New Python 3.13 REPL

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Me

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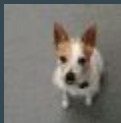
New interpreter origins

What is a REPL?

- Read
- Eval
- Print
- Loop

Why new REPL?

- Better highlighting with colors
- Better copy/paste support
- Multi-line editing

People

PyPy interpreter

- Michael Hudson-Doyle

- Armin Rigo

Contributions

- Pablo Galindo Salgado

- Łukasz Langa

- Lysandros Nikolaou

Windows

- Dino Viehland

- Anthony Shaw

Requirements

- Unix-like: `curses` and `readline`
- Windows
- Not iOS or WebAssembly platforms

✨Features✨

Function changes

- `help()` is now `help`

- `quit()` is now `quit`

- `exit()` is now `exit`

Colors

Colors: old version

```
>>> from collections import Counter
>>> Counter('foo')
Counter({'o': 2, 'f': 1})
>>> Counter(['foo')
  File "<stdin>", line 1
    Counter(['foo')
                  ^
SyntaxError: closing parenthesis ')' does not match opening parenthesis '['
>>> 1/0
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
ZeroDivisionError: division by zero
```

Colors: new version 🚀

```
>>> from collections import Counter
>>> Counter('foo')
Counter({'o': 2, 'f': 1})
>>> Counter(['foo')
  File "<unknown>", line 1
    Counter(['foo')
                  ^
SyntaxError: closing parenthesis ')' does not match opening parenthesis '['
>>> 1/0
Traceback (most recent call last):
  File "<python-input-9>", line 1, in <module>
    1/0
    ~^~
ZeroDivisionError: division by zero
```

Colors: Env Vars

- TERM=dumb to disable entirely

- FORCE_COLOR overrides TERM*

- NO_COLOR overrides FORCE_COLOR

- PYTHON_COLORS will set *only python* colors

TERM > FORCE_COLOR > NO_COLOR > PYTHON_COLORS

* Not in my testing

Copy/paste

🌈 Demo Time 🚀

Bonus: Env Vars

- `PYTHON_BASIC_REPL=1` to disable new REPL

- To control REPL for `breakpoint()`

`PYTHONBREAKPOINT=ipdb.set_trace`

- `PYTHONMALLOCSTATS` to see memory allocation/cleanup

Fun things: pydoc http server

```
python -m pydoc -p 1234
```

Summary

Available in Python 3.13

- Colors! 🎨
- Copy/paste improvements ✂️
- New Env Vars
- Multiline editing/history

Talk notes on github

My website