SECURITY PRINCIPLES

EX.NO: 2 ROLL NO: 231901033 DATE: 12.02.2025 NAME: NAVEEN C H

#### Aim:

To understand the CIA triad, security models, Defense-in-Depth, Zero Trust, and threat vs. risk in cybersecurity.

# **Procedure:**

#### 1. Learn the CIA Triad

Study the core principles of cybersecurity: Confidentiality, Integrity, and Availability.

### 2. Understand DAD Threats

Explore how Disclosure, Alteration, and Destruction impact security and data protection.

### 3. Explore Security Models

Understand security models such as Bell-LaPadula, Biba, and Clark-Wilson, and their role in defining access control and integrity.

# 4. Apply Defense-in-Depth

Learn how to implement multiple layers of security to protect systems and data at various levels.

# 5. Study ISO/IEC 19249 Security Framework

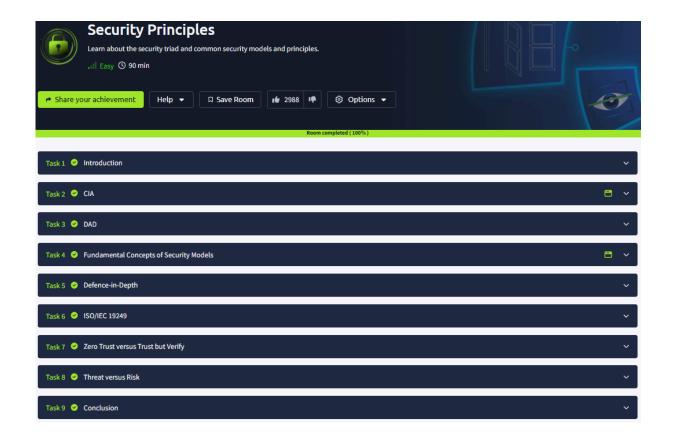
Review the international standard that defines security design principles for IT systems.

# 6. Compare Zero Trust vs. Trust but Verify

Analyze the Zero Trust model which assumes no inherent trust, versus the traditional "Trust but Verify" approach.

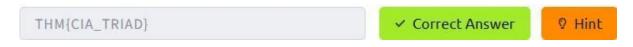
### 7. Differentiate Threats from Risks

Understand the difference between threats (potential harm) and risks (likelihood and impact of harm).



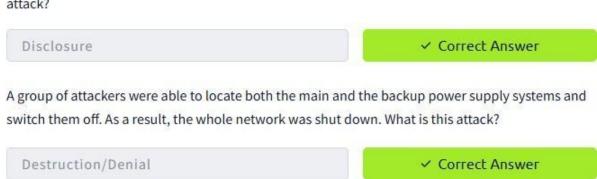
#### TASK 2 : CIA:

Click on "View Site" and answer the five questions. What is the flag that you obtained at the end?



#### TASK 3: DAD:

The attacker managed to gain access to customer records and dumped them online. What is this attack?

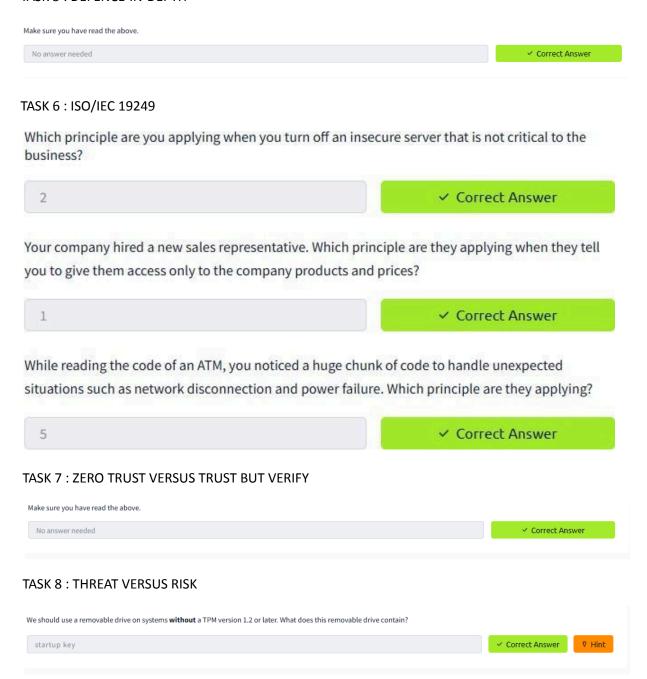


### TASK 4: FUNDAMENTAL CONCEPTS OF SECURITY MODELS

Click on "View Site" and answer the four questions. What is the flag that you obtained at the end?



TASK 5: DEFENCE-IN-DEPTH



## Result:

TryHackMe platform **Security Principles** tasks have been successfully completed.