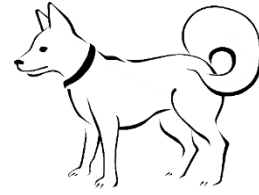


Programming Assignment: Dog class and its client code



Problem Statement:

In this assignment you will write a simple Dog class and write a main method that helps user interact with a Dog. Specifically,

1. Create a (simplistic) Dog class with the following requirements:
 - Attributes:
 - **name:** name of the dog
 - **color:** color of the dog
 - **isHungry:** attribute that tells if the dog is hungry
 - **weight:** attribute to hold the weight of the dog in KG
 - A constructor:
 - This takes two required arguments (name and color) and one optional argument (weight) with a default value of 10. Initializes isHungry to True.
 - Methods
 - **bark:** a method that takes no parameters and prints a string of the form “*name*: Woof Woof” where *name* is the name of the dog.
 - **eat:** a method that takes no parameters. This method sets the isHungry attribute to False and adds 100gms to the weight of the dog. It then prints a string of the form “*name*: Chomp Chomp”.
 - **walk:** a method that takes no parameters. This method will check if the dog is hungry,
 - if so then it just calls the bark() method
 - Else it decreases the weight of the dog by 100gms, sets the isHungry attribute to True and prints a string of the form “*name*: Step Step” where *name* is the name of the dog.
 - **printStatus:** a method that takes no parameters and prints a string of the form: “*name* is *color* in color, weighs *weight* kg and is hungry” when the isHungry is True or “*name* is *color* in color, weighs *weight* kg and is not hungry” when isHungry is False, using the name, color, weight and the isHungry attributes of the dog object. Example: “Willie is Brown in color, weighs 10.2 kg and is not hungry.”
2. Write a **main** method in the same file that
 - a. creates an object from the Dog class having name “Willie”, color Brown and weight of 15kg.
 - b. Prompts the user repeatedly for the action to perform, until user enters “Q” to quit. Prints “Invalid command” for any unrecognized command.
 - i. ‘S’ for status to call the printStatus method of the dog object.

- ii. “F” for feeding the dog to call the eat method of the dog object
- iii. “W” for walking the dog to call the walk method of the dog object.
- iv. ‘Q’ for exiting the program.

See the sample runs below. Submit the program in a file with a name of the form first_last_dog.py. Make sure to add a block-comment at the start of the file that lists assignment title, class name, date, your name, and assignment description. Follow naming conventions.

Sample Run:

```
*Python 3.6.3 Shell*
File Edit Shell Debug Options Window Help

===== RESTART: C:/code/Python/Playground-120/Assignments/dog.py =====
Willie welcomes you! Woof woof
-----
Enter the command
'S' to get Status enquiry,      'F' to feed the dog,
'W' to take it for a walk,      'Q' to exit:
S
Willie is Brown in color weighs 15 kgs and is hungry.
-----
Enter the command
'S' to get Status enquiry,      'F' to feed the dog,
'W' to take it for a walk,      'Q' to exit:
F
Willie : Chomp Chomp
-----
Enter the command
'S' to get Status enquiry,      'F' to feed the dog,
'W' to take it for a walk,      'Q' to exit:
S
Willie is Brown in color weighs 15.1 kgs and is not hungry.
-----
Enter the command
'S' to get Status enquiry,      'F' to feed the dog,
'W' to take it for a walk,      'Q' to exit:
W
Willie : Step Step
-----
Enter the command
'S' to get Status enquiry,      'F' to feed the dog,
'W' to take it for a walk,      'Q' to exit:
S
Willie is Brown in color weighs 15.0 kgs and is hungry.
-----
Enter the command
'S' to get Status enquiry,      'F' to feed the dog,
'W' to take it for a walk,      'Q' to exit:

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Python 3.6.3 Shell
File Edit Shell Debug Options Window Help

-----
Enter the command
'S' to get Status enquiry,          'F' to feed the dog,
'W' to take it for a walk,          'Q' to exit:
w
Willie : Step Step
-----
Enter the command
'S' to get Status enquiry,          'F' to feed the dog,
'W' to take it for a walk,          'Q' to exit:
s
Willie is Brown in color weighs 15.0 kgs and is hungry.
-----
Enter the command
'S' to get Status enquiry,          'F' to feed the dog,
'W' to take it for a walk,          'Q' to exit:
w
Willie : Woof Woof
-----
Enter the command
'S' to get Status enquiry,          'F' to feed the dog,
'W' to take it for a walk,          'Q' to exit:
f
Willie : Chomp Chomp
-----
Enter the command
'S' to get Status enquiry,          'F' to feed the dog,
'W' to take it for a walk,          'Q' to exit:
s
Willie is Brown in color weighs 15.1 kgs and is not hungry.
-----
Enter the command
'S' to get Status enquiry,          'F' to feed the dog,
'W' to take it for a walk,          'Q' to exit:
q
Good bye! Woof woof
>>> |
```