

WeatherPy

Note

- Instructions have been included for each segment. You do not have to follow them exactly, but they are included to help you think through the steps.

In [11]:

```
# Dependencies and Setup
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np
import json
import requests
import time
from datetime import datetime
from pprint import pprint

# Import API key
from api_keys import 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)
```

Generate Cities List

In [12]:

```
# List for holding lat_lngs and cities
lat_lngs = []
cities = []

# Create a set of random lat and lng combinations
lats = np.random.uniform(low=-90.000, high=90.000, size=1500)
lngs = np.random.uniform(low=-180.000, high=180.000, 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 our cities list
    if city not in cities:
        cities.append(city)
# Print the city count to confirm sufficient count
len(cities)
```

Out[12]:

605

Perform API Calls

- Perform a weather check on each city using a series of successive API calls.
- Include a print log of each city as it's being processed (with the city number and city name).

In [13]:

```
# Config information
url="http://api.openweathermap.org/data/2.5/weather?"
# units in imperial format
units = "imperial"
# query URL
query_url = f"{url}appid={api_key}&units={units}&q="
```

In [19]:

```
# create lists
name = []
cloudiness = []
country = []
date = []
max_temp = []
wind = []
humidity = []
lng = []
lat = []
```

In [20]:

```
# Print function
print(f'Beginning Data Retrieval')
print(f'_____')
# Loop through cities and append responses
for city in cities:
    try:
        response = requests.get(query_url + city).json()
        print(f"Processing Record| for {city}")
        name.append(response['name'])
        lng.append(response['coord']['lon'])
        lat.append(response['coord']['lat'])
        cloudiness.append(response['clouds']['all'])
        humidity.append(response['main']['humidity'])
        max_temp.append(response['main']['temp_max'])
        wind.append(response['wind']['speed'])
        country.append(response['sys']['country'])
    # Exception handling for errors in API
    except KeyError:
        print(f"City not found. Skipping...")
print ('_____')
print ('Data Retrieval Complete')
print ('_____')
```

Beginning Data Retrieval

```
Processing Record| for port elizabeth
Processing Record| for bengkulu
Processing Record| for ahipara
Processing Record| for erbaa
Processing Record| for arraial do cabo
Processing Record| for mataura
Processing Record| for rikitea
Processing Record| for punta arenas
Processing Record| for stephenville
Processing Record| for chuy
Processing Record| for saint-pierre
Processing Record| for muros
Processing Record| for khatanga
Processing Record| for rawannawi
City not found. Skipping...
Processing Record| for ijaki
City not found. Skipping...
Processing Record| for chokurdakh
Processing Record| for mahebourg
Processing Record| for castro
Processing Record| for katsuura
Processing Record| for maturin
Processing Record| for cherskiy
Processing Record| for luderitz
Processing Record| for ushuaia
Processing Record| for new zealand
```

Processing Record	for soriana
Processing Record	for hermanus
Processing Record	for nizhneyansk
City not found. Skipping...	
Processing Record	for bredasdorp
Processing Record	for zavitinsk
Processing Record	for barrow
Processing Record	for upernavik
Processing Record	for ormara
Processing Record	for clive
Processing Record	for cape town
Processing Record	for dunedin
Processing Record	for san patricio
Processing Record	for kieta
Processing Record	for laguna
Processing Record	for saint-philippe
Processing Record	for celestun
Processing Record	for vaini
Processing Record	for carnarvon
Processing Record	for mar del plata
Processing Record	for palmer
Processing Record	for puerto ayora
Processing Record	for provideniya
Processing Record	for butia
Processing Record	for taolanaro
City not found. Skipping...	
Processing Record	for kapaa
Processing Record	for tuktoyaktuk
Processing Record	for bealanana
Processing Record	for kudahuvadhoo
Processing Record	for murray bridge
Processing Record	for kodiak
Processing Record	for yellowknife
Processing Record	for tobane
Processing Record	for aklavik
Processing Record	for snezhnogorsk
Processing Record	for bluff
Processing Record	for albany
Processing Record	for hilo
Processing Record	for guerrero negro
Processing Record	for humaita
Processing Record	for norman wells
Processing Record	for wamba
Processing Record	for hobart
Processing Record	for clyde river
Processing Record	for mastic beach
Processing Record	for paamiut
Processing Record	for port alfred
Processing Record	for tutoia
Processing Record	for jamestown
Processing Record	for choszczno
Processing Record	for baculin
Processing Record	for atuona
Processing Record	for cabo san lucas
Processing Record	for lebu
Processing Record	for mackay
Processing Record	for talnakh
Processing Record	for tezu
Processing Record	for cidreira
Processing Record	for oban
Processing Record	for port hardy
Processing Record	for nome
Processing Record	for nowa ruda
Processing Record	for jalingo
Processing Record	for luena
Processing Record	for avarua
Processing Record	for busselton
Processing Record	for araouane
Processing Record	for meulaboh
Processing Record	for matay
Processing Record	for ratnagiri
Processing Record	for fukue
Processing Record	for nizwa
Processing Record	for road town
Processing Record	for husavik
Processing Record	for nikolskoye
Processing Record	for bethel

Processing Record| for ancud
Processing Record| for maningrida
Processing Record| for kuytun
Processing Record| for asilah
Processing Record| for amderma
City not found. Skipping...
Processing Record| for kruisfontein
Processing Record| for grand river south east
City not found. Skipping...
Processing Record| for faanui
Processing Record| for cockburn town
Processing Record| for kursk
Processing Record| for misratah
Processing Record| for lavrentiya
Processing Record| for barcelos
Processing Record| for saldanha
Processing Record| for pangnirtung
Processing Record| for butaritari
Processing Record| for vanimo
Processing Record| for manzhouli
Processing Record| for henties bay
Processing Record| for mareeba
Processing Record| for saint anthony
Processing Record| for port moresby
Processing Record| for abu dhabi
Processing Record| for progreso
Processing Record| for gorom-gorom
Processing Record| for banff
Processing Record| for lamar
Processing Record| for huinan
Processing Record| for ambilobe
Processing Record| for jamsa
Processing Record| for bambous virieux
Processing Record| for namibe
Processing Record| for kaitangata
Processing Record| for wattegama
Processing Record| for ponta do sol
Processing Record| for vila velha
Processing Record| for kasangulu
Processing Record| for cayenne
Processing Record| for constitucion
Processing Record| for lompoc
Processing Record| for santa maria
Processing Record| for mehamn
Processing Record| for barentsburg
City not found. Skipping...
Processing Record| for kaeo
Processing Record| for petropavlovsk-kamchatskiy
Processing Record| for yulara
Processing Record| for fortuna
Processing Record| for port hedland
Processing Record| for attawapiskat
City not found. Skipping...
Processing Record| for chake chake
Processing Record| for alofi
Processing Record| for ternate
Processing Record| for tuatapere
Processing Record| for iqaluit
Processing Record| for georgetown
Processing Record| for karlshus
Processing Record| for berlevag
Processing Record| for tsihombe
City not found. Skipping...
Processing Record| for mys shmidta
City not found. Skipping...
Processing Record| for saint george
Processing Record| for dawei
Processing Record| for matagami
Processing Record| for codrington
Processing Record| for torbay
Processing Record| for bima
Processing Record| for garmsar
Processing Record| for zhigansk
Processing Record| for price
Processing Record| for tambacounda
Processing Record| for rotterdam
Processing Record| for tilichiki

Processing Record| for prince george
Processing Record| for logresti
Processing Record| for darnah
Processing Record| for maryborough
Processing Record| for katangli
Processing Record| for qaanaaq
Processing Record| for komsomolskiy
Processing Record| for victoria
Processing Record| for seydi
Processing Record| for ribas do rio pardo
Processing Record| for acapulco
Processing Record| for bilibino
Processing Record| for hearst
Processing Record| for subaytilah
City not found. Skipping...
Processing Record| for high level
Processing Record| for abapo
Processing Record| for thompson
Processing Record| for puerto escondido
Processing Record| for joshimath
Processing Record| for east london
Processing Record| for viligili
City not found. Skipping...
Processing Record| for nevelsk
Processing Record| for kalmunai
Processing Record| for pisco
Processing Record| for san jeronimo de tunan
City not found. Skipping...
Processing Record| for isangel
Processing Record| for tasiilaq
Processing Record| for new norfolk
Processing Record| for pangai
Processing Record| for barbar
City not found. Skipping...
Processing Record| for ngukurr
City not found. Skipping...
Processing Record| for klaksvik
Processing Record| for itoman
Processing Record| for sibolga
Processing Record| for olhao
Processing Record| for longyearbyen
Processing Record| for bambanglipuro
Processing Record| for jiuquan
Processing Record| for sao filipe
Processing Record| for gold coast
Processing Record| for buraydah
Processing Record| for lincoln
Processing Record| for jacareacanga
Processing Record| for severnyy
Processing Record| for porosozero
Processing Record| for sentyabrskiy
City not found. Skipping...
Processing Record| for bathsheba
Processing Record| for palabuhanratu
City not found. Skipping...
Processing Record| for kahului
Processing Record| for kununurra
Processing Record| for san cristobal
Processing Record| for makhachkala
Processing Record| for shemonaikha
Processing Record| for zhaodong
Processing Record| for mount gambier
Processing Record| for rio gallegos
Processing Record| for vestmannaeyjar
Processing Record| for kiruna
Processing Record| for pevek
Processing Record| for chifeng
Processing Record| for senador canedo
Processing Record| for zatoka
Processing Record| for san juan evangelista
Processing Record| for padang
Processing Record| for valley city
Processing Record| for tuggurt
City not found. Skipping...
Processing Record| for saint-leu
Processing Record| for belushya guba
City not found. Skipping...

Processing Record| for baykit
Processing Record| for batsfjord
Processing Record| for camana
Processing Record| for mwense
Processing Record| for ayan
Processing Record| for marfino
Processing Record| for bonthe
Processing Record| for praia
Processing Record| for sinnamary
Processing Record| for ribeira grande
Processing Record| for vila franca do campo
Processing Record| for camacha
Processing Record| for hithadhoo
Processing Record| for zhob
Processing Record| for kikwit
Processing Record| for salalah
Processing Record| for makakilo city
Processing Record| for broome
Processing Record| for tecoanapa
Processing Record| for esperance
Processing Record| for la seyne-sur-mer
Processing Record| for jos
Processing Record| for changji
Processing Record| for sechelt
Processing Record| for tabiauea
City not found. Skipping...
Processing Record| for biak
Processing Record| for coos bay
Processing Record| for karratha
Processing Record| for constantine
Processing Record| for margate
Processing Record| for sandpoint
Processing Record| for hami
Processing Record| for portland
Processing Record| for teplyk
Processing Record| for mae sot
Processing Record| for dikson
Processing Record| for mocuba
Processing Record| for tandil
Processing Record| for warqla
City not found. Skipping...
Processing Record| for touros
Processing Record| for vardo
Processing Record| for olafsvik
Processing Record| for raudeberg
Processing Record| for nishihara
Processing Record| for bubaque
Processing Record| for opuwo
Processing Record| for ewa beach
Processing Record| for vostok
Processing Record| for alyangula
Processing Record| for plettenberg bay
Processing Record| for taoudenni
Processing Record| for dicabisagan
Processing Record| for tibacuy
Processing Record| for rawson
Processing Record| for touho
Processing Record| for srandakan
Processing Record| for mores lake
Processing Record| for saskylakh
Processing Record| for kutum
Processing Record| for ottawa
Processing Record| for adrar
Processing Record| for namatanai
Processing Record| for sao miguel do araguaia
Processing Record| for lolua
City not found. Skipping...
Processing Record| for jimenez
Processing Record| for khorixas
Processing Record| for vaitupu
City not found. Skipping...
Processing Record| for bin qirdan
Processing Record| for samalaeulu
City not found. Skipping...
Processing Record| for sandhaven
City not found. Skipping...
Processing Record| for serenje

Processing Record	for	nayudupeta
Processing Record	for	mount isa
Processing Record	for	sumbuya
Processing Record	for	kargopol
Processing Record	for	mmathubudukwane
Processing Record	for	yumen
Processing Record	for	caborca
Processing Record	for	swan river
Processing Record	for	kholm
Processing Record	for	saint-orens-de-gameville
Processing Record	for	tirodi
Processing Record	for	brigantine
Processing Record	for	lixourion
Processing Record	for	arlit
Processing Record	for	gorontalo
Processing Record	for	hopfgarten
Processing Record	for	los llanos de aridane
Processing Record	for	port lincoln
Processing Record	for	batagay
Processing Record	for	geraldton
Processing Record	for	jerez
Processing Record	for	henderson
Processing Record	for	ialibu
Processing Record	for	illoqqortoormiut
City not found. Skipping...		
Processing Record	for	mocambique
City not found. Skipping...		
Processing Record	for	minsk
Processing Record	for	coahuayana
Processing Record	for	nanakuli
Processing Record	for	hofn
Processing Record	for	okhotsk
Processing Record	for	vigrestad
Processing Record	for	kedrovyy
Processing Record	for	akdepe
Processing Record	for	hay river
Processing Record	for	smithers
Processing Record	for	ilulissat
Processing Record	for	mattawa
Processing Record	for	saint-georges
Processing Record	for	tiksi
Processing Record	for	salair
Processing Record	for	richards bay
Processing Record	for	guatire
Processing Record	for	launceston
Processing Record	for	ayagoz
Processing Record	for	prieska
Processing Record	for	luoyang
Processing Record	for	whithorn
Processing Record	for	shimoda
Processing Record	for	liangxiang
Processing Record	for	luanda
Processing Record	for	saint-augustin
Processing Record	for	honiara
Processing Record	for	airai
Processing Record	for	porto novo
Processing Record	for	sangmelima
Processing Record	for	port-gentil
Processing Record	for	coquimbo
Processing Record	for	dire dawa
Processing Record	for	puerto del rosario
Processing Record	for	vitim
Processing Record	for	skibbereen
Processing Record	for	kavaratti
Processing Record	for	sinkat
City not found. Skipping...		
Processing Record	for	wukari
Processing Record	for	leningradskiy
Processing Record	for	mergui
City not found. Skipping...		
Processing Record	for	santa fe
Processing Record	for	upington
Processing Record	for	santa vitoria
Processing Record	for	egvekinot
Processing Record	for	haikou
Processing Record	for	bonavista
Processing Record	for	amursk

Processing Record	for itarema
Processing Record	for umarkot
Processing Record	for caravelas
Processing Record	for gorlice
Processing Record	for peterhead
Processing Record	for grindavik
Processing Record	for rostov
Processing Record	for nicoya
Processing Record	for malakal
Processing Record	for conakry
Processing Record	for ocho rios
Processing Record	for beringovskiy
Processing Record	for lata
Processing Record	for naze
Processing Record	for oppdal
Processing Record	for neryungri
Processing Record	for ugoofaaru
Processing Record	for victor harbor
Processing Record	for maykain
City not found. Skipping...	
Processing Record	for luang prabang
Processing Record	for nioki
Processing Record	for bontang
Processing Record	for chara
Processing Record	for votice
Processing Record	for rungata
City not found. Skipping...	
Processing Record	for lasa
Processing Record	for pasil
Processing Record	for bukoba
Processing Record	for sitka
Processing Record	for qiongshan
Processing Record	for jawhar
Processing Record	for cartagena
Processing Record	for ambon
Processing Record	for amapa
Processing Record	for kamen-na-obi
Processing Record	for povenets
Processing Record	for huarmey
Processing Record	for san lazaro
Processing Record	for valreas
Processing Record	for khani
Processing Record	for pagatin
Processing Record	for cherepanovo
Processing Record	for lodja
Processing Record	for ust-kuyga
Processing Record	for magaramkent
Processing Record	for rio cuarto
Processing Record	for san pedro
Processing Record	for buala
Processing Record	for orlik
Processing Record	for taganak
Processing Record	for zar
Processing Record	for ariquemes
Processing Record	for ust-kamchatsk
City not found. Skipping...	
Processing Record	for catamarca
Processing Record	for san quintin
Processing Record	for coihaique
Processing Record	for mineiros
Processing Record	for hasaki
Processing Record	for presidente medici
Processing Record	for nikolayevsk-na-amure
Processing Record	for narsaq
Processing Record	for north platte
Processing Record	for mata
Processing Record	for mbandaka
Processing Record	for necochea
Processing Record	for acajutla
Processing Record	for valenca do piaui
Processing Record	for inirida
Processing Record	for krivosheino
Processing Record	for haines junction
Processing Record	for tawnat
City not found. Skipping...	
Processing Record	for jumla
Processing Record	for oropesa

Processing Record| for punta alta
Processing Record| for carauari
Processing Record| for dukat
Processing Record| for rocha
Processing Record| for hurricane
Processing Record| for tuysarkan
City not found. Skipping...
Processing Record| for ales
Processing Record| for miri
Processing Record| for severo-kurilsk
Processing Record| for bilma
Processing Record| for nizhnevartovsk
Processing Record| for qui nhon
Processing Record| for sosva
Processing Record| for bongouanou
Processing Record| for wanning
Processing Record| for alta floresta
Processing Record| for dandong
Processing Record| for erzin
Processing Record| for sugod
Processing Record| for pemangkat
Processing Record| for hirara
Processing Record| for uwayl
City not found. Skipping...
Processing Record| for staryy oskol
Processing Record| for datong
Processing Record| for calbuco
Processing Record| for port macquarie
Processing Record| for pipraich
Processing Record| for pakxan
Processing Record| for oranjemund
Processing Record| for alice springs
Processing Record| for mount pleasant
Processing Record| for gorno-chuyskiy
City not found. Skipping...
Processing Record| for ouricuri
Processing Record| for flinders
Processing Record| for marienburg
Processing Record| for tumanny
City not found. Skipping...
Processing Record| for manicore
Processing Record| for magadi
Processing Record| for cantagallo
Processing Record| for jackson
Processing Record| for beloha
Processing Record| for mayo
Processing Record| for tura
Processing Record| for carutapera
Processing Record| for bintulu
Processing Record| for tecpan
Processing Record| for daud khel
Processing Record| for yerbogachen
Processing Record| for krasnyy chikoy
Processing Record| for emba
Processing Record| for mandalgovi
Processing Record| for plouzane
Processing Record| for drayton valley
Processing Record| for cordoba
Processing Record| for talawdi
City not found. Skipping...
Processing Record| for abalak
Processing Record| for talcahuano
Processing Record| for novobirilyussy
Processing Record| for izacic
Processing Record| for marcona
City not found. Skipping...
Processing Record| for tera
Processing Record| for aykhal
Processing Record| for pimenteiras
Processing Record| for eyl
Processing Record| for labuhan
Processing Record| for ostrovnay
Processing Record| for altay
Processing Record| for sug-aksy
City not found. Skipping...
Processing Record| for ustyey
Processing Record| for karaul

City not found. Skipping...
Processing Record| for nguui
City not found. Skipping...
Processing Record| for sioux lookout
Processing Record| for tevriz
Processing Record| for palana
Processing Record| for pangody
Processing Record| for marsh harbour
Processing Record| for moron
Processing Record| for pokaran
Processing Record| for chuguyevka
Processing Record| for qadirpur ran
Processing Record| for sobolevo
Processing Record| for jaru
Processing Record| for kanniyakumari
Processing Record| for kargasok
Processing Record| for inongo
Processing Record| for hundested
Processing Record| for thinadhoo
Processing Record| for markova
Processing Record| for nouadhibou
Processing Record| for deputatskiy
Processing Record| for urucui
Processing Record| for macusani
Processing Record| for bogorodskoye
Processing Record| for phan rang
City not found. Skipping...
Processing Record| for doha
Processing Record| for camacupa
Processing Record| for ilyich
Processing Record| for nago
Processing Record| for utiel
Processing Record| for terney
Processing Record| for mattru
Processing Record| for oskarshamn
Processing Record| for kupang
Processing Record| for santo antonio do sudoeste
Processing Record| for udachnyy
Processing Record| for kizhinga
Processing Record| for terrassa
Processing Record| for phibun mangsahan
Processing Record| for the pas
Processing Record| for khonuu
City not found. Skipping...
Processing Record| for tyukhtet
Processing Record| for huambo
Processing Record| for taga
Processing Record| for kyaikto
Processing Record| for midland
Processing Record| for lesosibirsk
Processing Record| for juneau
Processing Record| for sola
Processing Record| for nebaj
Processing Record| for kavieng
Processing Record| for marabba
Processing Record| for kuah
Processing Record| for maltahohe
Processing Record| for fonte boa
Processing Record| for riyadh
Processing Record| for lara
Processing Record| for yuanping
Processing Record| for dingle
Processing Record| for chapais
Processing Record| for erdenet
Processing Record| for prado
Processing Record| for tierranueva
Processing Record| for santo amaro da imperatriz
Processing Record| for karlshamn
Processing Record| for pervomayskoye
Processing Record| for ulladulla
Processing Record| for sungai siput utara
City not found. Skipping...
Processing Record| for batemans bay
Processing Record| for tongren
Processing Record| for sumbe
Processing Record| for sambava
Processing Record| for tabuk

```
Processing Record| for karauzyak
City not found. Skipping...
Processing Record| for gobabis
Processing Record| for marstal
Processing Record| for faya
Processing Record| for dobryanka
Processing Record| for chudovo
Processing Record| for erenhot
Processing Record| for galiwinku
City not found. Skipping...
Processing Record| for pudozh
```

Data Retrieval Complete

Convert Raw Data to DataFrame

- Export the city data into a .csv.
- Display the DataFrame

In [24]:

```
# Create a dictionary of main columns
weather_info={
    "City":name,
    "Cloudiness":cloudiness,
    "Country":country,
    "Humidity":humidity,
    "Lat":lat,
    "Lng":lng,
    "Max Temp":max_temp,
    "Wind Speed":wind
}
```

In [25]:

```
# Create a dataframe from dictionary
weather_df = pd.DataFrame(weather_info)
```

In [26]:

```
# Count data to verify data
weather_df.count()
```

Out[26]:

```
City          558
Cloudiness    558
Country       558
Humidity      558
Lat           558
Lng           558
Max Temp      558
Wind Speed    558
dtype: int64
```

In [27]:

```
# Create dataframe header to verify data
weather_df.head(5)
```

Out[27]:

	City	Cloudiness	Country	Humidity	Lat	Lng	Max Temp	Wind Speed
0	Port Elizabeth	20	ZA	61	-33.92	25.57	78.80	18.34
1	Bengkulu	100	ID	92	-3.80	102.27	76.48	2.42
2	Ahipara	17	NZ	99	-35.17	173.17	63.00	9.91

3	Erbaa	0	TR	76	40.67	36.57	28.63	7.36
	City	Cloudiness	Country	Humidity	Lat	Lng	Max Temp	Wind Speed
4	Arraial do Cabo	22	BR	83	-22.97	-42.03	75.43	20.76

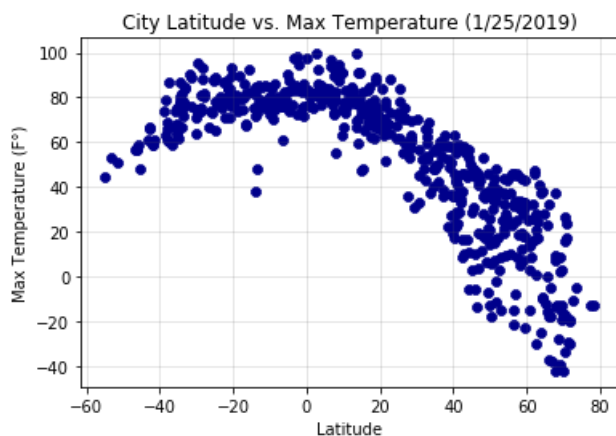
Plotting the Data

- Use proper labeling of the plots using plot titles (including date of analysis) and axes labels.
- Save the plotted figures as .pngs.

Latitude vs. Temperature Plot

In [44]:

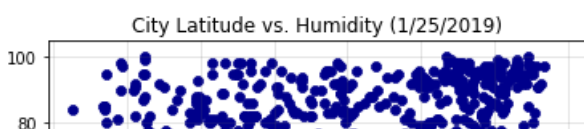
```
# Create a scatter plot
plt.scatter(weather_df ["Lat"], weather_df ["Max Temp"], marker = "8", color = "darkblue")
# Add grid
plt.grid(b=True, which='major', color='#666666', linestyle='-', alpha=0.2)
# Add x-label
plt.xlabel("Latitude")
# Add y-label
plt.ylabel("Max Temperature (F°)")
# Add scatter plot title
plt.title("City Latitude vs. Max Temperature (1/25/2019)")
# Save scatter plot graph in .png file
plt.savefig("LatitudeVsTemp.png")
# Display scatter plot
plt.show()
```

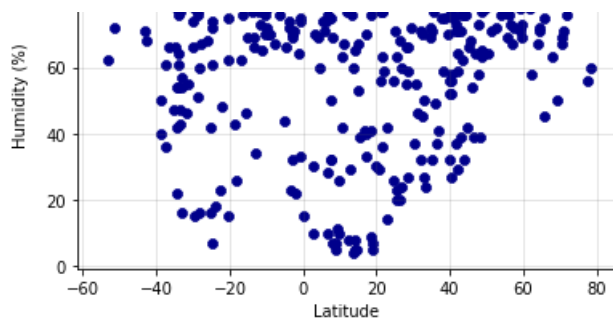


Latitude vs. Humidity Plot

In [46]:

```
# Create a scatter plot
plt.scatter(weather_df ["Lat"], weather_df ["Humidity"], marker = "8", color = "darkblue")
# Add grid
plt.grid(b=True, which='major', color='#666666', linestyle='-', alpha=0.2)
# Add x-label
plt.xlabel("Latitude")
# Add y-label
plt.ylabel("Humidity (%)")
# Add scatter plot title
plt.title("City Latitude vs. Humidity (1/25/2019)")
# Save scatter plot graph in .png file
plt.savefig("LatitudeVsHumidity.png")
# Display scatter plot
plt.show()
```

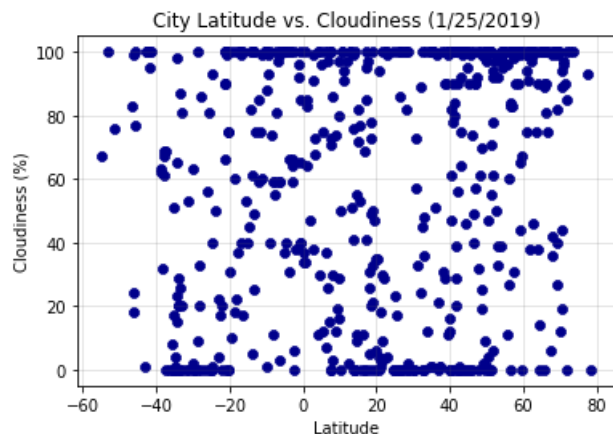




Latitude vs. Cloudiness Plot

In [47]:

```
# Create a scatter plot
plt.scatter(weather_df ["Lat"], weather_df ["Cloudiness"], marker = "8", color = "darkblue")
# Add grid
plt.grid(b=True, which='major', color='#666666', linestyle='--', alpha=0.2)
# Add x-label
plt.xlabel("Latitude")
# Add y-label
plt.ylabel("Cloudiness (%)")
# Add scatter plot title
plt.title("City Latitude vs. Cloudiness (1/25/2019)")
# Save scatter plot graph in .png file
plt.savefig("LatitudeVsCloudiness.png")
# Display scatter plot
plt.show()
```



Latitude vs. Wind Speed Plot

In [48]:

```
# Create a scatter plot
plt.scatter(weather_df ["Lat"], weather_df ["Wind Speed"], marker = "8", color = "darkblue")
# Add grid
plt.grid(b=True, which='major', color='#666666', linestyle='--', alpha=0.2)
# Add x-label
plt.xlabel("Latitude")
# Add y-label
plt.ylabel("Wind Speed (mph)")
# Add scatter plot title
plt.title("City Latitude vs. Wind Speed (1/25/2019)")
# Save scatter plot graph in .png file
plt.savefig("LatitudeVsWindSpeed.png")
# Display scatter plot
plt.show()
```

