Final Project

“PHONE NUMBER TRACKER USING PYTHON”

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Submitted by:

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Project Title:

“Phone Number Tracker Using Python”

Objective:

Track phone number details like location, carrier, and timezone to verify validity, ensuring secure and spam-free communication for users.

Why python?

* Reduce development time
* Reduce code length
* Easy to learn and use as developers
* Easy to understand codes

Real Life Application:

In real life, the phone number tracker project can help users identify unknown callers, avoid potential spam calls, and verify the legitimacy of international numbers. This practical application enhances communication security and provides valuable information about incoming calls.

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1. Identifying Caller Information:

The project can be used to identify information about a caller, such as their location and carrier, helping users recognize and verify incoming calls.

1. Avoid Unwanted Calls:

You can use it to check if a strange number calling you is from a known company or if others have marked it as a spam call. This way, you can avoid picking up calls you don’t want.

1. Verifying International Numbers:

For users dealing with international contacts, the project aids in verifying the validity of phone numbers, ensuring they are correctly formatted and belong to valid carriers.

1. Enhancing Security:

Businesses and individuals can use the phone number tracker to enhance security measures by validating phone numbers during account registrations or transactions, reducing the risk of fake or unauthorized entries.

1. Providing Location-Based Services:

Location information obtained from the project can be beneficial for applications offering location-based services, such as delivery tracking or location-based promotions, where knowing the user’s location is essential.

pre – requirements to run project

1. python
2. installation of following libraries in terminal
3. phonenumbers
4. tkinter

Type the following code in the command line of the terminal to install the libraries:

pip install phonenumbers

pip install tkinter

project’s codes

importtkinterastk

fromtkinterimportmessagebox

importphonenumbers

fromphonenumbersimportcarrier,geocoder,timezone

defget\_phone\_info():

mobileNo=entry.get()

try:

parsed\_number=phonenumbers.parse(mobileNo)

info\_str=""

info\_str+=f"Is number valid: {phonenumbers.is\_valid\_number(parsed\_number)}\n"

info\_str+=f"Time Zone: {timezone.time\_zones\_for\_number(parsed\_number)}\n"

info\_str+=f"Carrier Name: {carrier.name\_for\_number(parsed\_number, 'en')}\n"

info\_str+=f"Location: {geocoder.description\_for\_number(parsed\_number, 'en')}\n"

messagebox.showinfo("Phone Number Information",info\_str)

exceptphonenumbers.phonenumberutil.NumberParseException:

messagebox.showerror("Error","Invalid phone number format. Please try again.")

*# Create main window*

root=tk.Tk()

root.title("Phone Number Information Tool")

*# Create labels and entry*

label=tk.Label(root,text="Enter mobile number with country code:")

label.pack(pady=5)

entry=tk.Entry(root,width=30)

entry.pack(pady=5)

*# Create button*

button=tk.Button(root,text="Get Information",command=get\_phone\_info)

button.pack(pady=5)

*# Run the main event loop*

root.mainloop()

Codes in detail:

How this code works:

1. Import tkinter library as tk:

This line imports the tkinter library and assigns it the alias tk, commonly used for tkinter.

1. From tkinter import messagebox:

This line imports the messagebox module from the tkinter library.

1. Import phonenumbers:

This line imports the phonenumbers library, used for parsing, formatting, and validating international phone numbers.

1. From phonenumbers import carrier, geocoder, timezone:

This line imports specific modules (carrier, geocoder, timezone) from the phonenumbers library.

1. Define the function get\_phone\_info():

This function retrieves information about a phone number using the phonenumbers library.

1. Retrieve the entered phone number from the entry widget:

Gets the phone number entered by the user from the entry widget and stores it in the variable mobileNo.

1. Try to parse the phone number using phonenumbers:

Attempts to parse the entered phone number using the phonenumbers library.

1. Build the information string using parsed number:

Constructs a string with various pieces of information about the phone number.

1. Display the information using a messagebox:

Shows a messagebox with the gathered information about the phone number.

1. Except block for handling invalid phone number format:

Catches and handles an exception if the phone number has an invalid

format.

1. Create the main window using tkinter:

Creates the main window for the graphical user interface (GUI) using

tkinter.

1. Set the title for the main window:

Sets the title of the main window to "Phone Number Information Tool."

1. Create labels and an entry widget:

Creates a label and an entry widget for the user to enter a mobile number.

1. Create a button for getting information:

Creates a button that triggers the get\_phone\_info function to retrieve and

display information when clicked.

1. Run the main event loop:

Starts the main event loop of the GUI, allowing user interaction and keeping the application running until the user closes the window.

review about class and bano qabil

Studying at Bano Qabil Institute has been a wonderful experience. The institute provides excellent computer and AI classes in a supportive environment. The teaching tools are modern and effective, and our teacher at Bano Qabil Institute is not only cooperative but also makes learning Python enjoyable. We are grateful for the education received at Bano Qabil Institute.

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