

CS118 Programming Assignment

Elsie the Cow

Farmer Greenjeans wants to make sure that Elsie (his cow) is fed properly. Unfortunately, he is very forgetful and sometimes gets confused when the other animals (goats, pigs, ducks) show up with Elsie – he can't remember whether he fed Elsie or not. On the other hand, he doesn't want to NOT feed the other animals; he just knows that Elsie requires more food. So he's asked you to write him a Python program to control his feed chute.

For the first simple version, the program will provide in the shell window a menu of animals – simply print the choices as shown then have the user choose one of the options from the menu. The menu must contain the four animals shown and use the letters shown to choose the animals. The program should function correctly for choices made as either UPPERCASE or lowercase. ONLY when an incorrect choice of animal is made print an error message and have the user re-select a choice until s/he chooses a valid option. Do not show the menu again, though.

When the user finally chooses a valid option, have the program perform the necessary action for that animal. For all valid animals except Elsie, the action for this simple version is to print a statement to the command window that the animal was fed – be sure to use the actual name of the animal as shown in the sample run.

For Elsie, the program will request an amount of food in kilograms and convert it to pounds, saving that converted value into a variable. Use that variable when you have the program report that Elsie was fed and how much.

After the menu has been processed, continue to show the menu again until the user chooses 'X' (uppercase only!) to exit the program.

```
D. Ducks
E. Elsie
G. Goats
P. Pigs
X. EXIT
Which animal to feed? z
Error! That is not one of my animals! Try again: d
OK, the ducks were fed.

D. Ducks
E. Elsie
G. Goats
P. Pigs
X. EXIT
Which animal to feed? |
```

```
D. Ducks
E. Elsie
G. Goats
P. Pigs
X. EXIT
Which animal to feed? e
How much food for Elsie (kg): 10
Elsie was fed 22.0 lbs

D. Ducks
E. Elsie
G. Goats
P. Pigs
X. EXIT
Which animal to feed? x
Error! That is not one of my animals! Try again: X
Your animals thank you!
>>> |
```

If you do not attempt the extra credit, submit your .PY file using Blackboard. Don't forget your affirmation!

Extra Credit (20%):

Make a copy of your program for the base portion of the exam. **Modify the copy** so that it not only follows the guidance above, but also reports the CURRENT date and time in the format shown here when feeding Elsie:

```
D. Ducks
E. Elsie
G. Goats
P. Pigs
X. EXIT
Which animal to feed? e
How much food for Elsie (kg): 10
Elsie was fed 22.0 lbs at 18:33 on Monday, October 14, 2013
```

If you are submitting the extra credit, create a ZIP file of both .PY files and submit the ZIP file via Blackboard.