

Python 2 Entrance Challenge

1) Demonstrate understanding of data types, decision structures, looping, and functions.

Prompt the user for two words and for two numbers.

If the user makes a mistake (e.g. putting in a word where a number is expected), give them useful feedback and a chance to fix it.

Write a function that takes those inputs as parameters. Your function should loop through all of the numbers from 1 through 100. For each number, if it is divisible by the user's first number, you should print the user's first word; if it is divisible by the user's second number, you should print the user's second word; if it is divisible by both of the user's numbers, you should print both words; and if it is not divisible by either, you should print the number itself.

(Hint: If you are not familiar with the modulo operator, %, this is a good time to look into it.)

Here's what the screen looks like for run of the program. I cut off the output at 20, instead of 100, but the last three lines of a full run are 98, wild, and cats.

```
Please give me a word: wild
Please give me a word: cats
Please give me a number: 3
Please give me a number: 5
```

```
1
2
wild
4
cats
wild
7
8
wild
cats
11
wild
13
14
wildcats
16
17
wild
19
cats
```

2) Demonstrate understanding of file inputs/outputs, importing modules, and more complex data structures.

Using Python's CSV module, pull in data from gifts.csv, and create a dictionary where the keys are the names, and the values are the gifts they like; print the dictionary to the console, nicely (every name and gift on its own line, neatly formatted).

Also create a list of (name, fav_gift) tuples. Print the list to the console, nicely.

Expected output:

```
The dictionary:
=====
Alex: complete breakfast
Elliot: duck feather
Harvey: coffee
Sam: pizza
Sebastian: frozen tear
Abigail: pumpkin
Haley: sunflower
Leah: salad
(and so on, ending with Vincent: grape)
```

```
The list of tuples:
=====
Alex, complete breakfast
Elliot, duck feather
Harvey, coffee
Sam, pizza
Sebastian, frozen tear
Abigail, pumpkin
Haley, sunflower
Leah, salad
(and soon, ending with Vincent, grape)
```