**The Great Computer Challenge, 2019**

***Cyber Security, Level IV***

# Background

Cybersecurity is the body of technologies, processes, and practices designed to protect networks, computers, programs and data from attack, damage or unauthorized access. In a computing context, security includes both cybersecurity and physical security.

Ensuring cybersecurity requires coordinated efforts throughout an information system. One of the most problematic elements of cybersecurity is the quickly and constantly evolving nature of security risks. The traditional approach has been to focus most resources on the most crucial system components and protect against the biggest known threats, which necessitated leaving some less important system components undefended and some less dangerous risks not protected against. Such an approach is insufficient in the current environment.

In order to understand how to provide cyber security, it is important to also understand how systems can be compromised. These skills are taught and practiced, but they must not be used in an unauthorized or malicious way. Information Security professionals recognize the responsibility to maintain ethical principles that protect the safety and welfare of society and promote the common good; to build public trust and confidence; to protect privacy and property; to act honorably, honestly, justly, responsibly and legally. It is expected that students participating in the GCC Cybersecurity Challenge will maintain the same ethical standards. At no time should an attack technique be used via the public wifi or on any target not specified in the challenge. Doing so may constitute an illegal act that can be prosecuted and will disqualify your team from the GCC Cybersecurity Challenge.

# Guidelines & Requirements

Contestants will solve a selection of cyber security problems using their choice of tools. Contestants will use their laptops with VirtualBox and an instance of Kali Linux (installed before the competition). They can install any tools they might need before the event. Judges will evaluate the answers to problems without considering the tools used. Answers will be delivered digitally. At the end of the contest time, contestants must leave a completed judging form.

**No printer is needed. Helpful tools and skills:** Kali Linux, bash scripting, Wireshark, Forensics, file analysis, cryptography, steganography, website analysis, and Googling.

1. Each team member may use one computer during the contest.
2. You may use the internet during the competition. To do so, you will need a computer with wireless capability. Information for connecting to the wireless will be distributed before the contest starts.
3. Internet connection can be used just for accessing information. Any cyber-attack via the Internet is not allowed.
4. Points and durations
   1. CTF Challenges: 3 hours

# Capture the Flag

*Duration 3 hours – Most Points Wins*

## The 2nd part of the challenge will be available to you and your team via your favorite web browser. Go to http://128.82.52.62:8080/

* This will prompt a login for your team.
* Register your team name and the members of your team.
* As soon as you log on you are ready to play! Good luck!

**Current team scores are available on the Scoreboard!**

## TIPS!

* The gameboard allows you to choose any challenge that is available. If you are stuck on a challenge move on to the next one and come back to it later.
* Split up the challenges among your teammates. “Many hands-on-keyboards make light of CTFs”
* Google and YouTube are your greatest ally!

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# Judging Criteria

## Judges will evaluate the answers to problems without considering the tools used. Answers will be delivered digitally. At the end of the contest time, contestants must leave a completed judging form.

**SOL Correlation**

Apply knowledge and skills to generate innovative ideas, products, processes, and solutions.

* + Use various creative software, programming environments, or digital tools to convey existing ideas in new and effective ways.
  + Use technology to develop innovative and effective solutions for assignments.

***Have fun and thanks for participating in the   
Great Computer Challenge, 2019!***