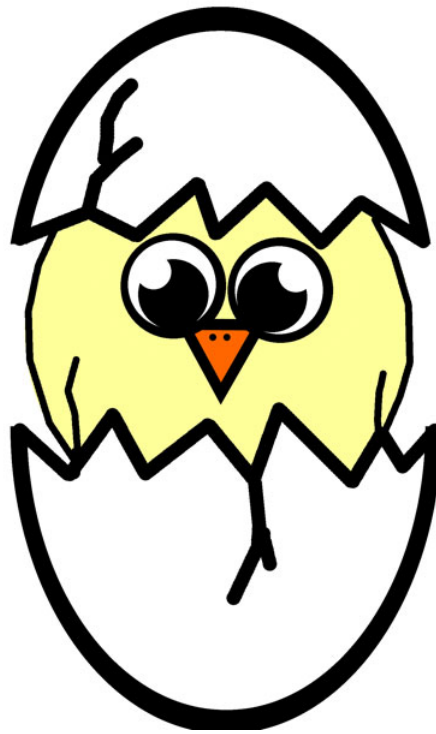


# H a t c h - A Python Preprocessor

**Addison Boyer**

*Natural Language Processing*  
*Spring 2020*



# 1 Getting Started

All Hatch statements begin with a special Hatch comment identifier (`#!`). If the Hatch comment identifier is not present, the line will be treated as interpretable Python code. All lines beginning with `#!` will “hatch” into interpretable Python code, given the correct Hatch syntax.

## 2 Keywords

1. **class** - Used to define a Python class in Hatch.
2. **get** - Used to define an attributes getter/getters in Hatch.
3. **set** - Used to define an attributes setter/setters in Hatch.
4. **str** - Used to define a classes `toString()` method in Hatch.
5. **hatch()** - Used to exit a Hatch interactive shell.

## 3 The Hatch Egg

The Hatch egg is where parameter and attribute names are passed. An egg consists of a comma delimited list of variable names surrounded by parenthesis. An empty hatch egg will result in the following error: *Empty egg to be hatched, aborting..*

## 4 Syntax

### 1. Class Declarations

```
#! class Person = (name, age, ...)
```

### 2. Getter Declarations

```
#! get = (name, age, ...)
```

### 3. Setter Declarations

```
#! set = (name, age, ...)
```

#### 4. toString() Declarations

```
#! str = (name, age, ...)
```

#### 5. Variable Declarations

```
#! name = 'Addison'
```

```
#! age = 20
```

```
#! age = 20.0
```

## 5 Hello Hatch

---

```
# HelloHatch.Hatch
import sys

#! class HelloHatch = (hello, hatch)
#! get = (hello, hatch)
#! set = (hello, hatch)
#! str = (hello, hatch)

def main(argv):

    hello_hatch = HelloHatch("Hello", "Hatch!")
    print(hello_hatch)

if(__name__ == "__main__"):
    main(sys.argv[1:])
```

---

**make -B**

**./interpreter.out HelloHatch.Hatch > HelloHatch.py**

---

```
# HelloHatch.py
import sys

class HelloHatch(object):
    def __init__(self,hello,hatch):
        self.hello = hello
        self.hatch = hatch

    def get_hello(self):
        return self.hello
    def get_hatch(self):
        return self.hatch

    def set_hello(self,hello):
        self.hello = hello
    def set_hatch(self,hatch):
        self.hatch = hatch

    def __str__(self):
        return str(self.hello) + ' ' + str(self.hatch)

def main(argv):

    hello_hatch = HelloHatch("Hello", "Hatch!")
    print(hello_hatch)

if(__name__ == "__main__"):
    main(sys.argv[1:])
```

---

**python3 HelloHatch.py**

Hello Hatch!