Lizzy Hanna

CSE 3342

2/16/19

Assignment 3

1. **Program**:

#reads text from a file and turns text into list of words

def read\_file(file\_name):

f = open(file\_name, "r")

word\_list = []

for x in f:

for word in x.split():

word\_list.append(word)

return word\_list

#creates dictionary from list (key: word, value: quantity)

def word\_freq(word\_list):

dictionary = {}

for x in word\_list:

if(dictionary.get(x) == None):

dictionary[x] = 1

else:

dictionary[x] = dictionary.get(x) + 1

return dictionary

#accepts list, returns set

def word\_no\_duplicate(word\_list):

word\_set = set()

for x in word\_list:

word\_set.add(x)

return word\_set

#accepts dictionary, return set

def dic\_no\_duplicate(dictionary):

word\_set = set()

for k in dictionary:

word\_set.add(k)

return word\_set

#main method

def main():

while True:

try:

file\_name = input("Enter the name of the file: ")

word\_list = read\_file(file\_name)

except IOError:

print("Unable to open file.")

else:

print("Word List")

print(word\_list)

dictionary = word\_freq(word\_list)

print()

print("Dictionary")

print(dictionary)

word\_set = word\_no\_duplicate(word\_list)

print()

print("word\_no\_duplicates Set")

print(word\_set)

word\_set = dic\_no\_duplicate(dictionary)

print()

print("dic\_no\_duplicates Set")

print(word\_set)

break

#runs main

if \_\_name\_\_ == "\_\_main\_\_":

main()

1. **Output:**

Enter the name of the file: smu.txt

Word List

['A', 'nationally', 'ranked', 'private', 'university', 'located', 'near', 'the', 'heart', 'of', 'Dallas,', 'SMU', 'is', 'a', 'distinguished', 'center', 'for', 'global', 'research', 'with', 'a', 'liberal', 'arts', 'tradition.', 'SMU’s', 'nearly', '12,000', 'diverse,', 'high-achieving', 'students', 'come', 'from', 'all', '50', 'states', 'and', '90', 'countries', 'to', 'take', 'advantage', 'of', 'the', 'University’s', 'small', 'classes,', 'hands-on', 'research', 'opportunities,', 'leadership', 'development,', 'community', 'service,', 'international', 'study', 'and', 'innovative', 'programs.', 'The', 'University', 'offers', 'a', 'strong', 'foundation', 'in', 'the', 'humanities', 'and', 'sciences', 'and', 'undergraduate,', 'graduate', 'and', 'professional', 'degree', 'programs', 'through', 'seven', 'schools.', 'Now', 'in', 'its', 'second', 'century', 'of', 'achievement,', 'SMU', 'is', 'increasingly', 'recognized', 'for', 'the', 'ways', 'it', 'supports', 'students,', 'faculty', 'and', 'alumni', 'as', 'they', 'become', 'ethical', 'leaders', 'in', 'their', 'professions', 'and', 'communities.', 'The', 'University’s', 'entrepreneurial', 'spirit', 'lives', 'in', 'people', 'from', 'every', 'academic', 'discipline', 'who', 'see', 'opportunities', 'to', 'create', 'something', 'new', 'in', 'the', 'world', '–', 'and', 'work', 'hard', 'to', 'bring', 'their', 'innovations', 'to', 'life.', 'SMU’s', 'relationship', 'with', 'Dallas', '–', 'the', 'dynamic', 'center', 'of', 'one', 'of', 'the', 'nation’s', 'fastest-growing', 'regions', '–', 'offers', 'unique', 'learning,', 'research,', 'social', 'and', 'career', 'opportunities', 'that', 'provide', 'a', 'launch', 'pad', 'for', 'our', 'students,', 'faculty', 'and', 'alumni', 'to', 'make', 'a', 'global', 'impact.', 'On', 'the', 'most', 'beautiful', 'college', 'campus', 'in', 'the', 'country,', 'SMU', 'Mustangs', 'are', 'energized', 'by', 'unbridled', 'opportunities', '–', 'from', 'teaching,', 'learning', 'and', 'research', 'to', 'creativity,', 'performance', 'and', 'athletic', 'endeavor.', 'SMU', 'was', 'founded', 'by', 'what', 'is', 'now', 'The', 'United', 'Methodist', 'Church,', 'in', 'partnership', 'with', 'civic', 'leaders.', 'The', 'University', 'is', 'nonsectarian', 'in', 'its', 'teaching', 'and', 'committed', 'to', 'academic', 'freedom', 'and', 'open', 'inquiry.']

Dictionary

{'A': 1, 'nationally': 1, 'ranked': 1, 'private': 1, 'university': 1, 'located': 1, 'near': 1, 'the': 9, 'heart': 1, 'of': 5, 'Dallas,': 1, 'SMU': 4, 'is': 4, 'a': 5, 'distinguished': 1, 'center': 2, 'for': 3, 'global': 2, 'research': 3, 'with': 3, 'liberal': 1, 'arts': 1, 'tradition.': 1, 'SMU’s': 2, 'nearly': 1, '12,000': 1, 'diverse,': 1, 'high-achieving': 1, 'students': 1, 'come': 1, 'from': 3, 'all': 1, '50': 1, 'states': 1, 'and': 14, '90': 1, 'countries': 1, 'to': 7, 'take': 1, 'advantage': 1, 'University’s': 2, 'small': 1, 'classes,': 1, 'hands-on': 1, 'opportunities,': 1, 'leadership': 1, 'development,': 1, 'community': 1, 'service,': 1, 'international': 1, 'study': 1, 'innovative': 1, 'programs.': 1, 'The': 4, 'University': 2, 'offers': 2, 'strong': 1, 'foundation': 1, 'in': 8, 'humanities': 1, 'sciences': 1, 'undergraduate,': 1, 'graduate': 1, 'professional': 1, 'degree': 1, 'programs': 1, 'through': 1, 'seven': 1, 'schools.': 1, 'Now': 1, 'its': 2, 'second': 1, 'century': 1, 'achievement,': 1, 'increasingly': 1, 'recognized': 1, 'ways': 1, 'it': 1, 'supports': 1, 'students,': 2, 'faculty': 2, 'alumni': 2, 'as': 1, 'they': 1, 'become': 1, 'ethical': 1, 'leaders': 1, 'their': 2, 'professions': 1, 'communities.': 1, 'entrepreneurial': 1, 'spirit': 1, 'lives': 1, 'people': 1, 'every': 1, 'academic': 2, 'discipline': 1, 'who': 1, 'see': 1, 'opportunities': 3, 'create': 1, 'something': 1, 'new': 1, 'world': 1, '–': 4, 'work': 1, 'hard': 1, 'bring': 1, 'innovations': 1, 'life.': 1, 'relationship': 1, 'Dallas': 1, 'dynamic': 1, 'one': 1, 'nation’s': 1, 'fastest-growing': 1, 'regions': 1, 'unique': 1, 'learning,': 1, 'research,': 1, 'social': 1, 'career': 1, 'that': 1, 'provide': 1, 'launch': 1, 'pad': 1, 'our': 1, 'make': 1, 'impact.': 1, 'On': 1, 'most': 1, 'beautiful': 1, 'college': 1, 'campus': 1, 'country,': 1, 'Mustangs': 1, 'are': 1, 'energized': 1, 'by': 2, 'unbridled': 1, 'teaching,': 1, 'learning': 1, 'creativity,': 1, 'performance': 1, 'athletic': 1, 'endeavor.': 1, 'was': 1, 'founded': 1, 'what': 1, 'now': 1, 'United': 1, 'Methodist': 1, 'Church,': 1, 'partnership': 1, 'civic': 1, 'leaders.': 1, 'nonsectarian': 1, 'teaching': 1, 'committed': 1, 'freedom': 1, 'open': 1, 'inquiry.': 1}

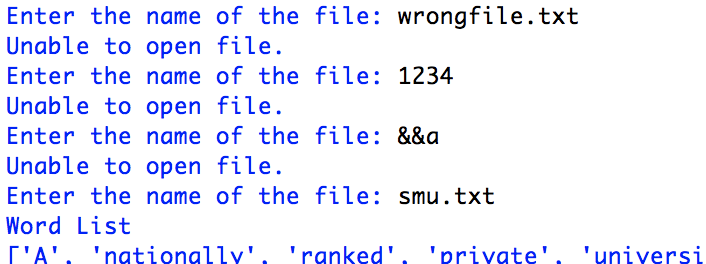
word\_no\_duplicates Set

{'arts', 'programs.', 'people', 'all', 'seven', 'students', 'energized', 'humanities', 'private', 'take', 'campus', 'heart', 'was', 'that', 'century', 'with', 'advantage', 'new', 'University', 'a', 'endeavor.', 'hard', 'create', 'by', 'unbridled', 'bring', 'civic', 'leaders', 'strong', 'achievement,', 'work', 'professions', 'research', 'relationship', 'nationally', 'partnership', 'freedom', 'regions', 'teaching,', 'tradition.', 'alumni', 'leaders.', 'learning', 'global', 'center', 'lives', 'pad', 'one', 'research,', 'career', 'nearly', 'University’s', 'increasingly', 'Mustangs', '90', 'graduate', 'is', 'liberal', 'foundation', 'faculty', 'provide', 'through', 'teaching', 'fastest-growing', 'open', 'diverse,', 'spirit', 'it', 'SMU', 'what', 'service,', 'second', 'opportunities,', 'offers', 'degree', 'beautiful', 'something', 'as', 'ways', 'sciences', 'classes,', 'hands-on', 'recognized', 'Church,', 'On', 'dynamic', 'academic', 'come', 'for', '–', 'athletic', 'committed', 'supports', 'become', 'undergraduate,', 'in', 'social', 'leadership', 'development,', '50', 'creativity,', 'performance', 'make', 'United', 'university', 'our', 'to', 'launch', 'impact.', 'world', 'ethical', 'founded', 'study', 'countries', 'discipline', 'learning,', 'innovations', 'community', 'opportunities', 'high-achieving', 'every', 'international', 'they', 'see', 'nonsectarian', 'communities.', 'SMU’s', 'the', '12,000', 'ranked', 'small', 'now', 'who', 'Methodist', 'professional', 'Dallas,', 'of', 'schools.', 'students,', 'programs', 'Dallas', 'inquiry.', 'states', 'its', 'nation’s', 'entrepreneurial', 'unique', 'college', 'life.', 'innovative', 'country,', 'distinguished', 'located', 'A', 'from', 'The', 'Now', 'near', 'and', 'most', 'their', 'are'}

dic\_no\_duplicates Set

{'arts', 'programs.', 'people', 'all', 'seven', 'students', 'energized', 'humanities', 'private', 'take', 'campus', 'heart', 'was', 'that', 'century', 'with', 'advantage', 'new', 'University', 'a', 'endeavor.', 'hard', 'create', 'by', 'unbridled', 'bring', 'civic', 'leaders', 'strong', 'achievement,', 'work', 'professions', 'research', 'relationship', 'nationally', 'partnership', 'freedom', 'regions', 'teaching,', 'tradition.', 'alumni', 'leaders.', 'learning', 'global', 'center', 'lives', 'pad', 'one', 'research,', 'career', 'nearly', 'University’s', 'increasingly', 'Mustangs', '90', 'graduate', 'is', 'liberal', 'foundation', 'faculty', 'provide', 'through', 'teaching', 'fastest-growing', 'open', 'diverse,', 'spirit', 'it', 'SMU', 'what', 'service,', 'second', 'opportunities,', 'offers', 'degree', 'beautiful', 'something', 'as', 'ways', 'sciences', 'classes,', 'hands-on', 'recognized', 'Church,', 'On', 'dynamic', 'academic', 'come', 'for', '–', 'athletic', 'committed', 'supports', 'become', 'undergraduate,', 'in', 'social', 'leadership', 'development,', '50', 'creativity,', 'performance', 'make', 'United', 'university', 'our', 'to', 'launch', 'impact.', 'world', 'ethical', 'founded', 'study', 'countries', 'discipline', 'learning,', 'innovations', 'community', 'opportunities', 'high-achieving', 'every', 'international', 'they', 'see', 'nonsectarian', 'communities.', 'SMU’s', 'the', '12,000', 'ranked', 'small', 'now', 'who', 'Methodist', 'professional', 'Dallas,', 'of', 'schools.', 'students,', 'programs', 'Dallas', 'inquiry.', 'states', 'its', 'nation’s', 'entrepreneurial', 'unique', 'college', 'life.', 'innovative', 'country,', 'distinguished', 'located', 'A', 'from', 'The', 'Now', 'near', 'and', 'most', 'their', 'are'}

1. **Test cases:**

****