

# INF206

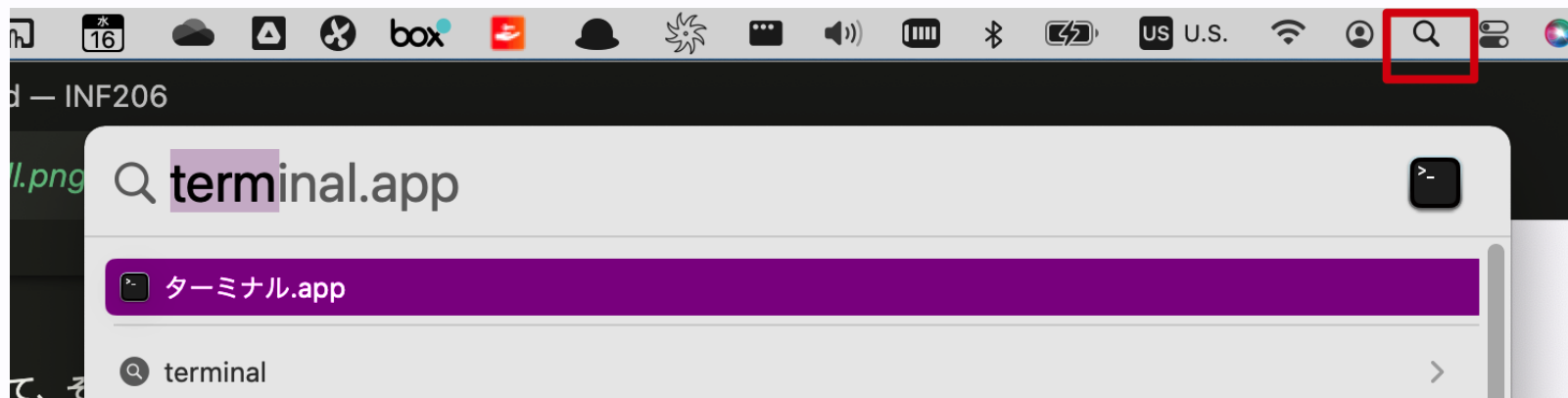
Programming

プログラミング

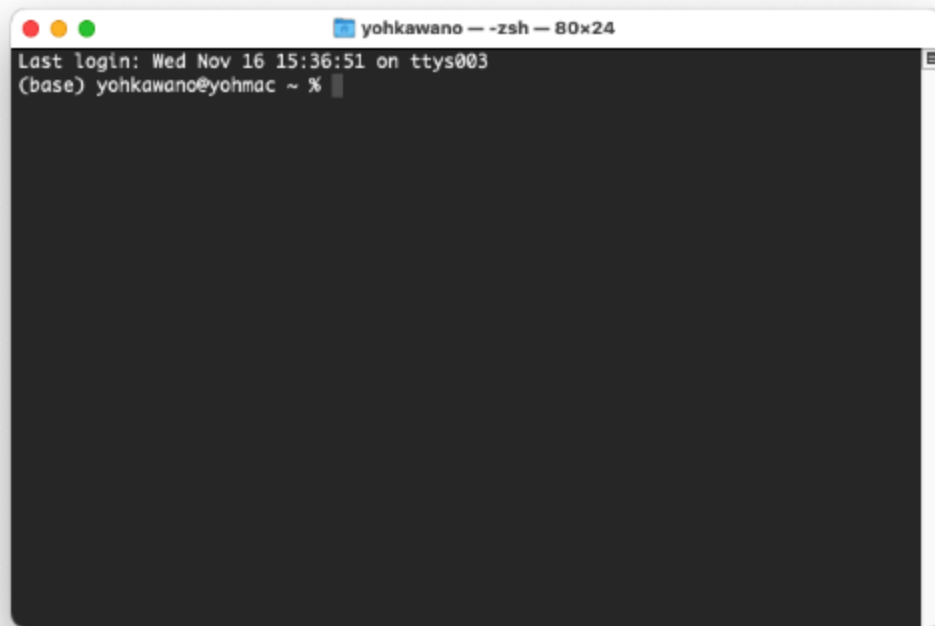
Week 8 | November 16, 2022



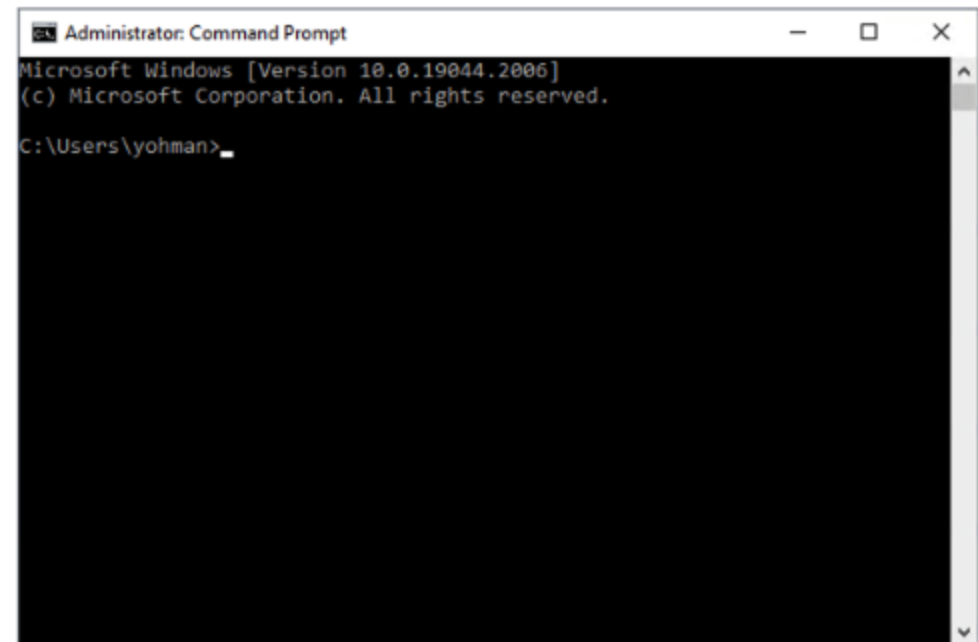
# Terminal (Mac) Command Prompt (PC)





A terminal window on a Mac with a title bar showing 'yohkawano - zsh - 80x24'. The terminal text shows a login message and a shell prompt.

```
yohkawano - zsh - 80x24
Last login: Wed Nov 16 15:36:51 on ttys003
(base) yohkawano@yohmac ~ %
```

An Administrator Command Prompt window on Windows with a title bar showing 'Administrator: Command Prompt'. The terminal text shows Windows version information and a command prompt.

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19044.2006]
(c) Microsoft Corporation. All rights reserved.

C:\Users\yohman>
```

## Mac

```
(base) yoh@mac ~ %
```

## PC

```
(base) C:\Users\xxx>
```

# Basic commands

command	説明	mac/pc
pwd	今のディレクトリーを表示	両方
ls	今のディレクトリーの中の ファイルとフォルダーを表示	Mac
dir	今のディレクトリーの中の ファイルとフォルダーを表示	PC
cd [folder_name]	違うフォルダーに移る	両方



# Python 環境

# 今まで：Google Colab



# Colabのメリットがいっぱい

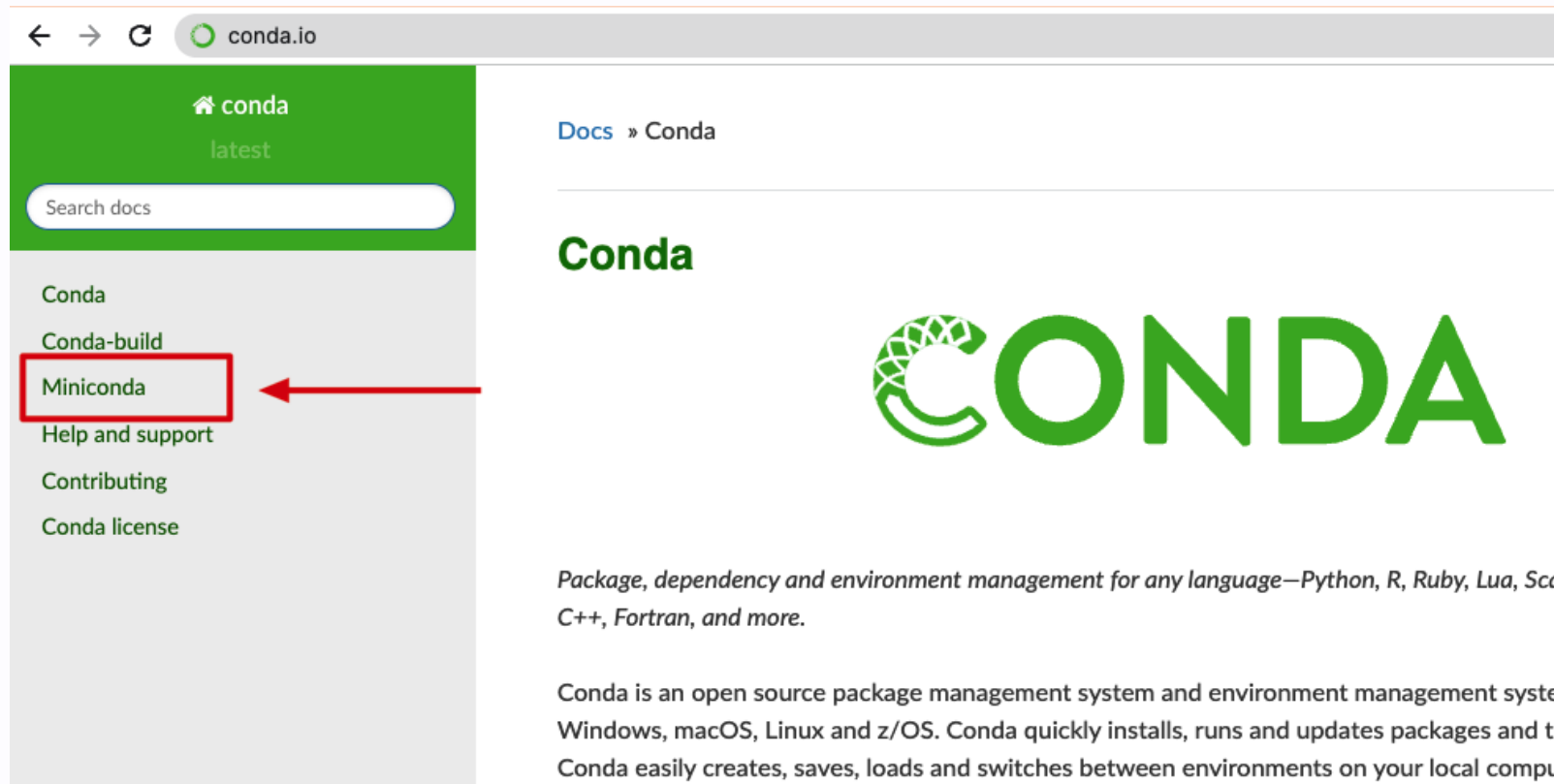
- クラウド上でプログラミングが可能
- 何もインストールしなくてもすぐにプログラミングができる
- 他？



miniCONDA<sup>®</sup>

# miniCONDA

<https://conda.io/>



# Latest Miniconda Installer Links

Latest - Conda

Platform	Name	SHA256 hash
Windows	<a href="#">Miniconda3 Windows 64-bit</a>	<a href="#">1acbc2e8277ddd54a5f724896c</a>
	<a href="#">Miniconda3 Windows 32-bit</a>	<a href="#">4fb64e6c9c28b88beab16994bf</a>
macOS	<a href="#">Miniconda3 macOS Intel x86 64-bit bash</a>	<a href="#">007bae6f18dc7b6f2ca6209b5a</a>
	<a href="#">Miniconda3 macOS Intel x86 64-bit pkg</a>	<a href="#">cb56184637711685b08f6eba95</a>
	<a href="#">Miniconda3 macOS Apple M1 64-bit bash</a>	<a href="#">4bd112168cc33f8a4a60d3ef7e</a>
	<a href="#">Miniconda3 macOS Apple M1 64-bit pkg</a>	<a href="#">0cb5165ca751e827d91a4a14682</a>

# インストールの確認

```
# pythonは？  
(base) yoh@mac ~ % python -V
```

```
# condaは？  
(base) yoh@mac ~ % conda -V
```

# 仮想環境の作成

```
(base) yoh@mac ~ % conda create -n reitaku python=3.8
```



```
Proceed ([y]/n)? y
```



# 仮想環境の有効化

```
(base) yoh@mac ~ % conda activate reitaku
```

すると



```
(reitaku) yoh@mac ~ %
```

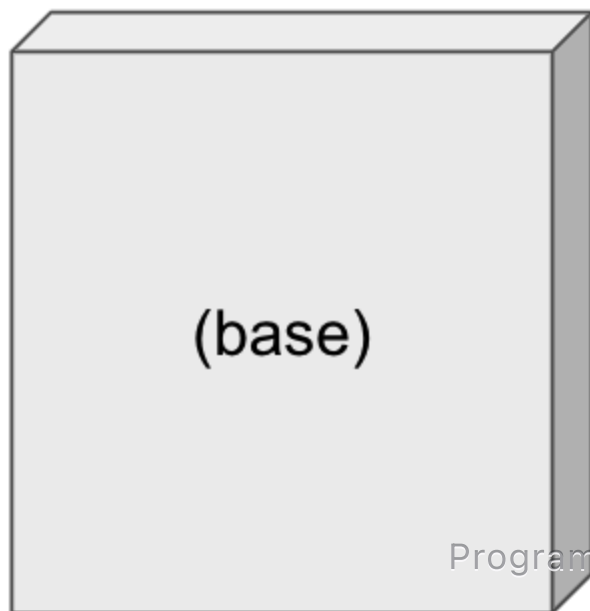
**(base)** が **(reitaku)** に変わった！



```
(base) yoh@mac ~ % conda create -n reitaku
```

```
(base) yoh@mac ~ % conda activate reitaku
```

```
(reitaku) yoh@mac ~ %
```



reitaku 環境にインストールされているパッケージ一覧

```
(reitaku) yoh@mac ~ % conda list
```

# プロジェクトフォルダーを作成

```
# 今どこ？  
(reitaku) yoh@mac ~ % pwd
```

directoryをリストアップ

```
(reitaku) yoh@mac ~ % ls
```

directoryを変更

```
(reitaku) yoh@mac ~ % cd Desktop
```

## directoryを作成

```
(reitaku) yoh@mac ~ % mkdir reitaku
```

## そのdirectoryに移動

```
(reitaku) yoh@mac ~ % cd reitaku
```

## python fileを作成

```
(reitaku) yoh@mac ~ % touch hello.py
```

hello.py ファイルがあるかどうかを確認

```
(reitaku) yoh@mac ~ % ls
```

# VSCode

The image shows the Visual Studio Code website and a screenshot of the VS Code editor interface. The website header includes the Visual Studio Code logo, navigation links (Docs, Updates, Blog, API, Extensions, FAQ, Learn), a search bar, and a 'Download' button. A banner below the header states 'Version 1.73 is now available! Read about the new features and fixes from October.' The main content area features the text 'Code editing. Redefined.' and 'Free. Built on open source. Runs everywhere.' Below this is a 'Download Mac Universal Stable Build' button and a link to 'Web, Insiders edition, or other platforms'. A note at the bottom of the website states 'By using VS Code, you agree to its license and privacy statement.'

The screenshot of the VS Code editor interface shows the 'EXTENSIONS: MARKETPLACE' sidebar on the left, listing various extensions such as Python, GitLens, C/C++, ESLint, Debugger for C++, Language Support for Java, vscode-icons, and Vetur. The main editor area displays a JavaScript file named 'blog-post.js' with the following code:

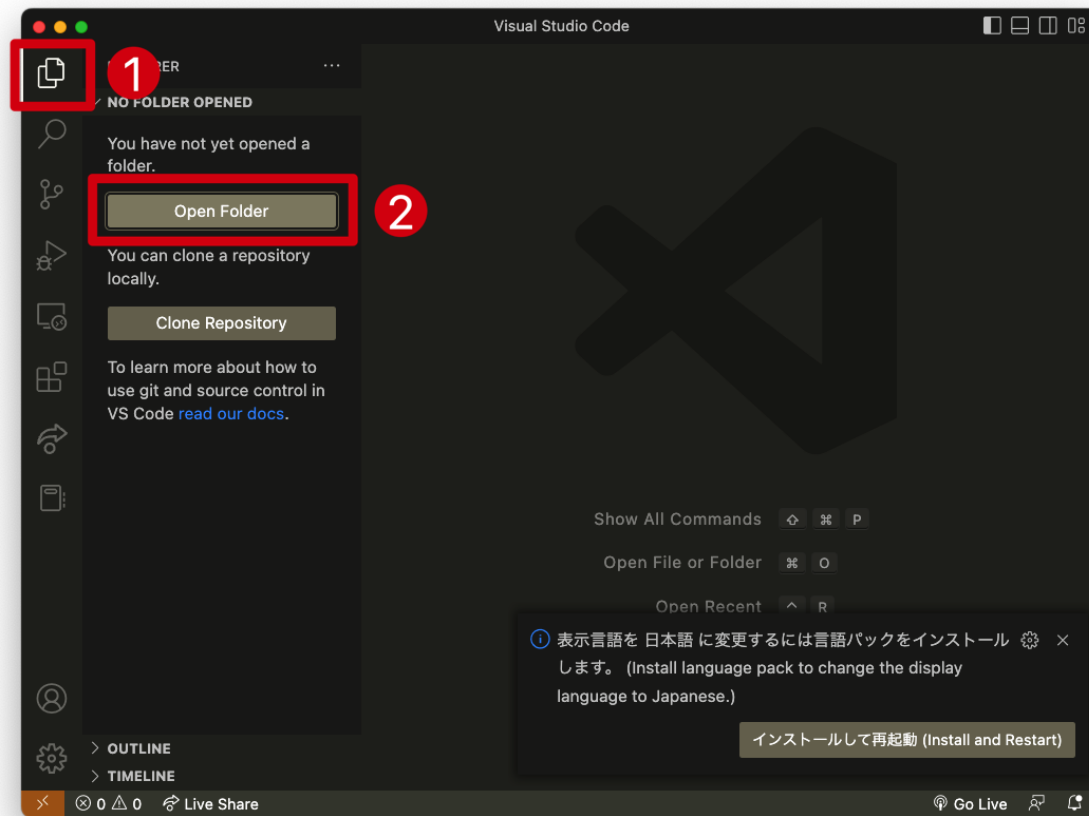
```
src > components > JS blog-post.js > <function> > (e)blogPost
1 import { graphql } from 'gatsby'
2 import React from 'react'
3 import Image from 'gatsby-image'
4
5 export default ({ data }) => {
6   const blogPost = data.cms.blogPost
7   return (
8     <div>
9       <blogPost> {e} dateFormat
10       <blogPost> {e} debug
11       <blogPost> {e} debugURI
12       <Image> {e} decodeURIComponent
13     </div>
14   )
15   <h1>{blogPost} {e} defaultStatus
16   <div>Post {e} delete
17   </div>
18   <div> {e} departFocus
19   </div>
20   <div> {e} devicePixelRatio
21   </div>
22   <div> {e} dispatchEvent
23 </div>
24 }
25
26 export const query = graphql`
```

The bottom status bar of the editor shows the current file is 'blog-post.js' in the 'src > components > JS' directory, with a line number of 6 and column of 21. The status bar also indicates the file is in 'UTF-8' encoding and 'LF' line endings.



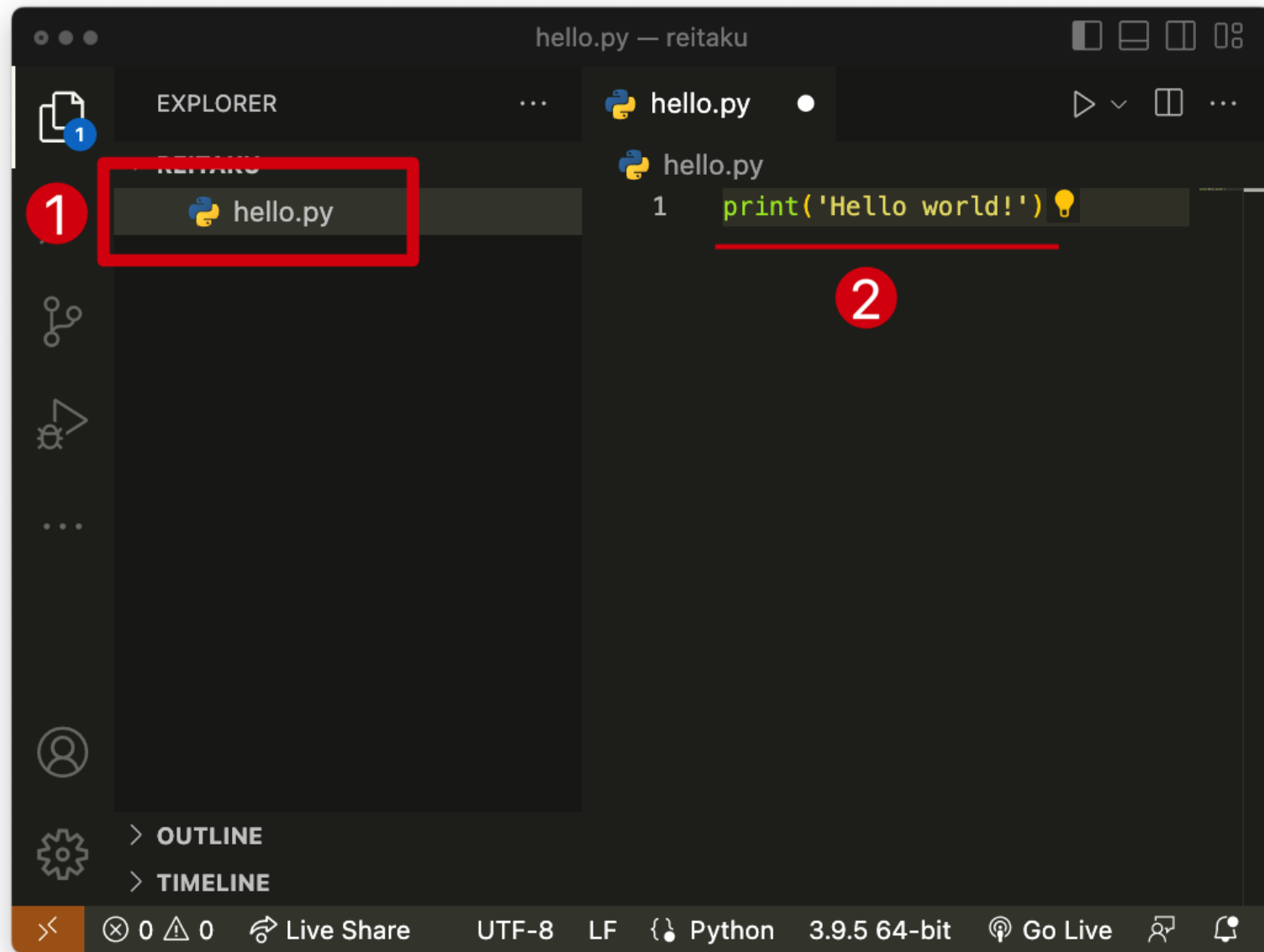
# ダウンロードしよう

<https://code.visualstudio.com/>



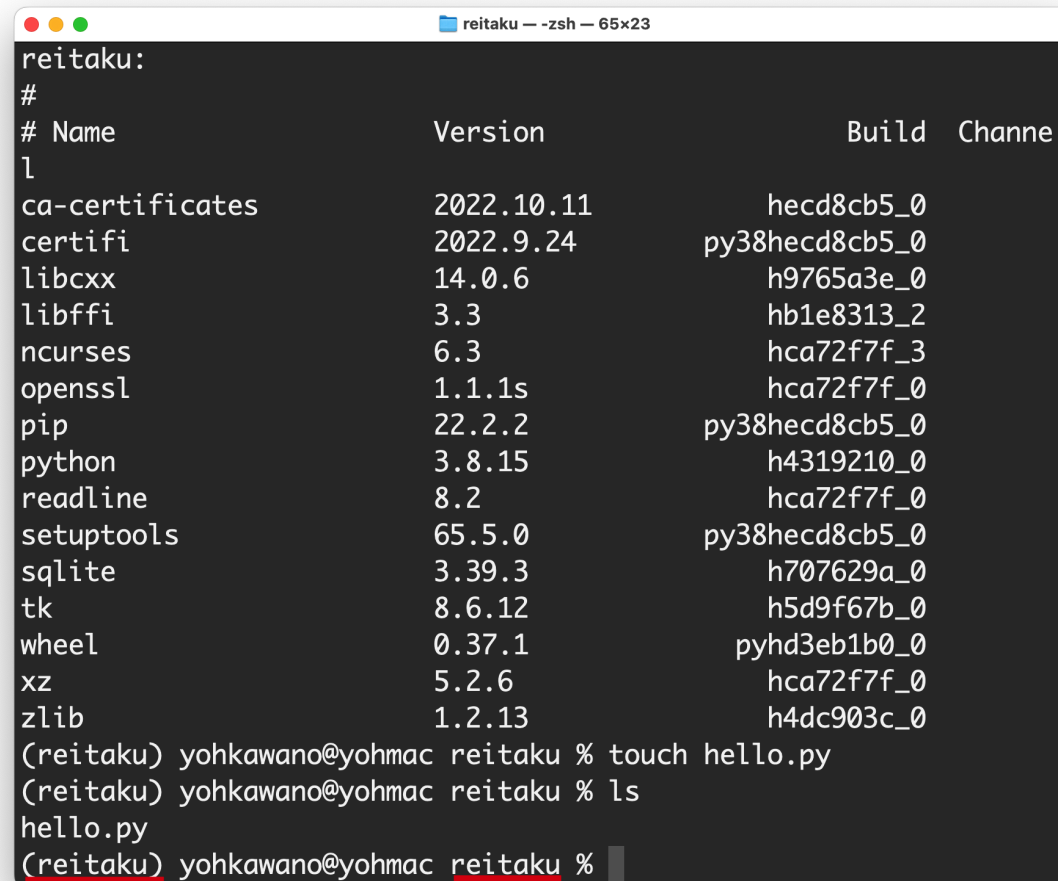
Then, open the **reitaku** folder

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Go back to terminal (Mac) or CMD (PC)

Make sure you are in (reitaku) and in the reitaku folder

A terminal window titled "reitaku -- zsh -- 65x23" displays a list of installed packages with their versions and build identifiers. Below the list, two commands are executed: "touch hello.py" and "ls", with the output "hello.py" shown. The prompt "(reitaku) yohkawano@yohmac reitaku %" is visible at the bottom.

```
reitaku:
#
# Name                Version                Build  Channe
l
ca-certificates      2022.10.11             hecd8cb5_0
certifi              2022.9.24              py38hecd8cb5_0
libcxx               14.0.6                 h9765a3e_0
libffi               3.3                    hb1e8313_2
ncurses               6.3                    hca72f7f_3
openssl              1.1.1s                 hca72f7f_0
pip                  22.2.2                 py38hecd8cb5_0
python               3.8.15                 h4319210_0
readline             8.2                    hca72f7f_0
setuptools            65.5.0                 py38hecd8cb5_0
sqlite               3.39.3                 h707629a_0
tk                   8.6.12                 h5d9f67b_0
wheel                 0.37.1                 pyhd3eb1b0_0
xz                   5.2.6                  hca72f7f_0
zlib                  1.2.13                 h4dc903c_0
(reitaku) yohkawano@yohmac reitaku % touch hello.py
(reitaku) yohkawano@yohmac reitaku % ls
hello.py
(reitaku) yohkawano@yohmac reitaku %
```

Run the python file:

```
(reitaku) yoh@mac ~ % python hello.py
```

# やった！今日できたこと：

- terminal/CMDの使い方
- miniCondaをインストール
- 仮想環境の作成、有効
- VSCodeのインストール
- ファイル式のPython codeの作成
- Pythonファイルをterminal経由でrun! 