CSE 545: Foundations to Computer Security
HOMEWORK ASSIGNMENT 3 (TOTAL OF 50 POINTS)
Due by 23:59 hrs on Nov 8, 2016
The assignment should take about 10 hours.
Do not wait until last minute. Please do not copy-paste answers from the internet. Good luck! Be creative!

1. Look at the chief Security/Privacy leadership/executives' profiles of 3 US based Technology companies and 3 Indian based Technology companies like Flipkart, InMobi, etc. Look at the background each of these executives have. Make a comparison between the executives' profiles of the Indian Tech companies and the US Tech companies. Include a short note / bullet points about the security and privacy profiles (CISO / CPO). [10 marks]
2. Last week, as was noted on Backpack as well, there were a wave of massive DDOS attacks in the USA which caused major websites such as Twitter and Spotify to go down. [10+10+5]
    a. Investigate and critique the cause of these attacks : how were they deployed?
    b. Suggest technical mitigations
    c. Suggest Judicial changes that could prevent such an attack in future

    Please restrict the context to these recent attack only.
3. Code a Keylogger. You can follow online tutorials but please do not plagiarize code from other students or from online. [10 marks]
4. Install Burp Suite. Follow the instructions given here to set it up on your laptop and install a certificate on your mobile. Filter Facebook related traffic from your phone and see if you can find any security/privacy related vulnerabilities. [15 marks]
5. Differentiate between the Biba Model and the Bell-LaPadula Model. Apply both models on the following scenario: [10+5+5]
    a. IIITD Accounts Department has the following 4 roles: Administrator, Accounts Keeper, Manager and Clerk in their order of hierarchy. Not all of them have access to the same amount of information.
    b. Define object classes based on your requirements.After applying both models which do you think is the better?
    c. Justify your answer