# Dependencies and Setup  
import matplotlib.pyplot as plt  
import pandas as pd  
import numpy as np  
import requests  
import time  
from scipy.stats import linregress# Import API key  
from api\_keys import weather\_api\_key# Incorporated citipy to determine city based on latitude and longitude  
from citipy import citipy# Output File (CSV)  
output\_data\_file = "output\_data/cities.csv"# Range of latitudes and longitudes  
lat\_range = (-90, 90)  
lng\_range = (-180, 180)

# List for holding lat\_lngs and cities  
lat\_lngs = []  
cities = []# Create a set of random lat and lng combinations  
lats = np.random.uniform(lat\_range[0], lat\_range[1], size=1500)  
lngs = np.random.uniform(lng\_range[0], lng\_range[1], size=1500)  
lat\_lngs = zip(lats, lngs)# Identify nearest city for each lat, lng combination  
for lat\_lng in lat\_lngs:  
 city = citipy.nearest\_city(lat\_lng[0], lat\_lng[1]).city\_name # If the city is unique, then add it to a our cities list  
 if city not in cities:  
 cities.append(city)# Print the city count to confirm sufficient count  
len(cities)