

In this lab, we will learn to:

1. Use docstrings and inline comments to document Python programs
2. Initialize and use variables with descriptive names
3. Use integers and floating-point numbers to make arithmetic calculations
4. Request input from a user.

This lab takes place on the planet Pythoid where everything is exactly the same as Earth, except that all months have exactly 30 days. The Pythoidians have very short memories and need lots of *comments* to remind themselves of what is going on.

Part 1. Calculate age in dog years. Dogs live wild lives. As a result, 1 human year equals 7 dog years.

- a. Write some code that takes a human age and translates it into dog age.

Example. An age 2 human should be 14 in dogs age.

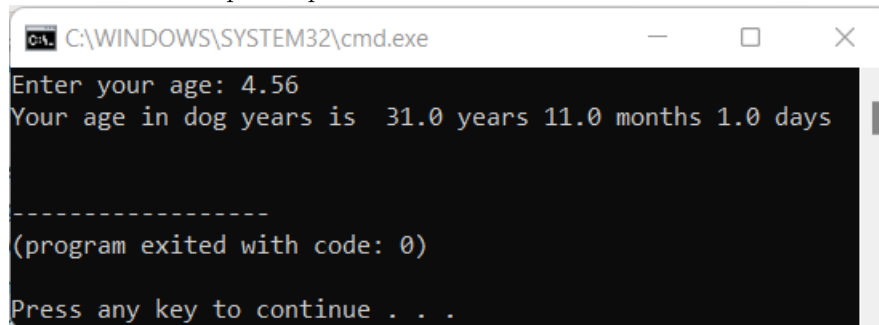
Example. An age 2.1 human should be 14.7 in dog age.

- b. Modify your code above to report age in years, months, and days instead of fractional years. (Don't use fractional days).

Example. An age 2 human should be 14 in dogs age.

Example. An age 2.1 human should be 14 years, 8 months, and 12 days in dog age.

Here is some example output.



```
C:\WINDOWS\SYSTEM32\cmd.exe
Enter your age: 4.56
Your age in dog years is 31.0 years 11.0 months 1.0 days

-----
(program exited with code: 0)
Press any key to continue . . .
```

Part 2. Calculate age in cat years. Cats have 9 lives. As a result, 1 cat year is equal to 9 human years.

1. Add some code that takes a human age and translates it into cat age. (Do not delete your dog age code).

Example. An age 18 human should be 2 in cat age.

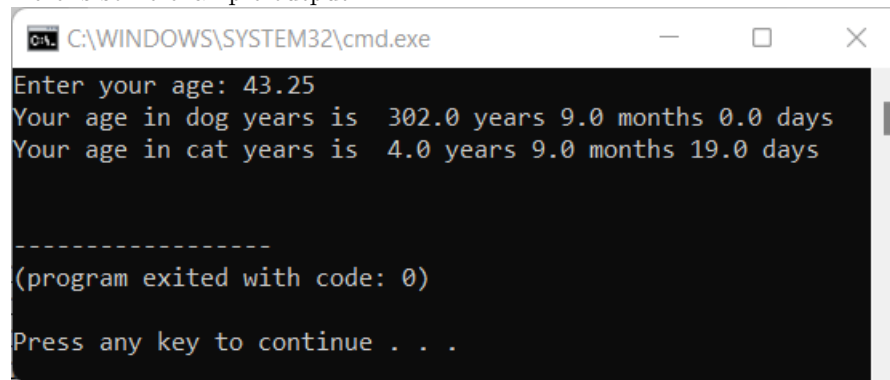
Example. An age 21.6 human should be 2.4 in cat age.

2. Modify your code above to report age in years, months, and days instead of fractional years. (Don't use fractional days).

Example. An age 18 human should be 2 in cat age.

Example. An age 21.6 human should be 2 years, 4 months, and 24 days in cat age.

Here is some example output.



```
C:\WINDOWS\SYSTEM32\cmd.exe
Enter your age: 43.25
Your age in dog years is  302.0 years 9.0 months 0.0 days
Your age in cat years is  4.0 years 9.0 months 19.0 days

-----
(program exited with code: 0)

Press any key to continue . . .
```

Part 3. Horse years are very strange. They can be calculated as follows

$$\text{Horse Age} = 3 \left(\frac{(\text{Human Age})^2 - 47}{7} + 12 \right)$$

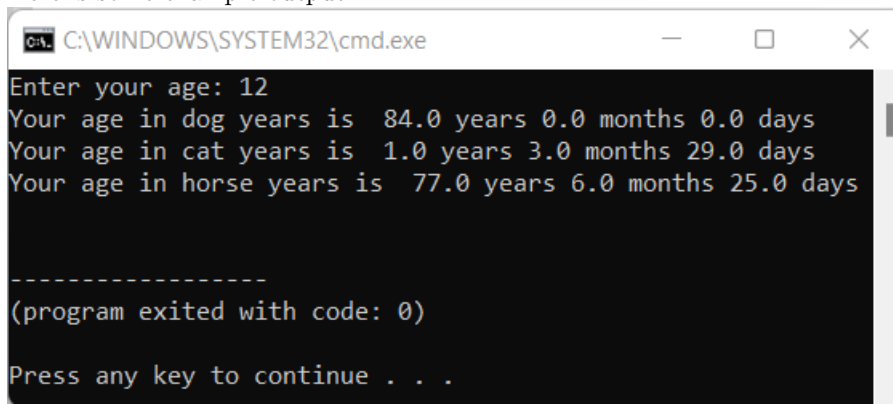
1. Add some code that takes a human age and translates it into horse age. (Do not delete your dog age or cat age code).

Example. An age 12 human should be about 77.5714 in horse age.

2. Modify your code above to report age in years, months, and days instead of fractional years. (Don't use fractional days).

Example. An age 12 human should be 77 years, 6 months, and 25 days in cat age.

Here is some example output.



```
C:\WINDOWS\SYSTEM32\cmd.exe
Enter your age: 12
Your age in dog years is 84.0 years 0.0 months 0.0 days
Your age in cat years is 1.0 years 3.0 months 29.0 days
Your age in horse years is 77.0 years 6.0 months 25.0 days

-----
(program exited with code: 0)
Press any key to continue . . .
```

This is your checkout criterion. Show me.
After I give you the thumbs up, upload it to D2L.