PL/Python goodies

Jan Urbański
`wulczer@wulczer.org`

ducksboard.com

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Recoverable database errors

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BEFORE

credit: gadgetdan

Recoverable database errors

BEFORE

credit: gadgetdan

AFTER

credit: VinothChandar

Recoverable database errors

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- use normal try/catch/finally blocks to manage database errors
- inspect caught errors to get SQLSTATE

Recoverable database errors

```python
from plpy import spiexceptions

while True:
    res = plpy.execute("update db set b = %s where a = %d" %
                       (plpy.quote_nullable(data), key))
    if res.nrows():
        break

    try:
        plpy.execute("insert into db(a, b) values (%d, %s)" %
                     (key, plpy.quote_nullable(data)))
        break
    except spiexceptions.UniqueViolation:
        pass
```
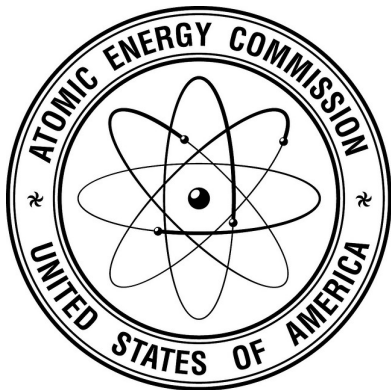
Explicit subtransactions

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credit: Idaho National Laboratory

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```
with plpy.subtransaction():
    plpy.execute("insert into this values ('that')")
    plpy.execute("insert into this values ('other')")
    plpy.execute("insert into this values ('another')")
```

Tracebacks

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BEFORE

credit: Peter Ward

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AFTER

Bug
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- only lines from the PL/Python function, but line numbers from all modules

Functions returning tables

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credit: Silk Road Collections

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- in 9.1 you can have multiple

Hstore to dictionary converter

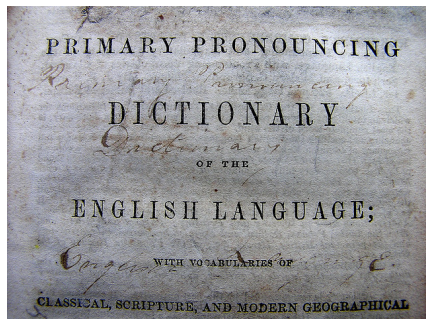# Hstore to dictionary converter

BEFORE

credit: HB Art

Hstore to dictionary converter

BEFORE

AFTER

credit: HB Art

credit: Muffet

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- https://github.com/wulczer/pyhstore