Python Brain Teasers

EXERCISE YOUR MIND

```
1 class Player:
2     # Number of players in the Game
3     count = 0
4
5     def __init__(self, name):
6         self.name = name
7         self.count += 1
8
9
10 p1 = Player('Parzival')
11 print(Player.count)
```

What will this code print?

30 mind bending teasers & solutions

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A Slice of π

pi.py

```
1 π = 22 / 7
2 print(π)
```

Try to guess what the output is before moving to the next page.

This code will print: `3.142857142857143`

There are two surprising things here: one is that `π` is a valid identifier and the second is that `22 / 7` computes to a `float`.

Let's start with `π`.[1]. Python 3 changed the default encoding for source files to UTF-8 and allows Unicode identifies.

This can be fun to write, but in practice it'll make your coworkers' life harder. I can easily type `π` using the editor I'm using - Vim, however most editors and IDE's will require more effort.

One place I've found out that Unicode identifies are helpful is when translating mathematical formulas to code. Apart from that, stick to plain old ASCII.

Now for `22 / 7`. Python 3 does the right mathematical division. If you'll try this code in Python 2 you'll get `3` since Python 2 shows more of it's C origins. If you want integer division to return an `int` in Python 3, use the `//` operator (e.g. `22 // 7`). This is handy when calculating indices, which must be whole numbers.

Further Reading

- Identifiers and keywords in the Python reference
- PEP 3120 - Using UTF-8 as the default source encoding
- PEP 263 - Defining Python Source Code Encodings

[1] The Greek letter Pi.