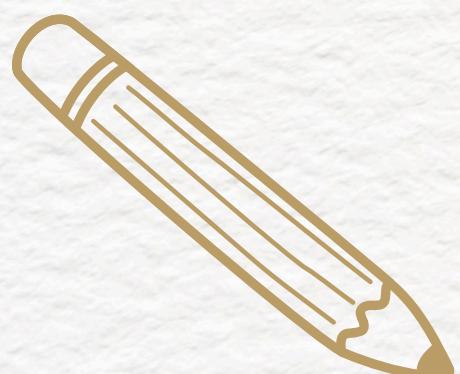


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# Group Project



December 15, 2024

# Team Members

Shahd Alsayed

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# Project Overview

## Social Media Data Fetcher

- A tool for fetching data from Facebook, Instagram, and Twitter.
- Utilizes playwright, instaloader, tkinter, and Pillow for data scraping and user interface.

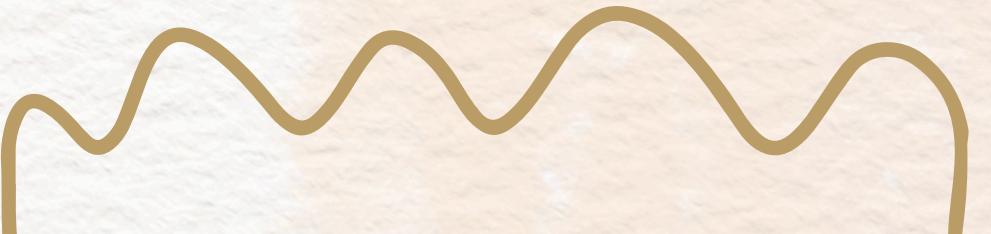
## Key Features

Fetches basic user information:

- Facebook: Name, Bio, Profile Picture, Birthday
- Instagram: Full Name, Bio, Followers, Profile Picture
- Twitter: Latest Tweets, User Info, Profile Picture

Displays results and profile images dynamically.

Multi-threaded: Supports fetching data in parallel across multiple threads.



# Technologies Used

1. Playwright: Automates the browsing and scraping of Facebook and Twitter.
2. Instaloader: Extracts data from Instagram profiles.
3. Tkinter: GUI framework for creating the user interface.
4. Pillow: For displaying profile images.

# How It Works?



## User Input:

Enter number of threads  
and social media platform  
username/ID.



## Data Fetching:

For each platform, the tool  
fetches user information via  
automation.



## Display Results:

Results are shown in  
individual thread windows  
with profile images.



# User Interface

Enter Number of Threads:

**Open Threads**

- Main Window: Input number of threads and start the fetch process.
- Thread Windows: For each thread, input platform name and username.
- Results Area: Displays fetched data, profile image.

**Thread 1**

Select Platform:

Facebook

Enter Username/ID:

Results will appear here

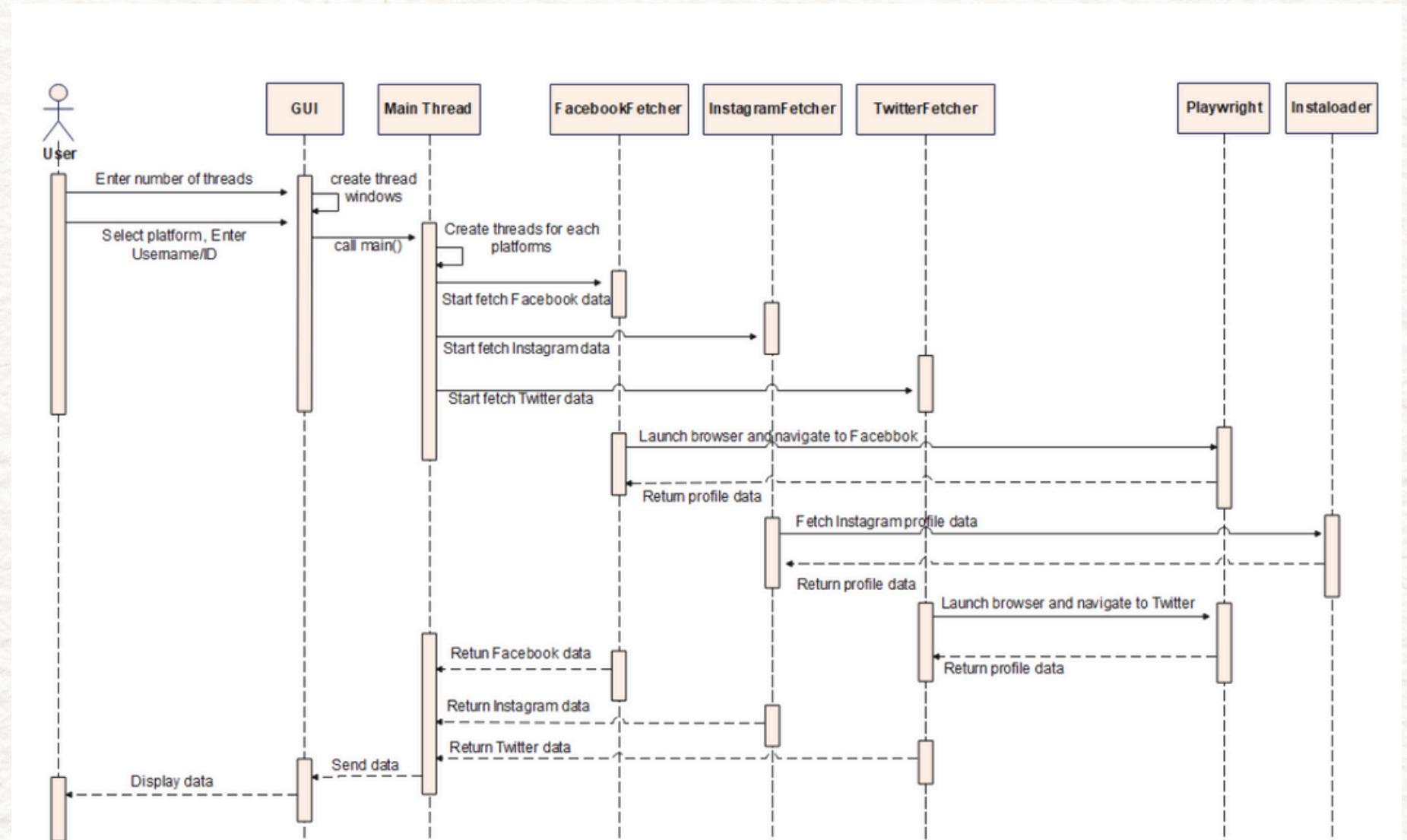
Profile image will appear here

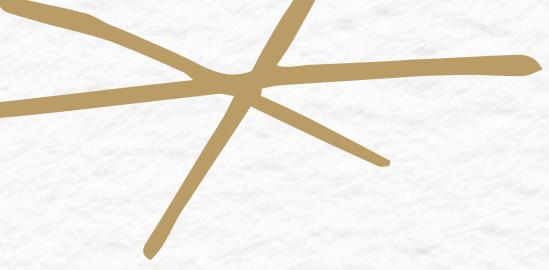
Fetch Data



# Code Workflow

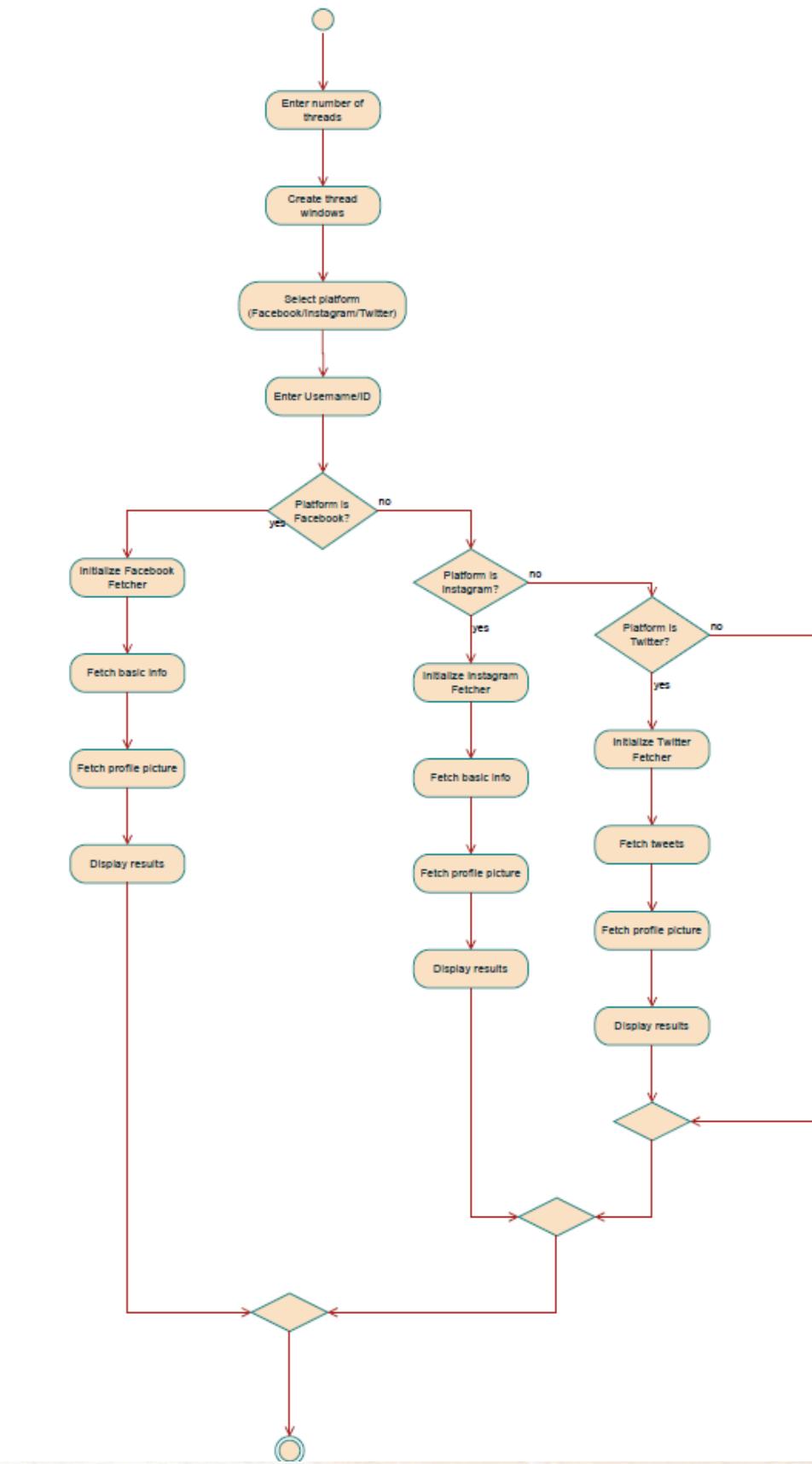
1. Multiple Threads: Each thread fetches data for a specific platform.
2. Fetching Logic:
  - a. Facebook and Twitter use Playwright to scrape data.
  - b. Instagram uses Instaloader.
3. Image Handling: Profile images are downloaded and displayed in the UI.





# Code Workflow

1. Multiple Threads: Each thread fetches data for a specific platform.
2. Fetching Logic:
  - a. Facebook and Twitter use Playwright to scrape data.
  - b. Instagram uses Instaloader.
3. Image Handling: Profile images are downloaded and displayed in the UI.



# Challenges & Solutions



## Handling Multiple Threads:

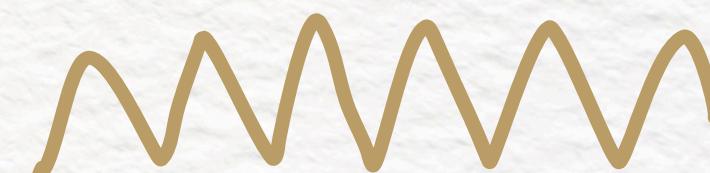
- Managed via Tkinter's multi-threading capabilities.

## Dynamic Image Loading:

- Used Pillow to dynamically update images within the UI.

## Ensuring Accurate Web Scraping with Dynamic Content:

- Implemented Playwright to handle dynamic web pages, allowing content to load fully before extracting data.



# Conclusion



The Social Media Data Fetcher is a powerful tool that streamlines the process of fetching user information from Facebook, Instagram, and Twitter. By leveraging technologies like Playwright, Instaloader, Tkinter, and Pillow, this tool provides a seamless and dynamic user experience with multi-threading support for efficient data retrieval.



## Key Takeaways:

- The project demonstrates the power of automation and web scraping for data extraction.
- Multi-threading ensures improved performance and responsiveness.
- A user-friendly interface simplifies interaction with complex backend processes.



## Future Outlook:

- With plans to expand support to more platforms, improve error handling, and enhance the UI, this tool is poised for further development. The ultimate goal is to create a more robust, versatile, and user-centric experience.



THANK  
YOU!

