**实验报告十四**

**姓名: 袁楚 班级：应统一班 学号：117060400114 指导老师：林卫中**

1. 爬取美国大学排名前30名的学校名称、学费、培养规模。

import re

from bs4 import BeautifulSoup

import requests

def getHTMLText(url):

send\_headers = {

"User-Agent": "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/61.0.3163.100 Safari/537.36",

"Connection": "keep-alive",

"Accept": "text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,\*/\*;q=0.8",

"Accept-Language": "zh-CN,zh;q=0.8"}

try:

r = requests.get(url, headers=send\_headers)

r.raise\_for\_status()

print(r.status\_code)

r.encoding = 'utf-8'

return r.text

except:

return ""

def fillUnivList(soup, allUniv):

data = soup.find\_all('div',{'class':re.compile('shadow-dark')})

for div in data:

singleUniv = []

div1 = div.find('div',{'style':'margin-left: 2.5rem;'})

rank = div1.get\_text().strip()

singleUniv.append(rank.split(' ')[0])

h3 = div.find('h3')

singleUniv.append(h3.get\_text().strip())

ldiv = div.find\_all('div',{'style':'padding-right: 0.5rem;'})

singleUniv.append(ldiv[0].strong.string)

singleUniv.append(ldiv[1].strong.string)

allUniv.append(singleUniv)

def printUnivList(allUniv):

print("{:<6}{:<20}{:<6}{:<10}".format("排名","学校名称","学费","培养规模"))

for u in allUniv:

print("{:<6}{:<20}{:<10}{:<10}".format(u[0],u[1],u[2],u[3]))

def main(num):

allUniv = []

url = 'https://www.usnews.com/best-colleges/rankings/national-universities'

for i in range(1, num+1):

ri = url + '?\_page=' + str(i)

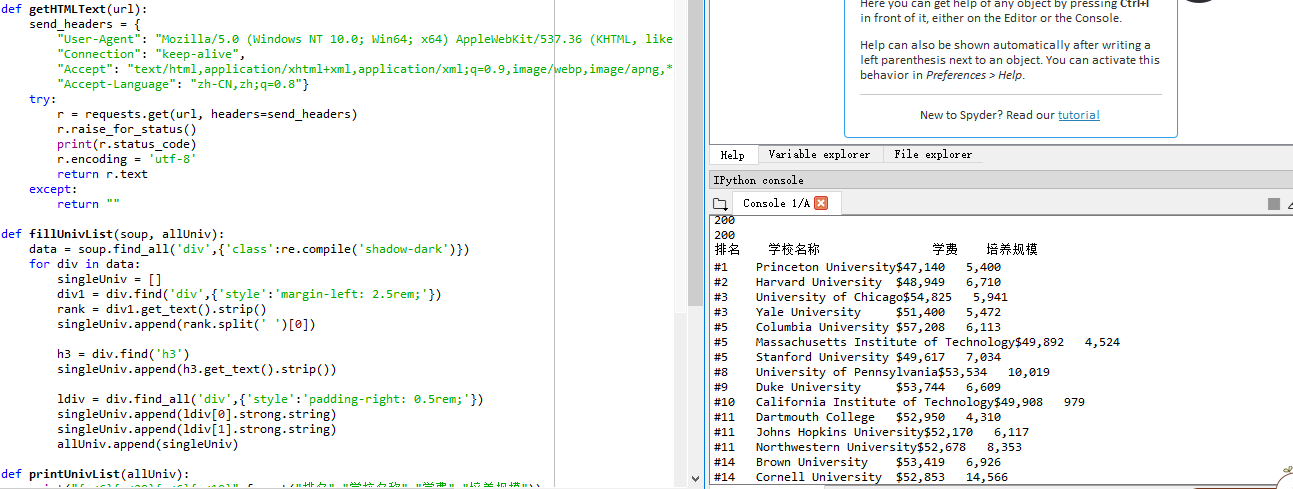
html = getHTMLText(ri)

soup = BeautifulSoup(html, 'html.parser')

fillUnivList(soup, allUniv)

printUnivList(allUniv)

main(3)



1. 列出前100名高校中学费低于$50,000的所有学校

import re

from bs4 import BeautifulSoup

import requests

def getHTMLText(url):

send\_headers = {

"User-Agent": "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/61.0.3163.100 Safari/537.36",

"Connection": "keep-alive",

"Accept": "text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,\*/\*;q=0.8",

"Accept-Language": "zh-CN,zh;q=0.8"}

try:

r = requests.get(url, headers=send\_headers)

r.raise\_for\_status()

print(r.status\_code)

r.encoding = 'utf-8'

return r.text

except:

return ""

def fillUnivList(soup, allUniv):

data = soup.find\_all('div',{'class':re.compile('shadow-dark')})

for div in data:

singleUniv = []

div1 = div.find('div',{'style':'margin-left: 2.5rem;'})

rank = div1.get\_text().strip()

singleUniv.append(rank.split(' ')[0])

h3 = div.find('h3')

singleUniv.append(h3.get\_text().strip())

ldiv = div.find\_all('div',{'style':'padding-right: 0.5rem;'})

singleUniv.append(ldiv[0].strong.string)

singleUniv.append(ldiv[1].strong.string)

allUniv.append(singleUniv)

def printUnivList(allUniv):

print("{:<6}{:<20}{:<6}{:<10}".format("排名","学校名称","学费","培养规模"))

for u in allUniv:

s = u[2].split(' ')

f = s[0].replace(',','')

f = f.replace('$','')

if int(f) < 50000:

print("{:<6}{:<20}{:<10}{:<10}".format(u[0],u[1],u[2],u[3]))

def main(num):

allUniv = []

url = 'https://www.usnews.com/best-colleges/rankings/national-universities'

for i in range(1, num+1):

ri = url + '?\_page=' + str(i)

html = getHTMLText(ri)

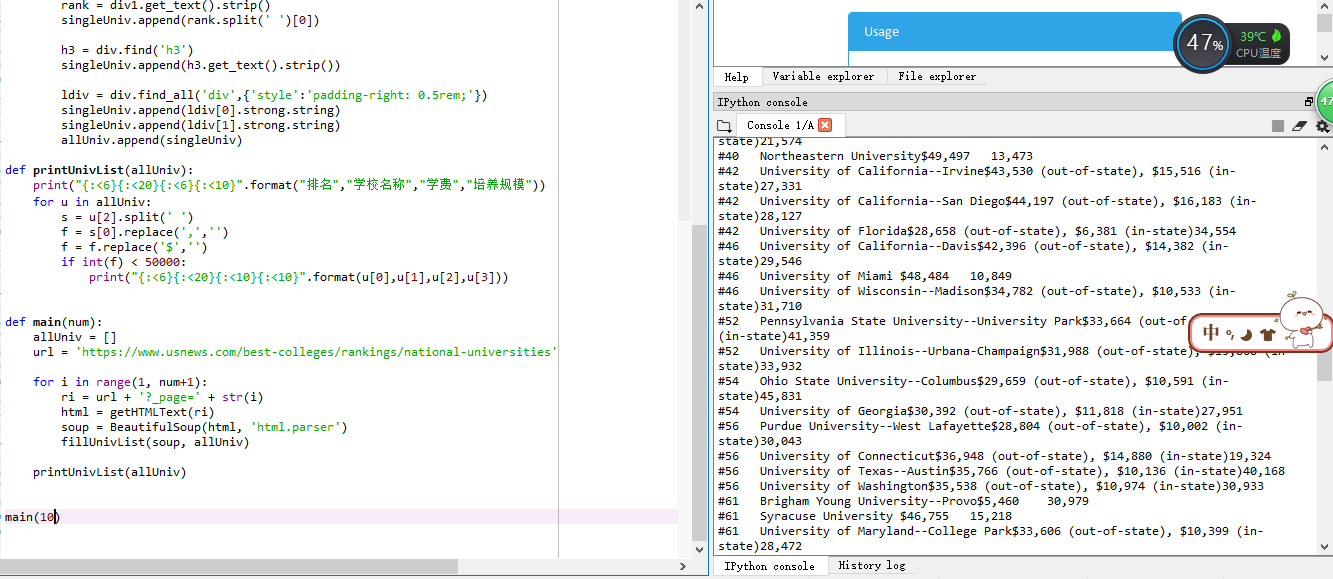
soup = BeautifulSoup(html, 'html.parser')

fillUnivList(soup, allUniv)

printUnivList(allUniv)

main(10)





1. 从百度图片上爬取90张范冰冰（或其他明星）的照片 <http://image.baidu.com/>

from bs4 import BeautifulSoup

import re

import requests

def downloadImageFile(imgUrl, destUrl, fname=''):

local\_filename = imgUrl.split('/')[-1]

print('Download Image File={}'.format(local\_filename))

try:

r = requests.get(imgUrl, stream=True)

r.raise\_for\_status()

if len(fname) == 0:

fname = local\_filename

print('fname={}'.format(fname))

with open(destUrl + "/" + fname, 'wb') as f:

for chunk in r.iter\_content(chunk\_size=1024):

if chunk:

f.write(chunk)

f.flush()

f.close()

return r.status\_code

except:

return r.status\_code

def getMorePages(kw, pages):

params = []

for i in range(30, 30\*pages+30, 30):

params.append({

'ipn': 'rj',

'ct': 201326592,

'is': '',

'fp': 'result',

'queryWord': kw,

'cl': 2,

'lm': -1,

'ie': 'utf-8',

'oe': 'utf-8',

'adpicid': '',

'st': -1,

'z': '',

'ic': 0,

'word': kw,

's': '',

'se': '',

'tab': '',

'width': '',

'height': '',

'face': 0,

'istype': 2,

'qc': '',

'nc': 1,

'fr': '',

'pn': i,

'rn': 30,

'gsm': '1e',

'1528253616462': ''

})

url = 'https://image.baidu.com/search/acjson?tn=resultjson\_com'

datalist = []

for param in params:

dj = requests.get(url, params=param).json()

data = dj['data']

if data is not None and len(data) > 0:

datalist.append(data)

return datalist

def main(kw, pages, desurl):

datalist = getMorePages(kw, pages)

index = 1

for data in datalist:

for i in data:

if i.get('thumbURL') is not None:

ir = i.get('thumbURL')

downloadImageFile(ir, desurl, str(index)+'.jpg')

index = index + 1

main('陈立农',3, 'd:/117060400114')

