



# **UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING**

## **IS2109 Information Systems Security - Practical 1**

### **Secure Web Browsing**

#### **Instructions:**

- **Submit answers for all the following questions. Clearly mention the Question Numbers.**
- **You must submit your answers as a PDF document named as P1\_IndexNumber (E.g. P1\_18020129)**

#### **1. Web Browsing**

Your web browser is the vehicle you use to surf the dangerous territory of the world wide web. There are so many potential threats to you from the things and people out there. It is really important to understand these threats and configure your web browser to protect you from those threats. It is not easy to teach each and every important point you need to remember to be safe on the web. You have to search and read about threats you face while browsing the web on your computer.

1. Make a list of threats you are facing while browsing the web on your computer?
2. What are the methods you can use to overcome each of these threats you have mentioned above?
3. Describe briefly each of the methods you have mentioned above in question no (2) and describe how they secure your web browsing?

## 2. Browser history, cache and cookies

Your web browser keeps track of activities you perform in the web. You can decide which information your browser should keep and which should not.

1. What is history in web browsers?
2. What is cache in web browsers and what is it for?
3. What is cookies in web browsers and what information is stored there?
4. What is it used for?
5. What is cookie theft and session hijacking?
6. Follow the below given task and answer questions.
  - Open the following URL in your browser (Using theater mode).  
[https://www.youtube.com/watch?v=C9OmN9O\\_v8U](https://www.youtube.com/watch?v=C9OmN9O_v8U)
  - Open the **Developer tools** for the above page. (Ctrl+Shift+I or settings→More Tools→Developer tools)
  - Find the cookies that belong to the web page.
    - i. List five cookie names.
    - ii. What will be the expiry date of the **PREF** cookie?
    - iii. List two **http only** cookies?
    - iv. What is the value of **wide** cookie?
    - v. If the value is 1, set it to 0, or vise-versa. Then close the developer tools and refresh the page. What is/are the difference/s in your page.

### **3. Downloading files from the web**

When downloading files from the web such as images, PDF documents, executable programs, etc, there's a risk that malicious programs can get installed and run in your computer. Therefore, we have to be very cautious when you download something from the web.

1. Security concerns in downloading files?
2. What is digest/hash of a file?
3. How to verify originality of downloaded file?
4. How to check the originality of an unknown file?
5. How can a malicious 3rd party can affect a downloaded file?