

# Introduction to Data and Cyber-Security (DCS3101) - Assignment 4

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## 1 Organization and Information

1. This is the fourth assignment of the total 4 assignments for this course.
2. The assignment is mandatory and must be passed to attend the final exam.
3. Group work is tolerated but submissions are individual.
4. Each submission will be graded independently.
5. *Deadline for submission of assignment is 20 Nov, 2014.*
6. The extra credit point (Q3) can be used carried to assignments 4 in case you obtain lower points in any assignments.
7. Assignments are to be submitted via Canvas.

## 2 Assignment

Q1 There are 4 videos in the

<https://www.pbs.org/wgbh/nova/labs/lab/cyber/>.

You are supposed to watch all the four videos and summarize them in 4-5 bullet points.

[4 Points]

Q2 The second part consists of playing the games and reporting the learning-outcome. There are 4 games corresponding to 4 parts:

- **Coding Challenge:** This game gives an introduction to very basic coding skills. You are supposed to program a robot to navigate a maze, using drag-and-drop commands.
- **Password-Cracking Challenge:** This game gives you an idea of “password duels” to teach the players about the basics of how attackers might try to crack their passwords. It also gives an idea of how one can make passwords better and secure.

- **Social Engineering Challenge:** You are presented with two apparently similar emails or websites. You must first identify the differences between them and then decide which one is a scam attempting to steal you information or money. Note that this challenge also includes a number of audio recordings and transcripts of phone calls; players have to decide if they should trust the caller or not.
- **Network Attacks:** As their companies grow, you as an employee must buy defenses to defend against a series of cyber attacks. The better you do in the three challenges, the more resources you shall have to buy defenses.

The games are available at <https://www.pbs.org/wgbh/nova/labs/lab/cyber/>. You are required the take the screen-shot of the obtained scores and discuss on key learning (3-5 points to be noted). [\[6 Points\]](#)

\*Note - A sample video of how to play the game is provided at [this link](#) along with some audio instructions. [Apologies for the bad voice-over].

Q3 Extra credit: Discuss on Advanced Persistent Threats (APT). [\[2 Points\]](#)