the given actions, with the following constraints:
 - the pet can `play` if its `energy` is **2 OR ABOVE** and `hunger` is **8 OR BELOW**, if the pet is playing he **LOSES** 2 units of `energy` and **GAINS** 2 units of `hunger`
 - the pet can `eat` if the `hunger` is **1 OR ABOVE**, when he eats, he **GAINS** 1 unit of `energy` and **LOSES** 1 units of hunger
 - the pet can `speak` if the `hunger` is **9 OR BELOW**, if the pet is speaking he **GAINS** 1 unit of `hunger`
 - the pet can `sleep` if the `energy` is **7 OR BELOW** and `hunger` is **5 OR BELOW**, if the pet is sleeping he **GAINS** 5 units of `energy` and **GAINS** 2 units of `hunger`
 - if the pet is sleeping you must wake him up before he can do any other action
4. When I initialize an action, I should see some kind of response on the screen, for example:
 - `play` - We're playing
 - `speak` - Woof/Meow ****NOTE**:** This action must output this exact string (woof for the dog, and meow for the cat)
 - `eat` - Eating... This is some tasty food

- `sleep` - Dreaming...
 - `wakeup` - Ready for some action
5. I should always see the `hunger` and `energy` levels of my pet
 6. If some of the actions can't be done, because of the constraints defined in the 3rd point, I should get some response, for example:
 - I can't play right now, I'm hungry
 - I don't want to eat, I'm already full
 - Sleep? Now? But there are so many things that can be done
 - etc.