PYTHON LOGGING

A MEDITATION ON SILENT FAILURES

WHO IS THIS TALK FOR?

WHY LOGGING?

ERRORS VS. FAILURES

SHOULDN'T I JUST TEST MY CODE?

DEPENDENCY CHANGES:

A HORROR STORY

WHAT IS LOGGING?

ANATOMY OF A PYTHON LOGGER

THREE KEY LOGGER FUNCTIONS

- LEVEL
- HANDLER
- FORMATTER

LOGGING LEVELS

- NOTSET
- DEBUG
- INFO
- WARNING
- ERROR
- CRITICAL

WHERE SHOULD MY LOGS GO?

HANDLER

```
import logging

logger = logging.getLogger(__name__)
logger.setLevel(logging.INFO)

handler = logging.FileHandler("info.log")
handler.setLevel(logging.INFO)

logger.addHandler(handler)

logger.info("Helpful logging message, id: {}".format(1))
logger.error("{} error encountered on line {}".format(KeyError, 10))
```

OUTPUT:

```
Helpful logging message, id: 1
<type 'exceptions.KeyError'> error encountered on line 10
```

WHAT SHOULD I LOG?

BASIC FORMATING

```
import logging

...

formatter = logging.Formatter('%(asctime)s - %(name)s - %(levelname)s - %(message)s')
handler.setFormatter(formatter)

logger.setHandler(handler)

logger.info("Helpful log message, id: {}".format(1))
logger.error("{} error encountered on line {}".format(KeyError, 10))
```

OUTPUT:

```
2016-07-29 16:39:59,313 - __main__ - INFO - Helpful logging message, id: 1'
2016-07-29 17:05:45,290 - __main__ - ERROR - <type 'exceptions.KeyError'> error encountered on line 10
```

ADVANCED FORMATTING

- EXTERNAL LIBRARIES
- SUBCLASSING `logging.Formatter`

HOW MUCH IS TOO MUCH?

RotatingFileHandler

```
import logging

handler = logging.RotatingFileHandler(path, maxBytes=20,
                                      backupCount=5)
```

LIMITS THE MAXIMUM SIZE OF A LOGFILE

OPTIONAL BACKUPS APPENDED WITH `*1.log`, `*2.log` ETC

THIS FILE ROTATES AS IT APPROACHES 20 BYTES AND KEEPS 5 BACKUPS

TimedRotatingFileHandler

```
handler = logging.TimedRotatingFileHandler(path,
                                       when="d",
                                       interval=2,
                                       backupCount=5)
```

LIMITS THE AMOUNT OF **TIME** A LOG WILL STICK AROUND

AVAILABLE INTERVALS -> SECS, MINS, HOURS, DAYS, OR WEEKDAYS (0-6)

THIS FILE ROTATES EVERY 2 DAYS WITH 5 BACKUP LOG FILES

I HAVE LOGS!

NOW WHAT?

THANK YOU

SLIDES AND PRESENTER NOTES AVAILABLE ON GITHUB

@JLUNREIN | JESSUNREIN.COM