#This program demonstrates Word Scrambler as per the specifications

#mentioned in the foundation program 5.0

import random; #To randomize the list elements

def create\_list\_and\_randomise(file\_contents):

for each\_line in file\_contents.split('\n'): #Extract each line in file

for each\_word in each\_line.split(' '): #Extract each word in file

length\_word = len(each\_word) #Get length of each word in the line

if length\_word > 3: #If length is greater than 3, then scramble it

first\_char = each\_word[0]

temp\_char = each\_word[length\_word-1]

shuffler\_list = []

symbols = dict()

if temp\_char.isalpha() or temp\_char.isnumeric(): #If the last character of the word is a letter or a number then store them

last\_char=temp\_char;

flag=0;

punc\_mark="";

result\_tuple = compare(length\_word-1,each\_word,shuffler\_list,symbols)

shuffler\_list = result\_tuple[0]

symbols = result\_tuple[1]

res = scramble(shuffler\_list,first\_char,last\_char,length\_word-1,symbols,flag,punc\_mark)

else: #If the last letter of the word is a special character follow a different approach

flag=1;

punc\_mark = each\_word[length\_word-1]

last\_char = each\_word[length\_word-2]

result\_tuple = compare(length\_word-2,each\_word,shuffler\_list,symbols)

shuffler\_list = result\_tuple[0]

symbols = result\_tuple[1]

res = scramble(shuffler\_list,first\_char,last\_char,length\_word-2,symbols,flag,punc\_mark)

fout.write(res) #Write the result into file

fout.write(' ')

else: #If the length is less than or equal to three don't scramble

fout.write(each\_word)

fout.write(' ')

fout.write('\n')

def compare(length\_word,string,shuffler\_list,symbols): #Function to extract the special characters to dictionary and other characters to list

for i in range(1,length\_word):

if string[i] == '!':

symbols[i]=string[i]

if string[i] == ',':

symbols[i]=string[i]

if string[i] == '?':

symbols[i]=string[i]

if string[i] == "'":

symbols[i]=string[i]

if string[i] == ".":

symbols[i]=string[i]

if string[i].isalpha():

shuffler\_list.append(string[i])

if string[i].isnumeric():

shuffler\_list.append(string[i])

return shuffler\_list,symbols;

def scramble(shuffler\_list,first\_char,last\_char,length,symbols,flag,punc\_mark): #To scramble the list and get the scrambled word

random.shuffle(shuffler\_list)

shuffler\_list.insert(0,first\_char)

shuffler\_list.insert(length,last\_char)

for key in symbols:

shuffler\_list.insert(key,symbols[key])

if flag == 1:

shuffler\_list.append(punc\_mark)

res=''.join(shuffler\_list)

return res

fin = open("C:\\Users\\KIRTHI\\Desktop\\inputfile.txt","r"); #Input file handler

fout = open("C:\\Users\\KIRTHI\\Desktop\\outputfile.txt","w"); #Output file handler

file\_contents=fin.read() #Read the file contents

create\_list\_and\_randomise(file\_contents)

fin.close() #Close the input file

fout.close() #Close the output file

print("Scrambling was successful") #Print a success message