import os

import csv

#import csv file

csvpath = os.path.join("Resources","election\_data.csv")

#identify voter list and candidate's dictionary

number\_vote = []

candidates = dict()

#open and read csv file

with open(csvpath,'r', encoding='utf-8') as csvfile:

csvreader = csv.reader(csvfile, delimiter=',')

header = next(csvreader) #skip the header

#loop through the data and get number of candidates with their total votes

for row in csvreader:

number\_vote.append(row[0])

candidate = row[2]

if candidate not in candidates.keys():

candidates.update({candidate:0}) # update new candidate into dict

candidates[candidate] += 1 # add up total votes for each candidate

#calculate total votes

total\_votes = sum(candidates.values())

#calculate final winner

winner = max(candidates, key=lambda k: candidates[k])

# Print the results

print(f"Election Results")

print(f"----------------------------")

print(f"Total Votes: {len(number\_vote)}")

print(f"----------------------------")

for x in candidates:

print(f"{x}:, {(candidates[x]/total\_votes\*100):.3f}%({candidates[x]})")

print(f"----------------------------")

print(f"Winner: {winner}")

print(f"----------------------------")

# create a open output file

output\_file = os.path.join("election\_final.csv")

with open(output\_file, "w") as file:

writer = csv.writer(file)

# Write the header row

file.write(f"Election Results")

file.write("\n")

file.write(f"----------------------------")

file.write("\n")

file.write(f"Total Votes: {len(number\_vote)}")

file.write("\n")

file.write(f"----------------------------")

file.write("\n")

for x in candidates:

file.write(f"{x}:, {(candidates[x]/total\_votes\*100):.3f}%({candidates[x]})")

file.write("\n")

file.write(f"----------------------------")

file.write("\n")

file.write(f"Winner: {winner}")

file.write("\n")

file.write(f"----------------------------")