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#Program Code

#Import histogram
import happy_histogram

#Region + Tweets + Keywords + Region Score
happiness_scores = {'eastern': [[], 0, 0, 0], 'central': [[], 0, 0, 0],
'mountain': [[], 0, 0, 0], 'pacific': [[], 0, 0, 0]}
regionList = ['pacific', 'eastern', 'central', 'mountain']

#setting files keywords & tweets
file_keywords = None
file_tweets = None

#Defining Function
def happinessScoreFunction():
        for region in regionList:
                total = 0
                no_of_tweets = 0


                #Calculate score
                for itr in happiness_scores[region][0]:
                        scoreTweet = 0
                        no_of_keywords = 0
                        for tweetWord in itr:

                                #Remove Extras
                                word = tweetWord.strip('/^"`&@_*\'•””~[]<>()-
+=0123456789»%$:\!.?#,;')
                                word = word.lower()

                                if word in keywords:
                                    scoreTweet = scoreTweet + keywords[word]
                                    no_of_keywords += 1

                        if no_of_keywords != 0:
                            total += scoreTweet/no_of_keywords
                            no_of_tweets += 1
                        else:
                            total += 0

                happiness_scores[region][1] = no_of_tweets

                if no_of_tweets != 0:
                        happiness_scores[region][2] = total / no_of_tweets
                else:
                        happiness_scores[region][2] = 0

while file_tweets == None:
        try:
            file_tweets = open(input("Please enter name of TWEET file: "), "r")
        except IOError as error:
            print(error)
while file_keywords == None:
        try:
            f_name = input("Please enter name of KEYWORDS file: ")
            file_keywords = open(f_name, "r")
        except IOError as error:
            print(error)


# Get keywords and values from files.
keywords = {}
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for line in file_keywords:
        word,value = line.split(',')
        value = int(value)
        keywords[word] = value

# Process Tweet F
for line in file_tweets:
        lst = line.split()
        lat = lst[0].strip('[')
        lat = float(lat.rstrip(','))
        long = float(lst[1].rstrip(']'))

        #Out of Range Region
        if lat > 49.189787 or lat < 24.660845:
            continue
        if long > -67.444574 or long < -125.242264:
            continue

        # Tweet Location
        if long <= -115.236428:
                region = 'pacific'
                happiness_scores['pacific'][3] += 1
        elif long <= -101.998892:
                region = 'mountain'
                happiness_scores['mountain'][3] += 1
        elif long <= -87.518395:
                region = 'central'
                happiness_scores['central'][3] += 1
        elif long <= -67.444574:
                region = 'eastern'
                happiness_scores['eastern'][3] += 1


        # Appending the information to the list happiness_scores
        happiness_scores[region][0].append(lst)

file_keywords.close()
file_tweets.close()
happinessScoreFunction()

for region in regionList:
        print("\n")
        print("Region " + region + ":")
        print("Total No. Tweets: " + str(happiness_scores[region][3]) +
              "\nNumber Of Tweets: " + str(happiness_scores[region][1]) +
              "\nRegion Happy Score: " + str(happiness_scores[region][2]))

# draw the happy histogram
happy_histogram.drawSimpleHistogram(happiness_scores['eastern'][2],
                                    happiness_scores['central'][2],
                                    happiness_scores['mountain'][2],
                                    happiness_scores['pacific'][2])
```