Module 1_Assignment 1:
Industry: Healthcare

Information Security Challenges in Healthcare:
The healthcare industry faces several unique cybersecurity challenges. Some key challenges include:

- ☐ **Data Breaches:** Hospitals and clinics store electronic health records which are highly valuable to cybercriminals.

- ☐ **Outdated Systems:** Many healthcare systems use legacy software with weak security protocols.

- ☐ **Lack of Awareness:** Healthcare staff often lack proper cybersecurity training.

- ☐ **Ransomware Attacks:** Attackers often target hospitals with ransomware, knowing that downtime can risk lives.

Regulations in Healthcare:
To address security and privacy, many countries enforce laws such as:

- ☐ **HIPAA (Health Insurance Portability and Accountability Act)** – in the US

- ☐ **GDPR (General Data Protection Regulation)** – in the EU
  These regulations require healthcare organizations to protect personal health data and report breaches.

Application of (Confidentiality, Integrity, Availability) CIA Triad in Healthcare:

- ☐ **Confidentiality:** Protecting patient data through encryption, access control. Violated in many breaches.

☐ **Integrity:** Ensuring medical records are accurate and not altered by unauthorized users. Sometimes compromised in malware attacks.

☐ **Availability:** Systems must be up 24/7 for emergency care. Ransomware often threatens this.

Cyber Kill Chain Tactics Used Against Healthcare:

☐ **Reconnaissance** – Attackers gather info about hospital networks using open-source tools.

☐ **Weaponization** – Malware is crafted, often disguised as legitimate medical files.

☐ **Delivery** – Phishing emails are sent to doctors or admin staff.

☐ **Exploitation** – Clicking links allows malware to exploit system vulnerabilities.

☐ **Installation** – Ransomware gets installed silently.

☐ **Command & Control** – Hackers remotely control infected devices.

☐ **Actions on Objectives** – Attackers steal data or lock systems for ransom.