Challenge 1

Programming Challenges

In python, the `random` module generates pseudo random numbers. For instance, `random.randrange(2)` produces (pseudo) random bits. To use this module, it is necessary to `import random`.

Using a loop, store n random bits in a `list` object.

```
N = 100.0
sequence = []
for i in range(0, N):
    sequence.append(random.randrange(2))
```

Then, look at the empirical distribution of the ratios of zeros and ones.

```
percent = []
percent.append(sequence.count(0) / N)
percent.append(sequence.count(1) / N)
print percent
```

Explore how the empirical distribution changes as `N` increases 10.0, 100.0, 1000.0, 10000.0.