# JIC Capture the Flag (CTF)
# Cybersecurity Competition

## Event Overview

The Capture the Flag (CTF) Cybersecurity Competition is a dynamic two-day event crafted to immerse participants in an environment that balances competition with collaboration, fostering both individual growth and team synergy. Designed to mirror real-world cybersecurity scenarios, the event challenges participants to tackle hands-on, practical problems across domains such as web security, reverse engineering, cryptography, binary exploitation (PWN), and digital forensics.

## Key Features:

1. **Structure & Participation**

   ✓ **30 participants** are grouped into **teams of 3–5 members**, encouraging strategic teamwork and knowledge-sharing.

   ✓ Over two days, teams engage in **60 unique challenges** (30 per day), each categorized by difficulty: **Easy (50–100 points)**, **Medium (150–200 points)**, and **Hard (250–300 points)**.

2. **Real-World Focus**

   ✓ Challenges simulate **actual cybersecurity threats**, such as:

      ▪ **Penetration Testing**: Identifying vulnerabilities in web applications.

      ▪ **Cryptanalysis**: Decrypting encoded messages or cracking cipher algorithms.

      ▪ **Incident Response**: Analyzing forensic artifacts (e.g., disk images, logs) to uncover hidden flags.

   ✓ Participants use industry-standard tools (e.g., Wireshark, Ghidra, Metasploit) to solve problems, bridging theory and practice.

3. **Competitive-Collaborative Balance**

   ✓ Teams compete on a **live leaderboard** to earn points, but the event also promotes **collaborative learning**. For example:

      ▪ Knowledge-sharing during breaks.

      ▪ Mentorship from on-site **cybersecurity specialists** (for general guidance, not solutions).

✓ Penalties for unethical practices (e.g., hacking other teams) ensure **fair play**.

4. **Educational & Professional Benefits**

  ✓ **Skill Development**: Enhances technical expertise in threat detection, ethical hacking, and system hardening.

  ✓ **Networking**: Connects participants with peers, faculty, and industry professionals.

  ✓ **Awareness**: Highlights the importance of cybersecurity in safeguarding digital infrastructure.

5. **Outcome & Recognition**

  ✓ **Top teams** receive awards (trophies, tech gadgets, certificates) at a dedicated **award ceremony**.

  ✓ All participants earn **certificates of completion**, adding value to academic and professional portfolios.

**Event Schedule**
  ✓ Day 1:
    o Start: 12:00 AM
    o End: 4:00 PM
  ✓ Day 2:
    o Start: 10:00 AM
    o End: 2:00 PM
    o **Award Ceremony**: 2:30 PM – 3:00 PM