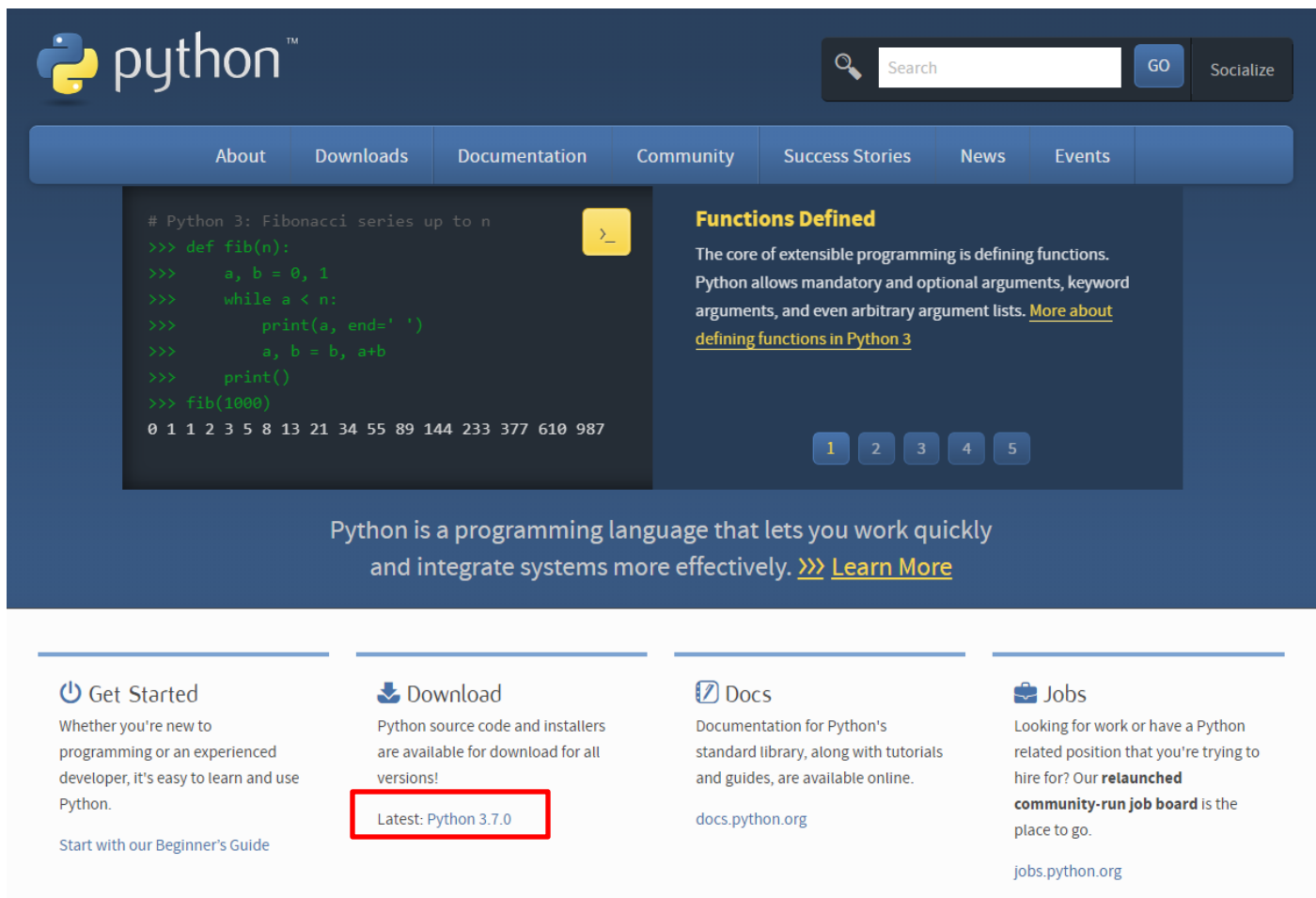


blockchain Python Demo

Paster

基礎環境建置



The image is a screenshot of the Python.org homepage. At the top, there is a dark blue header with the Python logo and the word "python" in white. To the right of the logo is a search bar with a magnifying glass icon, a "GO" button, and a "Socialize" button. Below the header is a navigation bar with links: "About", "Downloads", "Documentation", "Community", "Success Stories", "News", and "Events". The main content area is divided into two columns. The left column contains a code snippet for a Fibonacci series generator, with a yellow button labeled ">_" to its right. The right column has a section titled "Functions Defined" with a description of Python's extensibility and a link to "More about defining functions in Python 3". Below this is a row of five numbered buttons (1-5). At the bottom of the main content area, there is a statement: "Python is a programming language that lets you work quickly and integrate systems more effectively. >>> [Learn More](#)". The footer consists of four columns, each with an icon, a title, and a description. The "Download" column has a red box around the text "Latest: Python 3.7.0".

python™

Search [GO](#) [Socialize](#)

[About](#) [Downloads](#) [Documentation](#) [Community](#) [Success Stories](#) [News](#) [Events](#)

```
# Python 3: Fibonacci series up to n
>>> def fib(n):
>>>     a, b = 0, 1
>>>     while a < n:
>>>         print(a, end=' ')
>>>         a, b = b, a+b
>>>     print()
>>> fib(1000)
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987
```

Functions Defined

The core of extensible programming is defining functions. Python allows mandatory and optional arguments, keyword arguments, and even arbitrary argument lists. [More about defining functions in Python 3](#)

[1](#) [2](#) [3](#) [4](#) [5](#)

Python is a programming language that lets you work quickly and integrate systems more effectively. >>> [Learn More](#)

Get Started

Whether you're new to programming or an experienced developer, it's easy to learn and use Python.

[Start with our Beginner's Guide](#)

Download

Python source code and installers are available for download for all versions!

Latest: Python 3.7.0

Docs

Documentation for Python's standard library, along with tutorials and guides, are available online.

[docs.python.org](#)

Jobs

Looking for work or have a Python related position that you're trying to hire for? Our **relaunched community-run job board** is the place to go.

[jobs.python.org](#)

Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
Gzipped source tarball	Source release		41b6595deb4147a1ed517a7d9a580271	22745726	SIG
XZ compressed source tarball	Source release		eb8c2a6b1447d50813c02714af4681f3	16922100	SIG
macOS 64-bit/32-bit installer	Mac OS X	for Mac OS X 10.6 and later	ca3eb84092d0ff6d02e42f63a734338e	34274481	SIG
macOS 64-bit installer	Mac OS X	for OS X 10.9 and later	ae0717a02efea3b0eb34aad6c680dc498	27651276	SIG
Windows help file	Windows		46562af86c2049dd0cc7680348180dca	8547689	SIG
Windows x86-64 embeddable zip file	Windows	for AMD64/EM64T/x64	cb8b4f0d979a36258f73ed541def10a5	6946082	SIG
Windows x86-64 executable installer	Windows	for AMD64/EM64T/x64	531c3fc821ce0a4107b6d2c6a129be3e	26262280	SIG
Windows x86-64 web-based installer	Windows	for AMD64/EM64T/x64	3cfdaf4c8d3b0475aaec12ba402d04d2	1327160	SIG
Windows x86 embeddable zip file	Windows		ed9a1c028c1e99f5323b9c20723d7d6f	6395982	SIG
Windows x86 executable installer	Windows		ebb6444c284c1447e902e87381afeff0	25506832	SIG
Windows x86 web-based installer	Windows		779c4085464eb3ee5b1a4fffd0eabca4	1298280	SIG

Install Python 3.7.0 (64-bit)

Select Install Now to install Python with default settings, or choose Customize to enable or disable features.



Install Now

C:\Users\Paster\AppData\Local\Programs\Python\Python37

Includes IDLE, pip and documentation
Creates shortcuts and file associations



Customize installation

Choose location and features

python
for
windows

- ☒ Install launcher for all users (recommended)
- ☒ Add Python 3.7 to PATH

Cancel

Python 3.7.0 (64-bit) Setup



Setup Progress

Installing:

Python 3.7.0 Test Suite (64-bit)



python
for
windows

Cancel



Setup was successful

Special thanks to Mark Hammond, without whose years of freely shared Windows expertise, Python for Windows would still be Python for DOS.

New to Python? Start with the [online tutorial](#) and [documentation](#).

See [what's new](#) in this release.



Disable path length limit

Changes your machine configuration to allow programs, including Python, to bypass the 260 character "MAX_PATH" limitation.

Close

先有點在連成線

建立BLOCK

定義Transaction

- Transaction
 - Sender
 - Receiver
 - Money

Transaction Sample

- `blockchain_transaction.py`

定義Block

- Index
- Time
- Transaction
 - Sender
 - Receiver
 - Money
- Proof
- Previous_Hash

Block Sample

- `blockchain_block.py`

先有點在連成線

驗證

Proof of Work

- Reference
 - <https://en.wikipedia.org/wiki/Hashcash>
- Demo1
 - Blockchain_pow_poc.py
- Demo2
 - Blockchain_pow.py

Alpha Test

- `blockchain_alpha.py`

Blockchain_complete

- Pip install Flask==0.12.2 requests==2.18.4
- pip install pipenv
- pipenv run python blockchain_Complete.py -p 5000
- pipenv run python blockchain_Complete.py -p 5001

Reference

- Learn Blockchain by Building One
 - <https://hackernoon.com/learn-blockchains-by-building-one-117428612f46>
- BUILD YOUR OWN BLOCKCHAIN: A PYTHON TUTORIAL
 - <http://ecomunsing.com/build-your-own-blockchain>
- A Practical Introduction to Blockchain with Python
 - <http://adilmoujahid.com/posts/2018/03/intro-blockchain-bitcoin-python/>
- Blockchain Demo
 - <https://anders.com/blockchain/blockchain.html>