
README DOC

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Solution Requirements

- Python 2.7 +
- Pytest
- Pytest-cov

Solutions

I. Date calculation function (*source file: **src/datecalculation.py***)

The date calculation function returns the next draw date if provided with a date or takes the current date as input. The response will be a python datetime object.

Usage:

```
from src.datecalculation import next_draw_date
_date = datetime.datetime(2018, 8, 22, 11, 0)
d = next_draw_date(_date)
```

Test cases defined in **tests/test_datecalculation.py**

NB: There is an alternative implementation of date calculation function. It's in file **src/datecalculation2.py**. Tests for this implementation is handled in the same test file.

II. Least recently used cache (*source file: **src/lrucache.py***)

The LRU cache decorator caches the result of the decorating function. It accepts a max-size argument specifying the size of the cache (default is 100).

Usage:

```
from src.lrucache import lru_cache

@lru_cache
def _sum(a, b):
    return a+b

# OR
@lru_cache(maxsize=20)
def _sum(a, b):
    return a+b
```

Test cases defined in **tests/test_lrucache.py**

Demo Script: **lru_demo.py** (run `python lru_demo.py`)

III. Anagram (source file: **src/anagram.py**)

The anagram function returns all the anagrams of the word in the provided list. This function has 2 arguments, word and list of words respectively.

Usage:

```
from src.anagram import find_anagrams

word_list = ['oof', 'ofo', 'foo', 'fofo', 'foobar']
anagrams = find_anagrams('foo', word_list)
```

Test cases defined in **tests/test_anagram.py**

Testing

Dependencies:

- **Pytest**
- **Pytest-cov** <https://pytest-cov.readthedocs.io/en/latest/readme.html#installation>

To install dependencies, Run

```
pip install -r requirements.txt
```

Command For Testing:

```
pytest --cov=src/ tests/ (alias make test)
```

The output shows you test coverage report.

```
----- coverage: platform darwin, python 2.7.10-final-0
Name                               Stmts  Miss  Cover
-----
src/__init__.py                     0      0   100%
src/anagram.py                      4      0   100%
src/datecalculation.py             12      0   100%
src/datecalculation2.py            18      0   100%
src/lrucache.py                     40      0   100%
-----
TOTAL                               74      0   100%
```