

python

The Python logo, consisting of two interlocking snakes, one blue and one yellow, is positioned below the word "python".

```
import turtle
turtle.setup(650,350,200,200)
turtle.penup()
turtle.fd(-250)
turtle.pendown()
turtle.pensize(25)
turtle.pencolor("purple")

for i in range(4):
    turtle.circle(40, 80)
    turtle.circle(-40, 80)
    turtle.circle(40, 80/2)
    turtle.fd(40)
    turtle.circle(16, 180)
    turtle.fd(40 * 2/3)
```

Python语言程序设计

实例14: 第三方库自动安装脚本



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"第三方库自动安装脚本"问题分析

问题分析

第三方库自动安装脚本

- 需求：批量安装第三方库需要人工干预，能否自动安装？
- 自动执行pip逐一根据安装需求安装

如何自动执行一个程序？例如：pip？

问题分析

第三方库自动安装脚本

库名	用途	pip安装指令
NumPy	N维数据表示和运算	pip install numpy
Matplotlib	二维数据可视化	pip install matplotlib
PIL	图像处理	pip install pillow
Scikit-Learn	机器学习和数据挖掘	pip install sklearn
Requests	HTTP协议访问及网络爬虫	pip install requests

问题分析

第三方库自动安装脚本

库名	用途	pip安装指令
Jieba	中文分词	pip install jieba
Beautiful Soup	HTML和XML解析器	pip install beautifulsoup4
Wheel	Python第三方库文件打包工具	pip install wheel
PyInstaller	打包Python源文件为可执行文件	pip install pyinstaller
Django	Python最流行的Web开发框架	pip install django

问题分析

第三方库自动安装脚本

库名	用途	pip安装指令
Flask	轻量级Web开发框架	pip install flask
WeRoBot	微信机器人开发框架	pip install werobot
SymPy	数学符号计算工具	pip install sympy
Pandas	高效数据分析和计算	pip install pandas
Networkx	复杂网络和图结构的建模和分析	pip install networkx

问题分析

第三方库自动安装脚本

库名	用途	pip安装指令
PyQt5	基于Qt的专业级GUI开发框架	pip install pyqt5
PyOpenGL	多平台OpenGL开发接口	pip install pyopengl
PyPDF2	PDF文件内容提取及处理	pip install pypdf2
docopt	Python命令行解析	pip install docopt
PyGame	简单小游戏开发框架	pip install pygame



"第三方库自动安装脚本"实例讲解

第三方库自动安装脚本

```
#BatchInstall.py
```

```
import os
```

```
libs = {"numpy","matplotlib","pillow","sklearn","requests",\  
        "jieba","beautifulsoup4","wheel","networkx","sympy",\  
        "pyinstaller","django","flask","werobot","pyqt5",\  
        "pandas","pyopengl","pypdf2","docopt","pygame"}
```

```
try:
```

```
    for lib in libs:
```

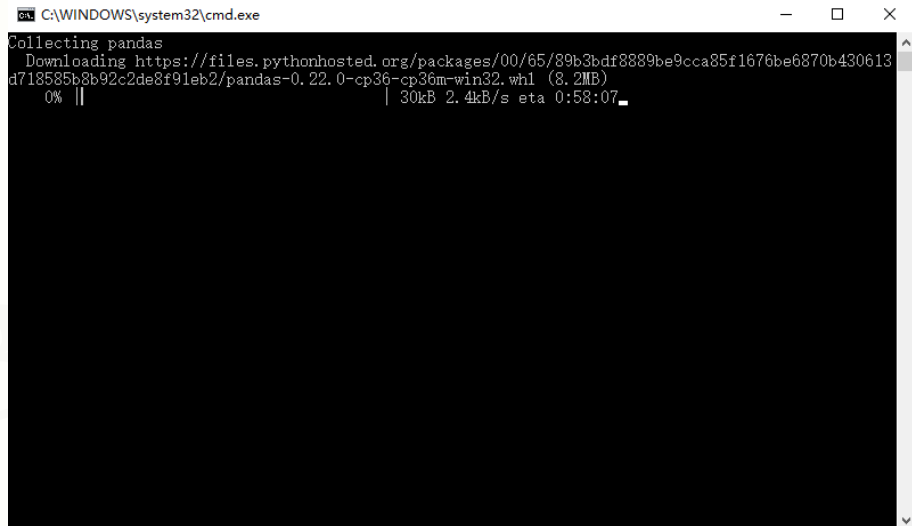
```
        os.system("pip install " + lib)
```

```
    print("Successful")
```

```
except:
```

```
    print("Failed Somehow")
```

第三方库自动安装脚本



```
C:\WINDOWS\system32\cmd.exe
Collecting pandas
  Downloading https://files.pythonhosted.org/packages/00/65/89b3bdf8889be9cca85f1676be6870b430613d718585b8b92c2de8f91eb2/pandas-0.22.0-cp36-cp36m-win32.whl (8.2MB)
    0% || 30kB 2.4kB/s eta 0:58:07_
```

准备好电脑，与老师一起编码吧！



"第三方库自动安装脚本"举一反三

```
#BatchInstall.py
```

```
import os
```

```
libs = {"numpy", "matplotlib", "pillow", "sklearn", "requests", \
        "jieba", "beautifulsoup4", "wheel", "networkx", "sympy", \
        "pyinstaller", "django", "flask", "werobot", "pyqt5", \
        "pandas", "pyopengl", "pypdf2", "docopt", "pygame"}
```

```
try:
```

```
    for lib in libs:
```

```
        os.system("pip install " + lib)
```

```
        print("Successful")
```

```
except:
```

```
    print("Failed Somehow")
```

举一反三

自动化脚本+

- 编写各类自动化运行程序的脚本，调用已有程序
- 扩展应用：安装更多第三方库，增加配置文件
- 扩展异常检测：捕获更多异常类型，程序更稳定友好

