Cyber Security Tasks & Instructions — CodeAlpha

🖥️ Cyber Security — Internship Overview

This internship program offers hands-on experience in cybersecurity principles and practices. CodeAlpha is a leading software development company dedicated to building secure and resilient systems. The internship equips students with skills to identify vulnerabilities, implement security measures, and conduct risk assessments. Interns will learn about network security, ethical hacking, encryption, and threat detection, gaining practical exposure through real-world projects. Expert mentorship and a collaborative environment will prepare interns to contribute effectively to organizational security.

🎁 Internship Perks

- Internship Offer Letter
- Completion Certificate (QR Verified)
- Unique ID Certificate
- Letter of Recommendation (based on performance)
- Job Opportunities / Placement Support
- Resume Building Support

📌 Instructions for Interns

1. Share your internship status on **LinkedIn**, tagging **@CodeAlpha**.
2. Complete the **assigned projects** within the mentioned time frame.
3. Upload your complete source code to **GitHub** in a repository named:
   `CodeAlpha_ProjectName`
4. Post a **video explanation** of your project on LinkedIn with GitHub repo link.
5. Submit your completed task using the **Submission Form**.
6. **Complete any 3 or 2 out of the 4 tasks** listed below (from your domain).

📱 Cyber Security Task List

(Complete any 2 or 3 of the following tasks)

✅ TASK 1: Basic Network Sniffer

- **Build a Python program** to capture network traffic packets.
- **Analyze captured packets** to understand their structure and content.
- Learn how **data flows through the network** and the basics of protocols.
- Use libraries like `scapy` or `socket` for packet capturing.
- Display useful information such as **source/destination IPs, protocols and payloads**.

✅ TASK 2: Phishing Awareness Training

- **Create a presentation or online module** focused on phishing attacks.
- Explain how to **recognize phishing emails and fake websites**.
- Educate about **social engineering tactics** used by attackers.
- Provide **best practices and tips** to avoid falling victim.
- Include **real-world examples and interactive quizzes** for better engagement.

✅ TASK 3: Secure Coding Review

- **Select a programming language and application** to audit.
- Perform a **code review to identify security vulnerabilities**.
- Use tools like **static analyzers** or manual inspection methods.
- Provide **recommendations and best practices** for secure coding.
- Document findings and suggest **remediation steps** for safer code.

✅ TASK 4: Network Intrusion Detection System

- Set up a **network-based intrusion detection system** using tools like Snort or Suricata.
- 2. **Configure rules and alerts** to detect suspicious or malicious activity.
- 3. Monitor network traffic continuously for **potential threats**.
- 4. Implement **response mechanisms** for detected intrusions.
- 5. Optionally, **visualize detected attacks** using dashboards or graphs.

🚨 Important Note

Internship Completion Criteria:
To be eligible for the internship certificate, participants must complete a minimum of **two or three tasks**.
Submitting only one task will be considered **incomplete** and certificates will **not** be issued in such cases.

📤 Submission Details

A submission form will be shared in your respective **WhatsApp group**. You are required to submit your completed task only through that form. Please follow the instructions mentioned in the form carefully to ensure your submission is accepted.

📞 Contact Information

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