Homework 1

Objective:
This assignment focuses on deepening your understanding of the concepts discussed in the Ethical Hacking Overview module. Answer the following research-based questions with explanations.

1. Role of Ethical Hackers: Research and explain the primary responsibilities of ethical hackers. Include examples of real-world scenarios where ethical hackers have helped organizations improve their security posture.

2. Penetration Testing Methodologies: Compare and contrast white-box, black-box, and gray-box penetration-testing methodologies. Discuss the advantages and disadvantages of each approach.

3. Legal and Ethical Considerations: Investigate the legal and ethical boundaries of ethical hacking. Discuss how laws vary between countries and why ethical hackers must stay informed about these differences.

4. Key Certifications: Explore at least three key certifications for ethical hackers (e.g. CEH, OSCP, CompTIA PenTest+, etc.) Describe the skills each certification covers and their relevance in the field.