**数据结构实验报告**

**学号：** 117060400225 **姓名**： 池艳 **班级：** 应用统计学二班

**指导老师：** 林卫中

**实验名称**： 文件和数据格式化

**实验要求：**（1）掌握文件的输入和输出操作

（2）了解PIL库并利用PIL库对图像进行处理

（3）图像的字符画绘制

（4）一二维数据格式化和处理

**实验题目：文件和数据格式化**

**算法实现：**

7.1 python源文件改写

textFile = open('源代码.txt', 'rt')

textFile.seek(0)

excludes = {"if","in","not","else","while","True","break"}

for word in textFile:

for p in word:

if p in excludes:

print(p, end='')

elif ord("a") <= ord(p) <= ord("z"):

print(str.upper(p))

else:

print(p, end='')

textFile.close()

7.2 图像文件压缩

from PIL import Image

from PIL import ImageFilter

im = Image.open("C:\\池艳.jpeg")

im.thumbnail((80,80))

im.save("池艳TN","jpeg")

7.5 制作英文学习词典

def userOperateInterface():

print("\n请选择词典的功能模块")

print("i:增加单词")

print("s:查询单词")

print("Q:退出单词")

print("选择功能")

return input()

def addword(wordDict:dict,fileName):

str = input("请输入要加入的单词:")

if str in wordDict.keys():

print("该单词已经加入到字典库\n")

userOperateInterface()

else:

t = input("请输入此单词的中文释义:")

wordDict[str] = t

with open(fileName,'a') as fw:

fw.write(str + " " + t + '\n')

def selectWord(wordDict:dict):

str = input("请输入要查询的单词")

if str not in wordDict.keys():

print("字典库中未找到这个单词\n")

else:

print(wordDict[str])

def main():

wordDict = ()

if os.path.exists("dict.txt"):

with open("dict.txt",'r') as fr:

for ln in fr:

s = ln.split(" ")

wordDict[s[0]] = s[1]

else:

fw = open("dict.txt",'w')

fw.close()

print("\*\*\*\*欢迎使用英文学习词典\*\*\*\*")

while True:

op = userOperateInterface()

if op =='i':

addword(wordDict,'dict.txt')

elif op =='s':

aaddword(wordDict)

elif op =='Q':

break

else:

print("输入有误\n")

main()

**实验结果：**

