

## Homework 3

Programming for Scientists

Due on: Feb 10

### §1 QUESTIONS

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**Question I:** Write a piece of code that writes the string "Hello World" to a file called "hello".

**Question II:** What happens if you use your code above when a file called *hello* already exists?

**Question III:** What's wrong with the following piece of code? How would you fix it?

```
try:
    f(0)
except Exception:
    print 'Some error'
except IOError:
    print 'I/O Error'
```

Hint: IOError is (indirectly) derived from Exception.

**Question IV:** What does the following code do?

```
from random import choice
print choice(range(30))
```

For this assignment, you might need to read the Python documentation.

### §2 PROGRAMMING ASSIGNMENT

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Learn about the built-in function `filter` and write two implementations of this function: one as a regular function and another as a generator (the generator is always a generator, independently of the type of the arguments).