**Lab 1**

Part A

There are a few applications available to use to lock down a web browser. These applications help to make the browser more secure and therefore reducing the risk of exposing your person information. Firstly, to ensure your browser is secure you should configure your browsers security and privacy settings to your needs. For example, make sure to enable the browsers “do not track” features. You should also keep your browser updated as well as keeping plugins updated. Also, with plugins caution should be taken when installing plugins. To add additional security to your browser extensions that prevent tracking can be installed for example Adblock Plus and Ghostery. It is also advised to only use HTTPS sites for all internet searches especially when on public networks.

There are several applications available to install in your browser to show who is tracking you. Some of these include Panopticlick, Disconnect, Trackography and Ghostery. Some sites track every click you make on a site for commercial purposes. Some sites even track user activity through the interconnectivity between sites. By tracking your clicks companies can show you advertisements that are similar to your previous searches and are tailored to your needs and interests. However, if you are not running a secure browser it is also possible to be tracked by cyber criminals. This can then lead to possible harm and breach in privacy with your private information being available to the cyber criminals to see and use.

However, it is possible to prevent the risk of being tracked. There are privacy tools, applications and plugins available to increase the security of your browser. As mentioned previously, ensure that your browsers’ security and privacy settings are configured to your needs, keep your browser and plugins up to date and be cautious when installing plugins. However, even with all these precautions in place there is still always a possibility of some information getting out.

Part B

The deep web is a section of the internet that cannot be found by normal search engines as it consists of unindexed websites. The deep web is a general term. The deep web consists of any content on the internet that can’t be indexed by search engines and includes normal content like forums that require registration and dynamically created pages like a user’s Gmail account. The deep web is completely anonymous. As the deep web consists of content that cannot be indexed by normal search engines there is a specific way to reach it. A dedicated browser, Tor is a commonly used example, is required to access the deep web. This browser ensures anonymity when browsing. The deep web contains information that cannot be accessed directly. Sites and files are usually hosted on different servers on a peer-to-peer network. This method of storing information is usually encrypted and difficult to track. That is why it is difficult to track a user’s location and what information they were accessing.

The deep web can be a dangerous place to browse the internet. Due to its anonymity, the deep web has attracted criminal activity in the past. Previous uses of the deep web for criminal activity includes selling illegal drugs and hiring contract killers. At one point the deep web had an illegal site, similar in functionality to eBay, known as Silk Road. This site is were illegal goods and services were bought and sold. Some parts of the deep web contain some companies hidden information that is placed behind security measures. Accessing this information can lead to the risk of arrest for copyright infringement and violation of the site’s terms.

While it is not illegal to access the deep web itself, the deep web does contain many websites that are illegal to access. Accessing the deep web needs to be done by using a dedicated or anonymous browser. Browsers like this are also used by military personnel, police, journalists and whistle-blowers to maintain their privacy. It is estimated that 99 percent of the internet is part of the deep web and cannot be accessed using conventional browsers like Google. The deep web is an estimated 500 times larger than the surface of the web.