Phishing Link Scanner Report

**Project Name: Phishing Link Scanner**

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**Objective:**

The goal of this project is to analyze and determine whether a given URL is potentially a phishing link by checking multiple characteristics commonly found in phishing attempts.

**Functionality Overview:**

The scanner examines URLs for the following risk factors:

1. Suspicious Keywords:

- Checks if the URL contains words like `login`, `verify`, `account`, etc.

2. URL Length:

- Flags URLs longer than 75 characters.

3. IP Address in URL:

- Phishing URLs often use raw IP addresses instead of domain names.

4. Symbol in URL:

- Can be used to trick users with misleading prefixes.

5. Hyphenated Domains:

- Domains with hyphens are often imitations of real brands.

6. Shortened URLs:

- Detects if the link is from a URL shortener (e.g., bit.ly).

7. Domain Age:

- Uses WHOIS data to fetch domain creation date. Very new domains can be suspicious.

**Tools & Libraries Used:**

- Python Standard Libraries

- `re`, `urllib.parse`, `datetime`

- External Libraries

- `requests` – for handling HTTP

- `tldextract` – for extracting domain parts

- `whois` – for domain WHOIS data

- `colorama` – for colorful terminal output

**Code Summary:**

The core logic is handled in `scan\_url(url)` which:

- Parses the URL

- Checks against risk factors

- Increments a `risk\_score`

- Prints the result based on score:

- LOW RISK: score < 2

- MODERATE RISK: score 2-3

- HIGH RISK: score ≥ 4

**Improvements Made:**

- Fixed hardcoded keyword print bug

- Corrected domain creation date output

- Added `colorama` for colorful results

- Modularized suspicious keyword logic

**Potential Enhancements:**

- Add GUI (Tkinter/PyQt)

- Save report as text or HTML

- Integrate VirusTotal or PhishTank API

- Auto-extract links from emails or webpages

**How to Use:**

1. Activate your virtual environment:

```

.\venv\Scripts\activate

```

2. Install dependencies:

```

pip install -r requirements.txt

```

3. Run the scanner:

```

python phishing\_link\_scanner.py

```

**Conclusion:**

This phishing link scanner provides a lightweight way to assess links for phishing traits based on common patterns and domain characteristics. It is a great starting point for cybersecurity learning and enhancement.