AL NAFI,
A company with a focus on education, wellbeing and renewable energy.

Python Alpha 500 easy version

Python Comprehensions

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Supplication at the start of the prayer after takbeer

اللّهُمَّ رَبَّ جِبْرائيل ، وَميكائيل ، وَإِسْرافيل، فاطِرَ السَّمواتِ وَالأَرْض ، عالِمَ الغَيْبِ وَالشَّهادَةِ أَنْتَ تَحْكمُ بَيْنَ عِبادِكَ فيما كانوا فيهِ يَخْتَلِفون. اهدِني لِما اخْتُلِفَ فيهِ مِنَ الْحَقِّ بِإِذْنِك ، إِنَّكَ تَهْدي مَنْ تَشاءُ إِلى صِراطٍ مُسْتَقيم

O Allah, Lord of Jibra-eel, Meeka-eel and Israfeel (great angles), Creator of the heavens and the Earth, Knower of the seen and the unseen. You are the arbitrator between Your servants in that which they have disputed. Guide me to the truth by Your leave, in that which they have differed, for verily You guide whom You will to a straight path. Reference: Muslim 1/534

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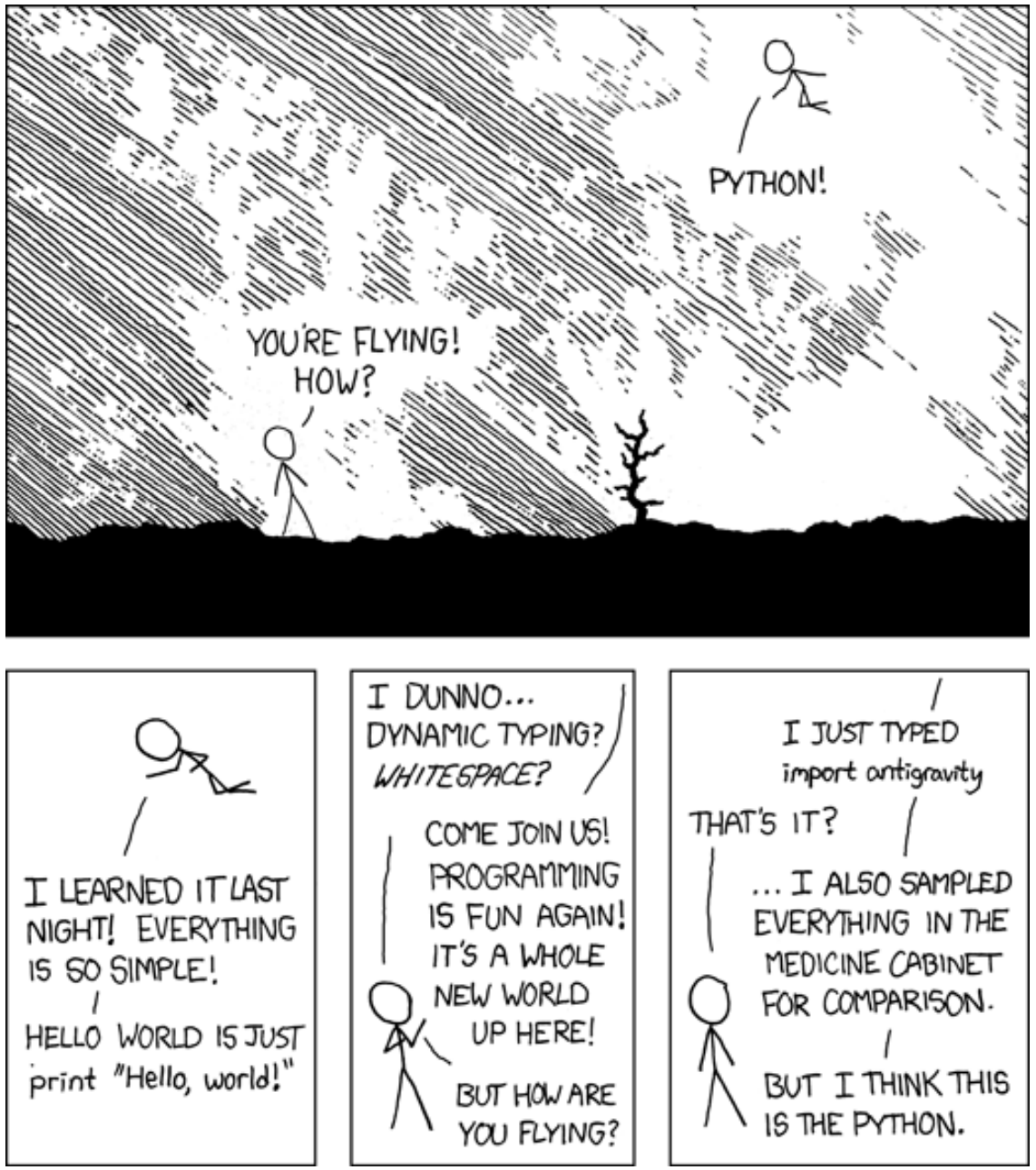

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Comprehensions

The Python language has a couple of methods for creating lists and dictionaries that are known as comprehensions. There is also a third type of comprehension for creating a Python known as comprehension.

You will find that the comprehension constructs build on the knowledge you have acquired from the previous classes as they contain loops and conditionals themselves.

Python's list comprehension is an example of the language's support for *functional programming concepts*. There's plenty of debate about the **best way** to develop program code: either procedurally, using functional programming techniques, or using object orientation.

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List comprehensions

List comprehensions in Python are very handy. They can also be a little hard to understand when and why you would use them.

List comprehensions tend to be harder to read than just using a simple for loop as well.

You may want to review the looping class before you continue. If you are ready, then we'll spend some time looking at how to construct list comprehensions and learn how they can be used.

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Another way to look at Comprehensions

List comprehensions are a unique way of quickly creating a list with Python.

If you find yourself using a look along with .append() to create a list, list comprehensions are a good alternative!

Lets do some examples.

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List comprehensions examples!

Good old python list

```
string = 'pakistan'
mylist = []
for letter in mystring:
    mylist.append(letter)
mylist
```

List Comprehension

```
string = 'pakistan'
mylist = [letter for letter in mystring]
mylist
```

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Another list comprehension example!

```
mylist=[x for x in 'word']
mylist

mylist=[sharfoo for sharfoo in 'word']
mylist
```

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More examples!

```
mylist = [x for x in range(0,11)]
mylist
```

Or

```
mylist = [num for num in range(0,11)]
mylist
```

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جزاك اللهُ

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