

Step 1: Install Python and pip

1. Download Python:

- Open your web browser and go to python.org/downloads.
- Look for the big yellow button that says something like "Download Python 3.11.x" (or the latest version). Click it.
- Once the file is downloaded, open it to start the installation.

1. Run the Installer:

- **Important:** On the first screen of the installer, check the box that says "**Add Python 3.11 to PATH**". This makes sure your computer knows where to find Python.
- Click "**Install Now**".
- Wait until the installation finishes. You will see a message saying that Python has been installed successfully.

1. Verify the Installation:

- Click the **Start** menu (the Windows icon at the bottom left) and type `cmd`.
- Open the **Command Prompt**.
- Type this command and press **Enter**:
- `bash`
- `Copy`
- `python --version`
-
- You should see a message like: `Python 3.11.x`. This means Python is installed correctly.
- **Note:** pip (the package installer) is included with Python by default. You can check pip by typing:
- `bash`
- `Copy`
- `pip --version`
-
- You should see a message with the version number of pip.

Step 2: Install Required Python Packages

The program we will run needs a few extra tools (called packages) to work. We will install these one by one.

1. Open the Command Prompt (if it isn't already open).

2. Type the following command and press Enter:

3. `bash`

4. `Copy`

5. `pip install googlemaps pandas requests beautifulsoup4 openpyxl`

6.

- This command tells pip to download and install:

- **googlemaps:** For working with Google's Maps and business information.
- **pandas:** For organizing and saving data.
- **requests:** For fetching web pages.
- **beautifulsoup4:** For reading the web page text (used when searching for email addresses).
- **openpyxl:** For saving the information into Excel files.
- Wait until all of these packages are installed. You should see messages indicating that the installation was successful.

Step 3: Create Your Business Category File

The program will read a list of business categories (like "Restaurants", "Tech Services", etc.) from a text file. Each category should be on a separate line.

1. **Open Notepad:**
 - Click the **Start** menu.
 - Type `Notepad` and open it.
1. **Enter Your Categories:**
 - Type each business category on a new line. For example:
 - `nginx`
 - **Copy**
 - `Restaurants Tech Services Grocery Stores Health Clinics`
 - Make sure each line has only one category.
1. **Save the File:**
 - In Notepad, click **File** and then **Save As...**
 - Choose a location that is easy to remember (for example, your Desktop).
 - In the "File name" box, type `categories.txt`
 - In the "Save as type" dropdown, select **All Files**.
 - Click **Save**.

Step 4: The Python Program

Below is the updated Python program. This program will:

- Ask you for your Google Maps API key.
- Ask for a location (for example, "Vero Beach" or any city/zipcode/state).
- Ask for the path to the category file you just created.
- Search for businesses for each category.
- Save each category's results into its own Excel file.
- Also create one master Excel file with all the data.

Copy the code below and paste it into a new file in your text editor (for example, Notepad). Then save the file as `scrape.py` on your Desktop.

python

Copy

```

import googlemaps import requests from bs4 import BeautifulSoup import re
import pandas as pd import time import os def get_email_from_website(url):
"""

    This function visits a website and looks for an email address.

    It returns the first email found or an empty string if none is found.

    """
    try:
        response = requests.get(url, timeout=10)
    html = response.text
    emails = re.findall(r"[A-Za-z0-9._%+-]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,}", html)
    return emails[0] if emails else ""
except Exception as e:
    print(f"Error fetching {url}: {e}")
return "" def sanitize_filename(name):
"""

    This function cleans a text string so it can be used as a safe file name.

    """
    return "".join(c for c in name if c not in r'\/:*?"<>|') def
search_businesses(gmaps, search_query):
"""

    This function searches for businesses using the Google Places API.

    It handles multiple pages of results.

    """
    results = []
    page_token = None
    while True:
        if
page_token:
            places_result = gmaps.places(query=search_query,
page_token=page_token)
        else:
            places_result =
gmaps.places(query=search_query)
        results.extend(places_result.get('results', []))
        page_token =
places_result.get('next_page_token')
        if page_token:
            time.sleep(2) # Wait for the next page token to become valid.
        else:
            break
    return results
def get_business_details(gmaps, place_id):
"""

    This function gets detailed information about a business using its Place
ID.

    """
    details_response = gmaps.place(place_id=place_id)
    return
details_response.get('result', {})
def main():
    # Ask for your Google
Maps API key.
    api_key = input("Enter your Google Maps API Key: ").strip()
    gmaps = googlemaps.Client(key=api_key)
    # Ask for the location (City,
Zipcode, or State).
    location = input("Enter a location (City, Zipcode or
State): ").strip()
    # Ask for the path to the category file.
    file_path = input("Enter the path to your text file with business categories
(for example, C:\\Users\\Owner\\Desktop\\categories.txt): ").strip()
    # Read the categories from the text file.
    try:
        with
open(file_path, 'r', encoding='utf-8') as f:
            queries =
[line.strip() for line in f if line.strip()]
    except Exception as e:
        print(f"Error reading file: {e}")
        return
    master_data = []
    # Process each business category.
    for query in queries:
        search_query = f"{query} in {location}"
        print(f"\nSearching for
businesses with query: '{search_query}'")
        results =
search_businesses(gmaps, search_query)
        print(f"Found {len(results)}
businesses for category '{query}'.")
        business_data = []
        for place in results:
            place_id = place['place_id']
            details = get_business_details(gmaps, place_id)
            name =
details.get('name', '')
            address =
details.get('formatted_address', '')
            phone =
details.get('formatted_phone_number', '')
            website =
details.get('website', '')
            email = ""
#

```

```

If a website is available, try to scrape an email address.
website: print(f"Scraping website for {name}: {website}")
email = get_email_from_website(website) time.sleep(1)
row = { "Category": query, "Name": name,
"Address": address, "Phone": phone,
"Website": website, "Email": email }
business_data.append(row) master_data.append(row)
# Save the results for this category into its own Excel file. df =
pd.DataFrame(business_data) safe_query = sanitize_filename(query)
output_file = f"business_data_{safe_query}.xlsx"
df.to_excel(output_file, index=False) print(f"Data for category
'{query}' saved to {output_file}.") # Save all the data into a
master Excel file. df_master = pd.DataFrame(master_data) master_file
= "master_business_data.xlsx" df_master.to_excel(master_file,
index=False) print(f"\nMaster file saved to {master_file}.") if __name__
== "__main__": main()

```

Step 5: Run the Program

1. Open the Command Prompt:

- Click the **Start** menu, type `cmd`, and press **Enter**.

1. Navigate to the Desktop:

- In the Command Prompt, type the following command and press **Enter**:
- `bash`
- `Copy`
- `cd %USERPROFILE%\Desktop`
- This command changes the folder to your Desktop, where you saved `scrape.py` and your `categories.txt`.

1. Run the Program:

- Type the following command and press **Enter**:
- `bash`
- `Copy`
- `python scrape.py`
-
- You will be asked to enter:
- Your Google Maps API Key (you must have one from Google).
- The location (for example, "Vero Beach").
- The full path to your categories file (for example, `C:\Users\Owner\Desktop\categories.txt`).
- The program will then search for businesses in each category, create one Excel file for each category (for example, `business_data_Restaurants.xlsx`) and a master file (`master_business_data.xlsx`) that contains all the data.

Final Tips

- **Google Maps API Key:**

You will need to sign up for a Google Maps API key. Visit Google Cloud Platform to get started.

- **File Paths:**

When asked for a file path, you can usually copy it from File Explorer. Just right-click the file, choose **Properties**, and copy the "Location" plus the file name.

- **Take Your Time:**

Each step might take a little time, so don't worry if you need to reread the instructions.