Python快速入门

嵩天



Python开发工具及环境配置

嵩天

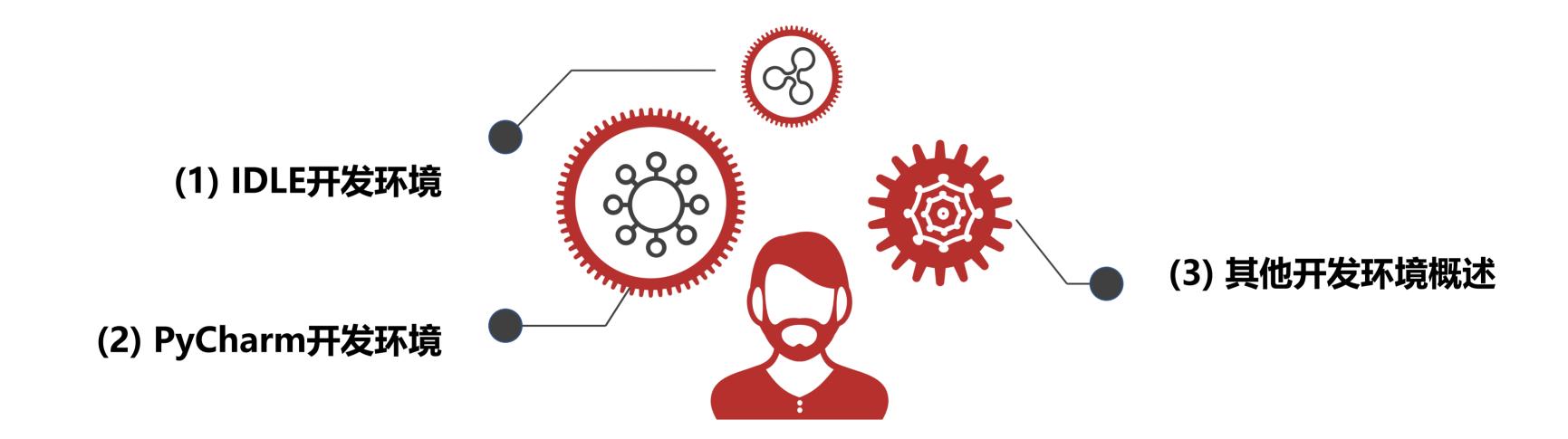




Python开发工具及环 境配置

Python快速入门 单元开篇

单元开篇



Python开发工具及环境配置



单元开篇

目的:了解Python语言开发工具 掌握1-2种Python语言开发工具

- 1 知道 一批Python语言开发工具
- 2 掌握 IDLE和PyCharm集成开发环境

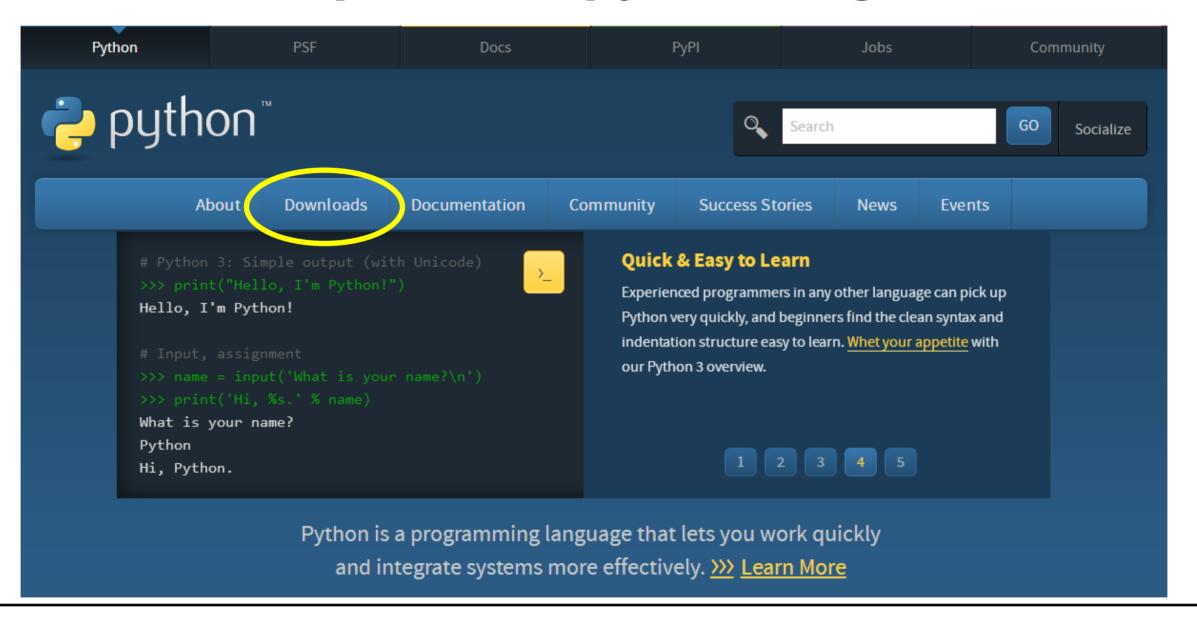
Python开发工具及环境配置





Python解释器安装

http://www.python.org/







Python解释器安装

http://www.python.org/

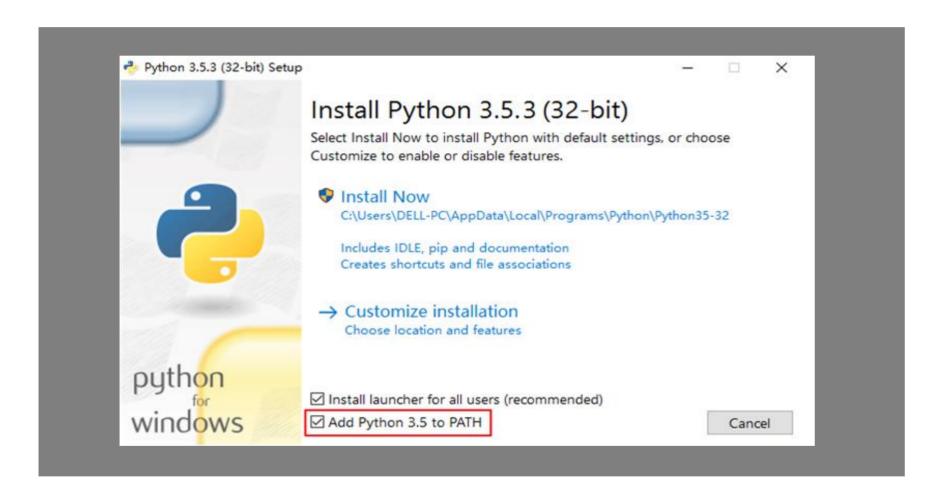
- Python 3.6.5 2018-03-28
 - Download Windows x86 web-based installer
 - Download Windows x86 executable installer
 - Download Windows x86 embeddable zip file
 - Download Windows x86-64 web-based installer
 - Download Windows x86-64 executable installer
 - Download Windows x86-64 embeddable zip file
 - Download Windows help file

- x86 32位Python解释器
- X86-64 64位Python解释器

务必安装3.5.3以上版本,不要安装2.x系列

Python解释器安装

安装过程



• 选中添加路径选项

务必安装3.5.3以上版本,不要安装2.x系列

IDLE开发环境

交互式环境

```
Python Shell
File Edit Shell Debug Options Window Help

Python 3.5.3 (v3.5.3:2c5fed8, Oct 3 2017, 17:26:49) [MSC v.1900 32 bit (Intel)] on win32

Type "copyright", "credits" or "license()" for more information.

>>> print("Hello World")

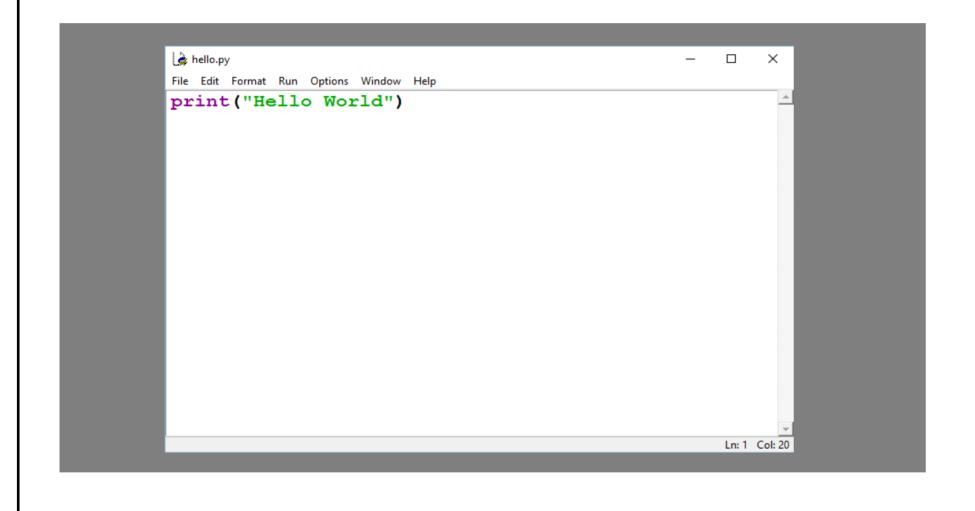
Hello World

>>> |
```

- >>> 是交互式的提示符
- 每输入一行代码,运行相应结果

IDLE开发环境

文件式环境



- CTRL+N启动一个文本编辑器
- IDLE提供的Python文件式环境

IDLE开发环境

快捷键

- CTRL + N: 在IDLE交互界面下,用来启动IDLE编辑器
- CTRL + Q: 退出IDLE或IDLE编辑器
- ALT + 3: 在IDLE编辑器内, 注释选定区域文本
- ALT + 4: 在IDLE编辑器内,解除注释选定区域文本
- ALT + Q: 在IDLE编辑器内,将Python代码进行格式化布局
- F5: 在IDLE编辑器内, 执行Python程序

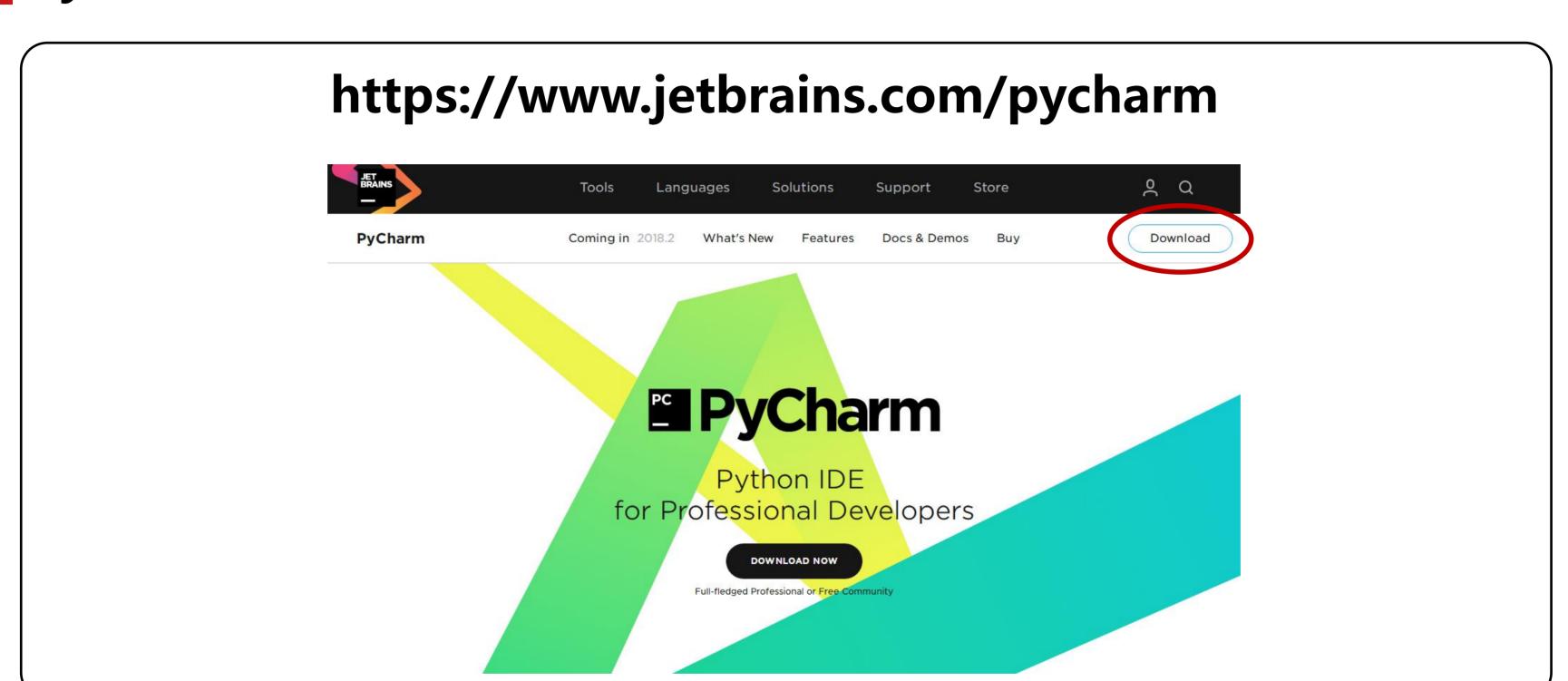
代码尝试

写段代码试一试

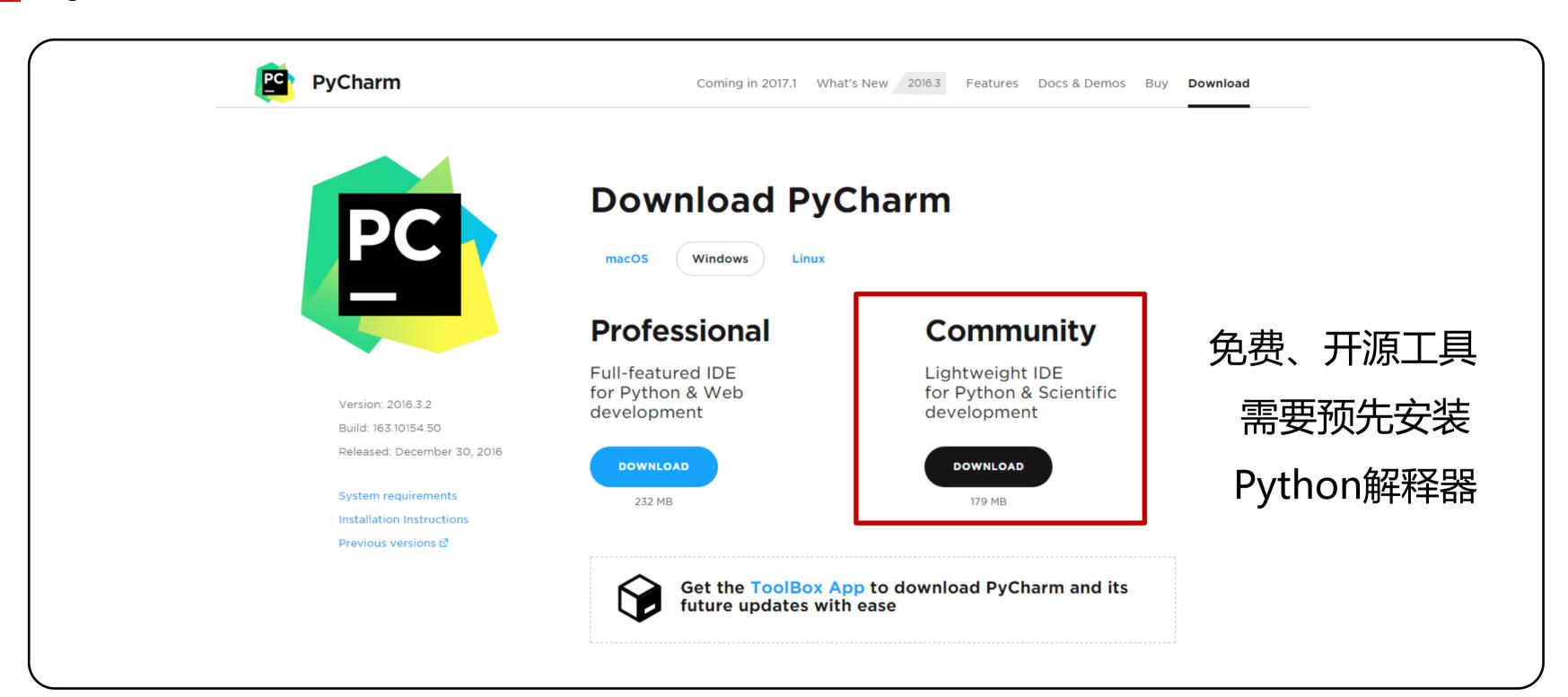
```
#SimpleTempConvert.py
TempStr = input("请输入摄氏温度值: ")
F = 1.8*eval(TempStr) + 32
print("对应的华氏温度是{:.2f}F".format(F))
```



Pycharm工具安装



Pycharm工具安装

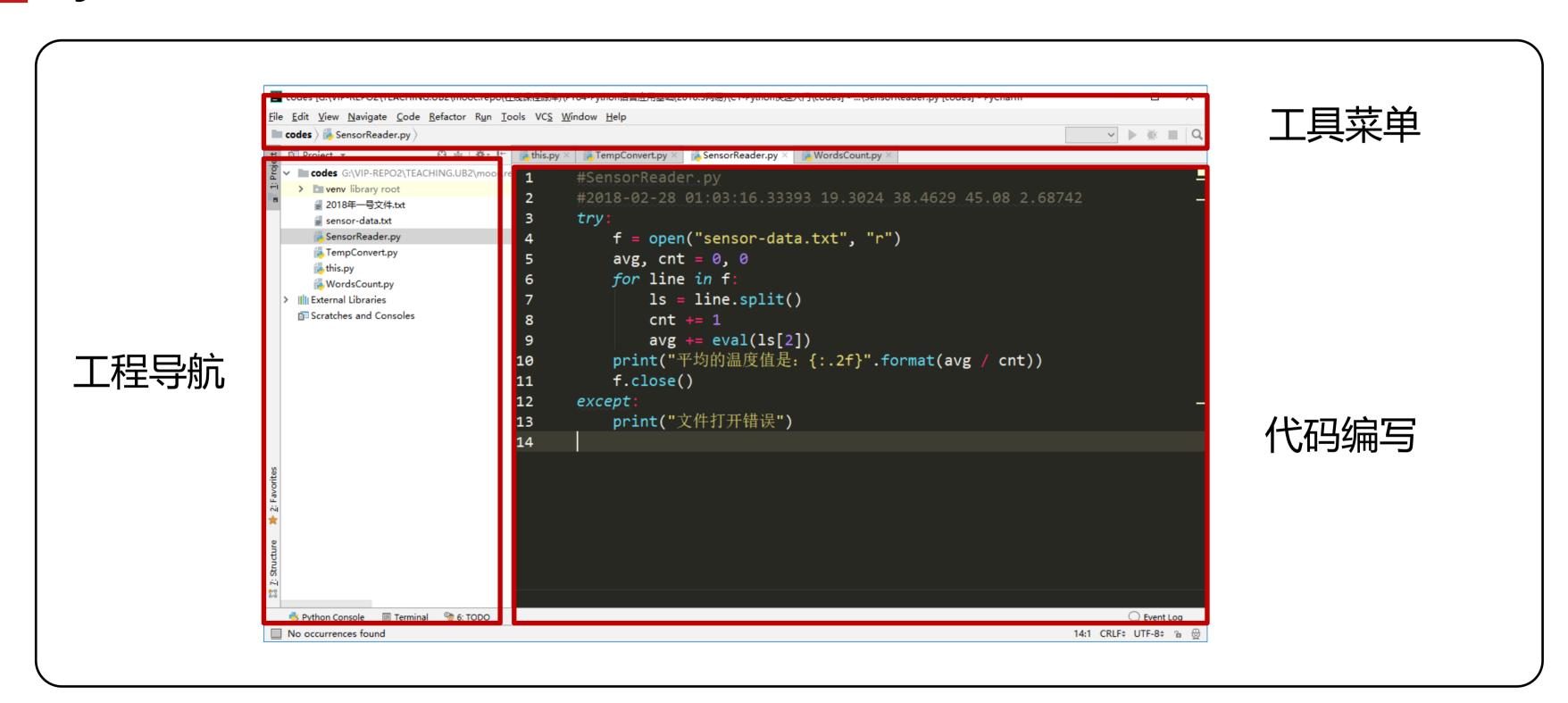


Pycharm开发工具

- 口社区版免费
- □调试功能丰富
- □通用类Python开发
- □适合较复杂工程
- Win/Linux/Mac OS

```
djtp_first_steps | polls | tests.py
                                                                                                                                                 d Polls ▼ ▶ ∰ 🛞 🚳 VCS VCS 🗜 👆 C
               response = self.client.get(reverse('polls:index'))
               self.assertEqual(response.status_code, 200)
               self.assertContains(response, "No polls are available.")
                self.assertQuerysetEqual(response.context['latest_question_list'], [])
           def te m test index view with a past question(self)
                  m test index view with future question and past question QuestionVi...
                  m test_index_view_with_no_questions(self)
                 m test index view with two past questions(self)
                 countTestCases(self)
                  m defaultTestResult(self)
                  ^↓ and ^↑ will move caret down and up in the editor >>
           def test_index_view_with_a_future_question(self):
               Questions with a pub_date in the future should not be displayed on
               create_question(question_text="Future question.", days=30)
               response = self.client.get(reverse('polls:index'))
               self.assertContains(response, "No polls are available.",
               self.assertQuerysetEqual(response.context['latest_question_list'], [])
           def test_index_view_with_future_question_and_past_question(self):
               Even if both past and future questions exist, only past questions
               should be displayed.
               create_question(question_text="Past question.", days=-30)
create_question(question_text="Future question.", days=30)
               response = self.client.get(reverse('polls:index'))
                self.assertQuerysetEqual(
                   response.context['latest_question_list'],
                    ['<Question: Past question.>']
           def test_index_view_with_two_past_questions(self):
                                                                                                                                                   25:18 LF$ UTF-8$ Git: master$ % 🖶 🖳
       nent seems to have no effect. Unresolved attribute reference 'test' for class 'QuestionViewTests'
```

Pycharm开发工具



Pycharm开发工具

哪些人适合用IDE(集成开发环境)?

- 专业程序员
- 致力于成为专业程序员的学习者
- 编程代码量一般超过100行
- · 编程初学者、入门学习者,请用IDLE

Python快速入门

其他开发工具概形地



其他开发工具概述

文本工具类

集成工具类

□ Notepad++

□ Wing

□ Vim & Emacs

■ PyDev & Eclipse

□ Sublime Text

■ Visual Studio

□ Atom

□ Visual Studio Code

■ Komodo Edit

Anaconda & Spyder

Notepad++

https://notepad-plus-plus.org

- 轻巧的文本编辑器
- 免费使用
- 适合各类编程语言
- 适合专业程序员
- Win为主

```
*D:\source\notepad4ever.cpp - Notepad++
Notepad_plus.cpp 🖾 🔚 notepad4ever.cpp 🖾
      #include <GPL.h>
      #include <free software.h>
      void notepad4ever()
 5
    □ {
           while (true)
                Notepad++;
 8
 9
10
11
```

Vim & Emac

- 老牌经典文本编辑器
- 免费使用
- 专业编程体验
- 适合专业程序员
- Linux为主

```
import random as r
                                             import matplotlib.pyplot as plt
    ■ ]python-crash-course/
                                             from numpy import arange, sin, cos, exp, pi
                                             plt.rcParams["figure.figsize"] = 8,6  # size of plot in inches
    ☐ |sample/
                                                                                                                                          arange
     . ]sample.py
                                                                                                                                          cos
    Ifibonacci.py
                                             mf = npend = 4
                                                                                                                                          ехр
                                                                                                                                          matplotlib
        ]guessingGame.py
                                             sigma = 0.005
        ]list_ends.py
                                             step = 0.01
                                             steps = 40000
        list_overall_comprehensions.py
                                                                                                                                          plt
                                             linew = 2
        ]new.py
        ]print_test.py
                                             def xprint(name, value): # convenience function to print params.
                                                                                                                                          sin
                                                 print(name+' '.join(['%.4f' % x for x in value]))
    . ]variables.py
                                                                                                                                        +xprint : function
                                             t = arange(steps)*step
                                                                                                                                       ▼ variables
                                             d = 1 - arange(steps)/steps # decay vector
                                                 n = input("Number of pendulums (%d)(0=exit): "%npend)
                                                                                                                                          linew
                                                 if n != '': npend = int(n)
                                                                                                                                          sigma
                                                 if npend == 0: break
                                                                                                                                          step
                                                 n = input("Deviation from integer freq.(xf): "xsigma)
                                                                                                                                          steps
                                                 if n != '': sigma = float(n)
                                                 ax = [r.uniform(0, 1) for i in range(npend)]
                                                 ay = [r.uniform(0, 1) for i in range(npend)]
                                                 px = [r.uniform(0, 2*pi) for i in range(npend)
                                                 py = [r.uniform(0, 2*pi) for i in range(npend)
                                                 fx = [r.randint(1, mf) + r.gauss(0, sigma) for i in range(npend)]
                                                 fy = [r.randint(1, mf) + r.gauss(0, sigma) for i in range(npend)]
                                                 xprint('ax = ', ax); xprint('fx = ', fx); xprint('px = ', px)
xprint('ay = ', ay); xprint('fy = ', fy); xprint('py = ', py)
                                                 for i in range(npend):
                                                     x += d * (ax[i] * sin(t * fx[i] + px[i]))
                                                      y += d * (ay[i] * sin(t * fy[i] + py[i]))
                                                 plt.figure(facecolor = 'white')
                                                 plt.plot(x, y, 'k', linewidth=1.5)
plt.axis('off')
                                                 plt.subplots_adjust(left=0.0, right=1.0, top=1.0, bottom=0.0)
                                                 plt.show(block=False)
                                         NORMAL > sample/sample.py xprint < python ♦ utf-8 ♦ 63% = 24/38 % : 34 < < Name sample.py
:set relativenumber!
```

Sublime Text

https://www.sublimetext.com

- 轻巧的文本编辑器
- 免费使用
- 专业编程体验
- 单人独立开发
- 适合专业程序员
- Win/Linux/Mac OS

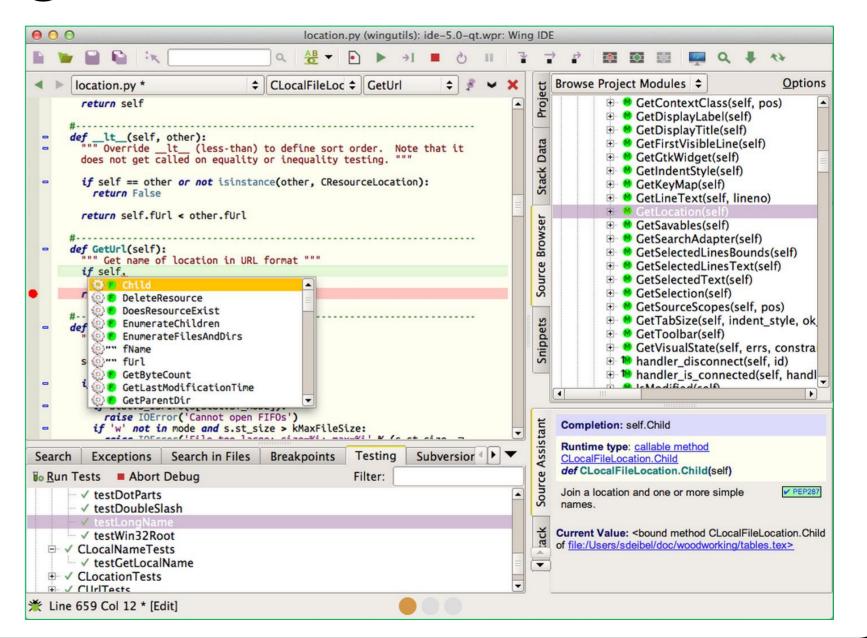
```
Edit Selection Find View Goto Tools Project Preferences Help
   TempStr = input("请输入带有符号的温度值:")
    if TempStr[-1] in ['F','f']:
       C = (eval(TempStr[0:-1]) - 32)/1.8
       print("转换后的温度是{:.2f}C".format(C))
6 elif TempStr[-1] in ['C','c']:
       F = 1.8*eval(TempStr[0:-1]) + 32
       print("转换后的温度是{:.2f}F".format(F))
9 else:
       print("输入格式错误")
Line 10, Column 20
```



Wing

https://wingware.com

- 收费工具
- 调试功能丰富
- 具有版本控制功能
- 适合多人共同开发
- Win/Linux/Mac OS

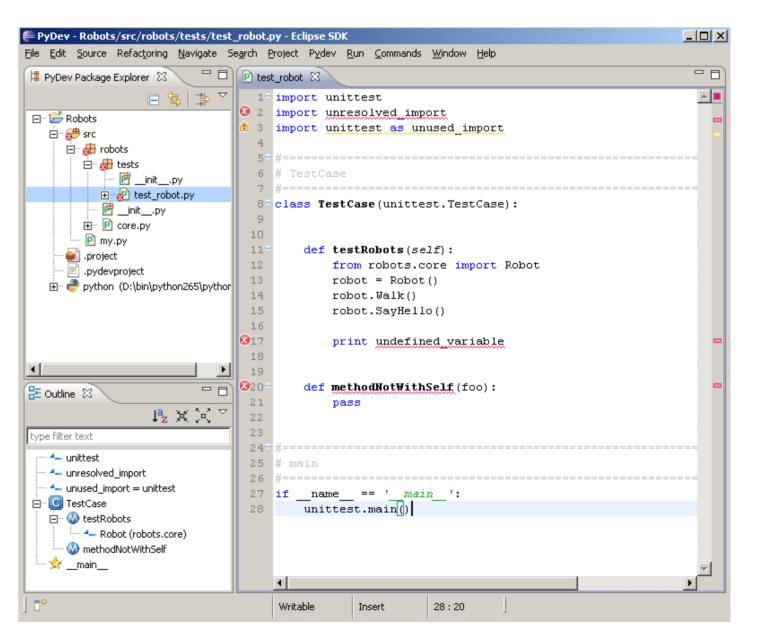




Eclipse & PyDev

https://www.pydev.org

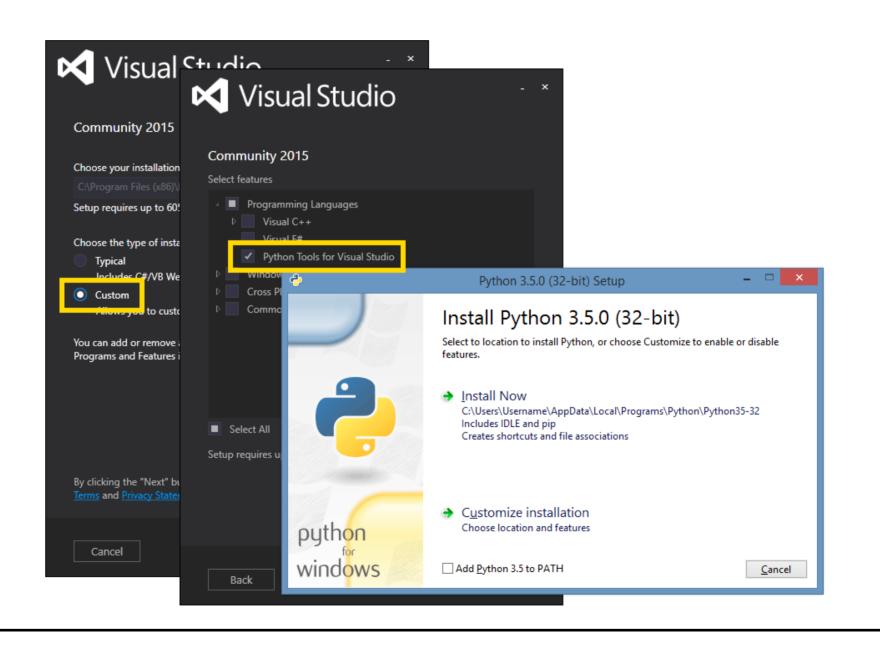
- Eclipse集成
- · 开源IDE, 免费工具
- 需要有一定开发经验
- 适合Eclipse死粉
- Win/Linux/Mac OS



Visual Studio & PTVS

PTVS: Python Tools for Visual Studio

- Visual Studio集成
- 微软出品, 收费工具
- 功能非常丰富
- 适合多人共同开发
- Win为主



Visual Studio Code

https://code.visualstudio.com

- 独立软件工具
- 微软出品,免费工具
- 功能非常丰富
- 可扩展性很强
- 有AI开发扩展模块
- Win为主

```
File Edit View Goto Help
                                                                                                     <u>№</u> ...
                                                                                    README.md
       EXTENSIONS
                                                                 x package.json
                                              import app from './app';
        @popular
                                              import debugModule = require('debug');
                                              import http = require('http');
              C# for Visual Studio Code (p
                                              const debug = debugModule('node-express-typescript:server');
              // Get port from environment and store in Express.
              Linting, Debugging (multi-t...
                                              const port = normalizePort(process.env.PORT || '3000');
                                              app.set(('port', port));
              ◆CSSImportRule
              Debug your JavaScript code...
                                              // create •• csssupportsRule
              Microsoft JS Diagno... Install
                                             const ser = export
              C/C++ 0.7... $\pi 143K ★★★★
                                             server.li @ exports
              Complete C/C++ language ...
                                             server.on = import
                                              server.on ⊗ importScripts
                                                       ◆● MessagePort
              Rich Go language support f..
                                               * Normal 🔑 port const port: number | string | boolean
              function normalizePort(val: any): number|string|boolean {
              Integrates ESLint into VS Co...
                                               let port = parseInt(val, 10);
 ♦ master C 11 131 ⊗ 0 ▲ 0
                                                                         Ln 9, Col 21 Spaces: 2 UTF-8 LF TypeScript
```

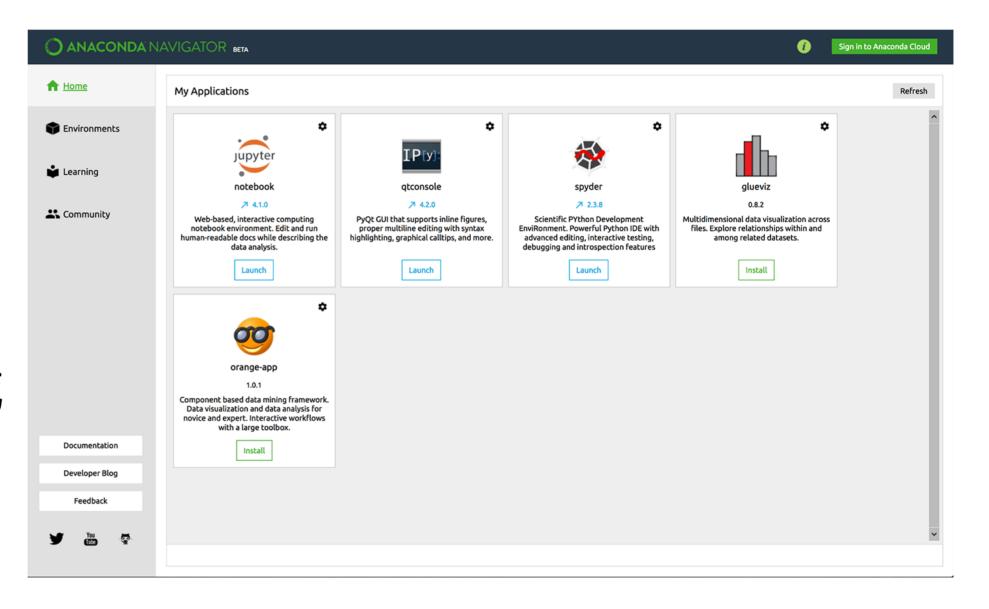




Anaconda

https://www.continuum.io

- 开源免费
- 支持超过800个第三方库
- 包括多种主流工具
- 适合数据分析及计算领域
- Win/Linux/Mac OS



其他开发工具概述

文本工具类

集成工具类

□ Notepad++

□ Wing

□ Vim & Emacs

□ PyDev & Eclipse

□ Sublime Text

■ Visual Studio

□ Atom

■ Visual Studio Code

■ Komodo Edit

Anaconda & Spyder

该选用哪个开发工具呢?

适合自己的IDE才是最好的IDE 从IDLE和Pycharm开始

Python开发工具及环 境配置

Python快速入门

单元小结

单元小结

(1) IDLE开发环境

安装Python基础开发环境、使用IDLE进行程序开发

(2) PyCharm开发环境

了解并初步使用PyCharm开发环境

(3) 其他开发环境概述

Nodepad++、Visual Studio Code、Anaconda等开发工具



Thank you