

Lab 3

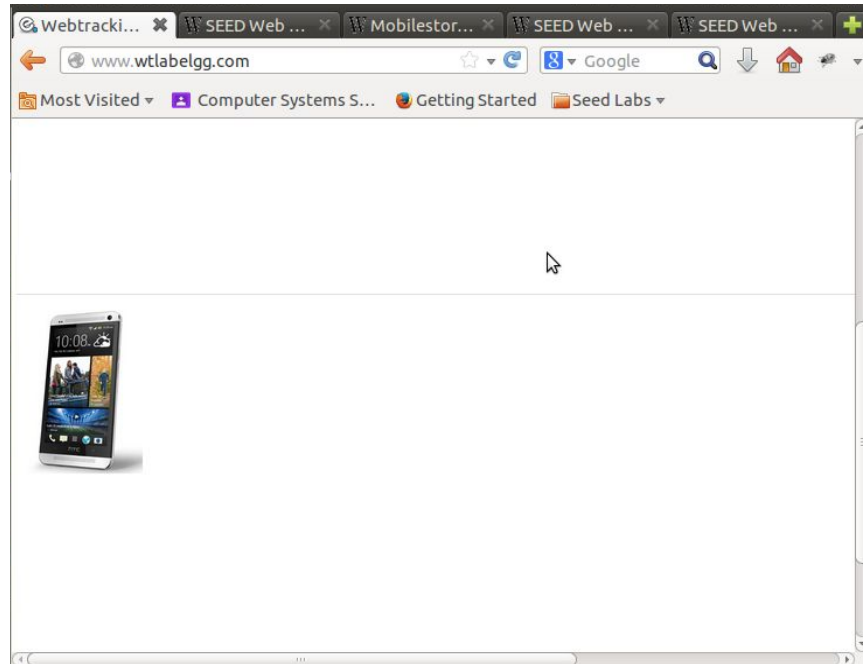
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CS-16059
Section A
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Computer Systems Security

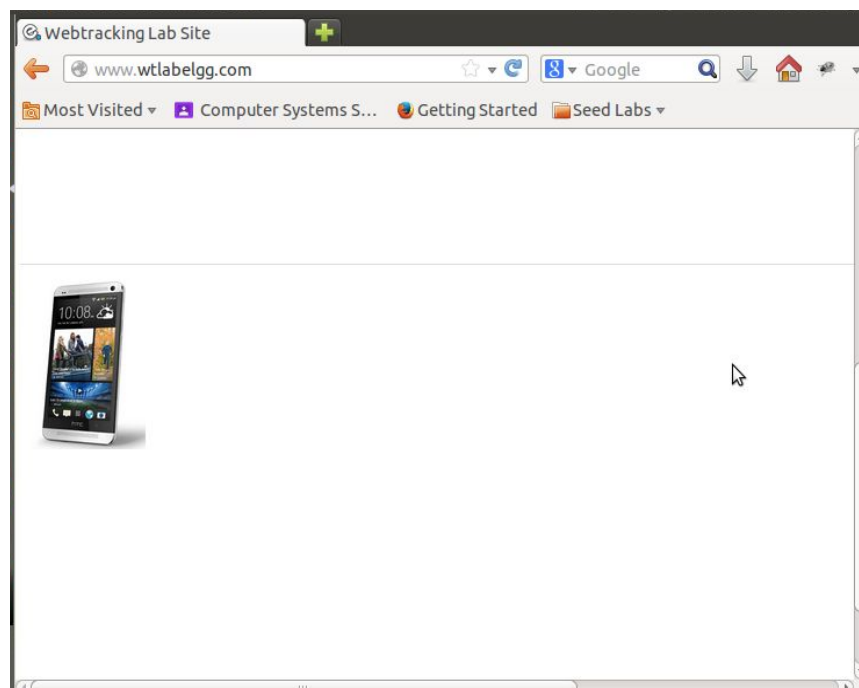
Task 1: Understand the basic working of the web tracking

Upon clicking a mobile product, the relevant ad started appearing on www.wtlabelgg.com. The browser was restarted but the ad did not disappear because the cookie was not removed.

After clicking a mobile product:

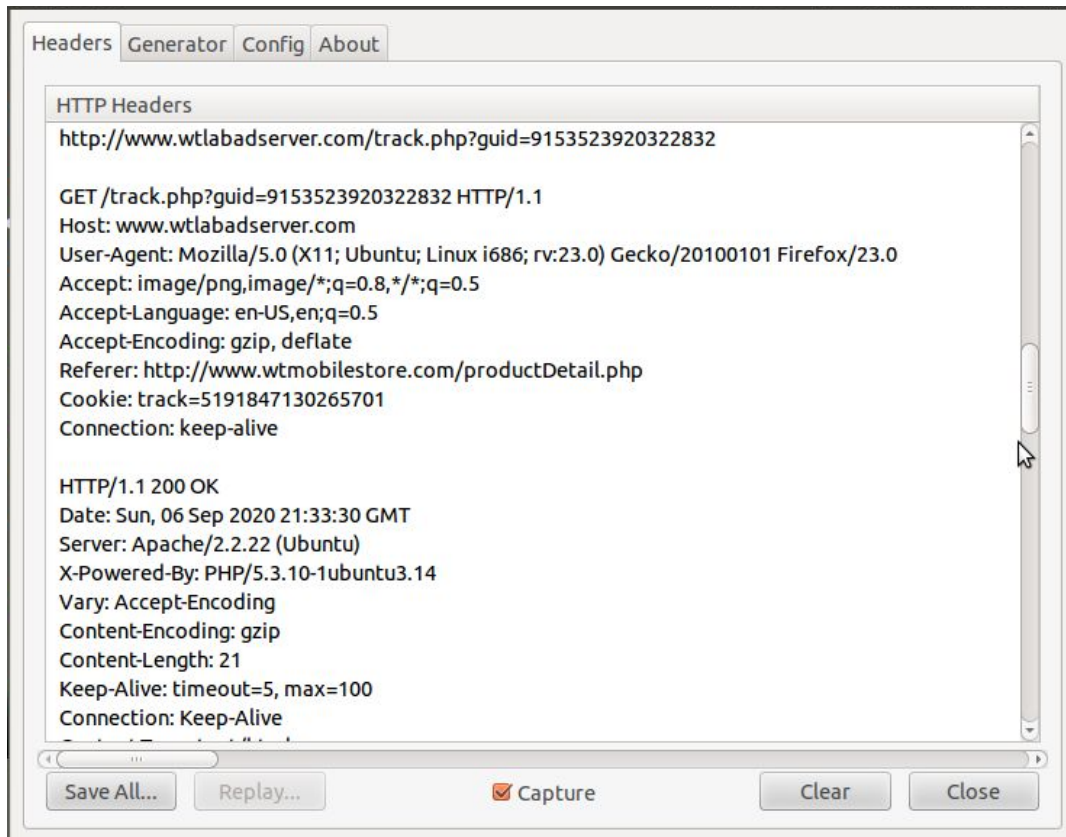


After restarting the browser:



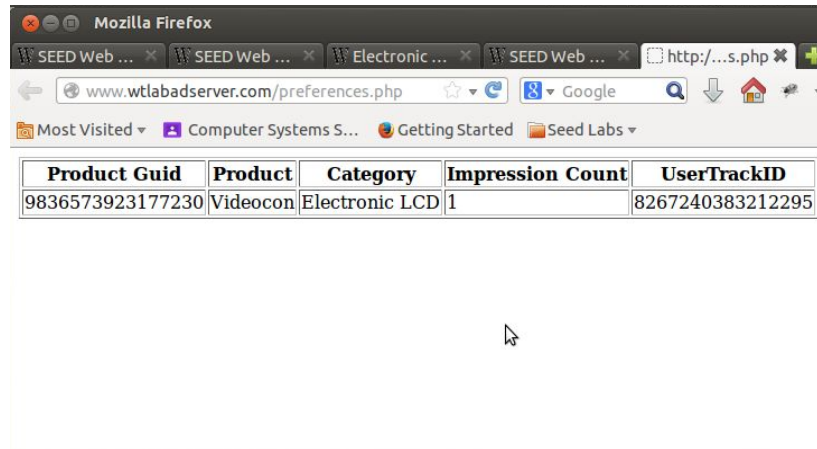
Task 2: Importance of cookie in Web tracking

In this task, the third party cookies were to be analyzed. Upon clicking the corresponding mobile product, a third party cookie was set up from the **wtlabadsrver**. The traffic was analyzed through LiveHTTPHeader and the third party cookie was also observed in the webpage of mobile product.



Task 3: Tracked user interests and data

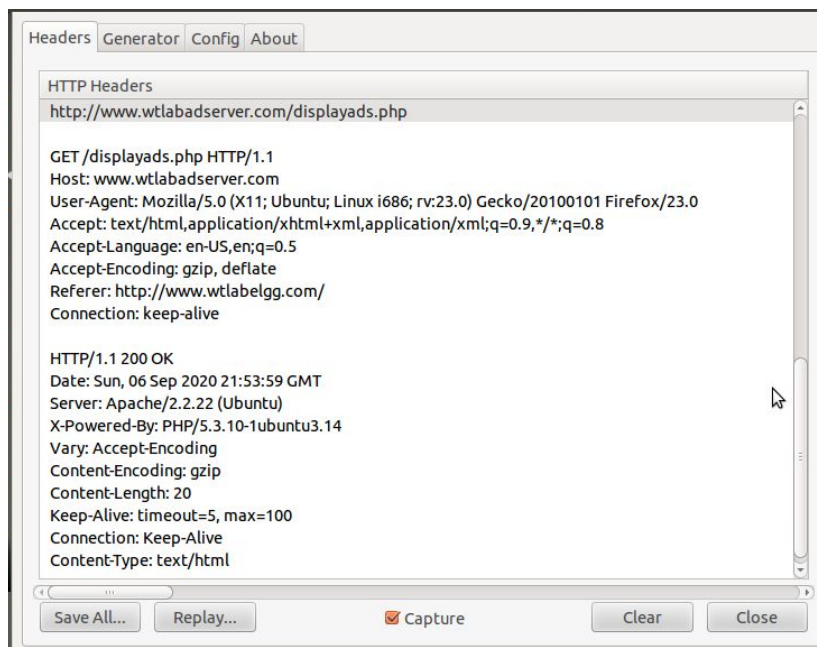
In this task, I clicked on the Electronic LCD product and then the preferences on **wtlabadsrver** was modified according to the activity as shown in the screenshot below.



Product Guid	Product	Category	Impression Count	UserTrackID
9836573923177230	Videocon	Electronic LCD	1	8267240383212295

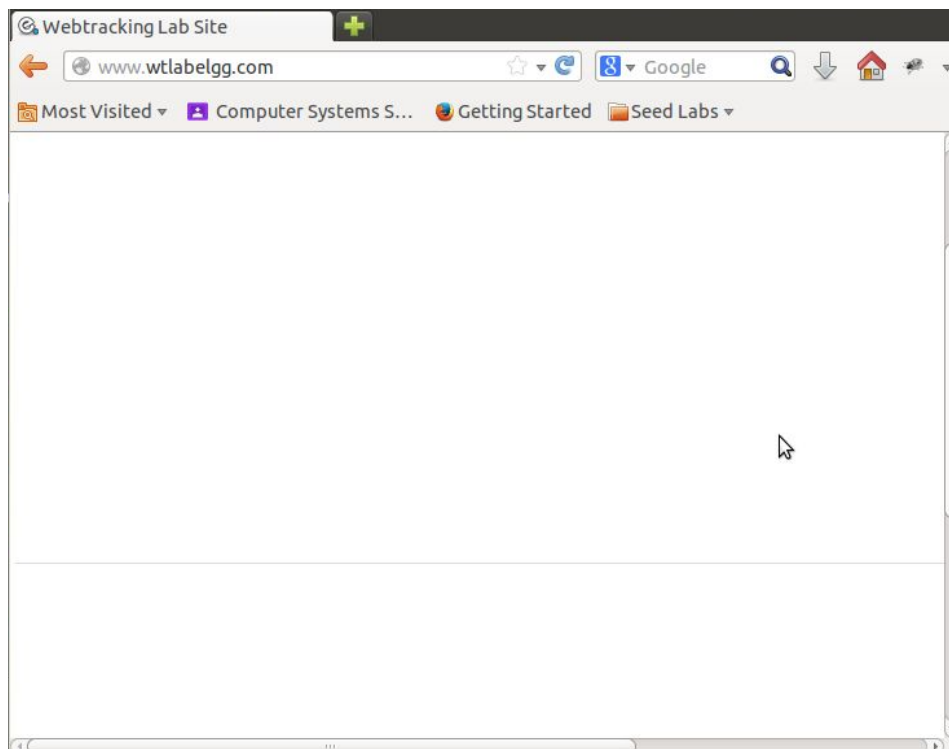
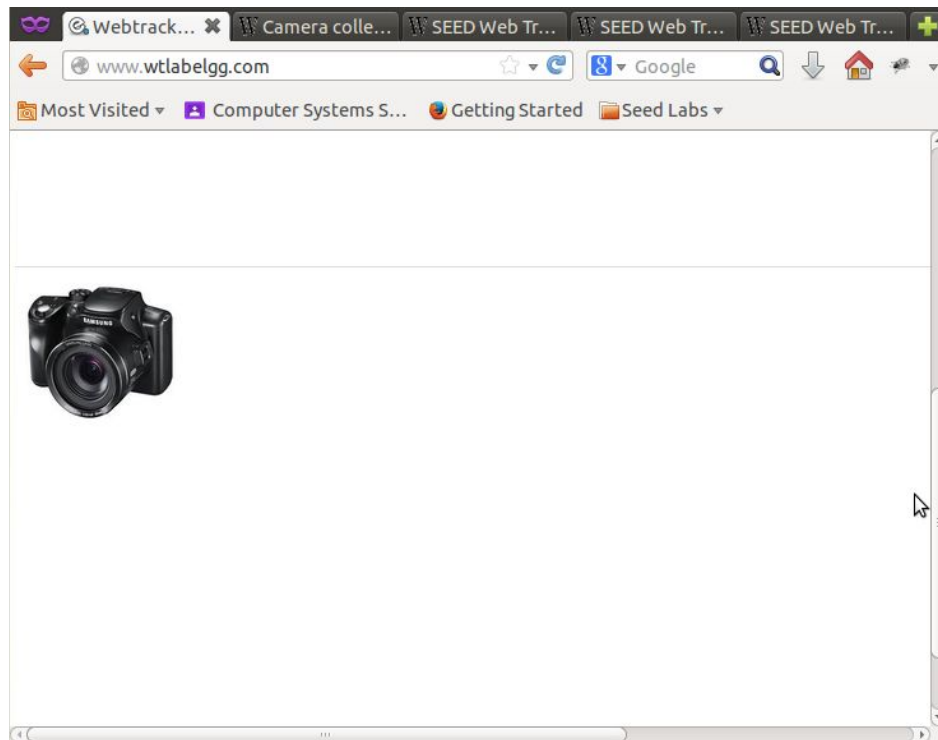
Task 4: How ads are displayed in website

Upon opening the browser, the relevant ad is displayed according to the cookies. In this task, I run LiveHTTPHeader for recognizing the cookie from a third party. It can be observed in the screenshot below that **wtlabadsrver** is the third party, which is responsible for displaying ads according to the cookies.



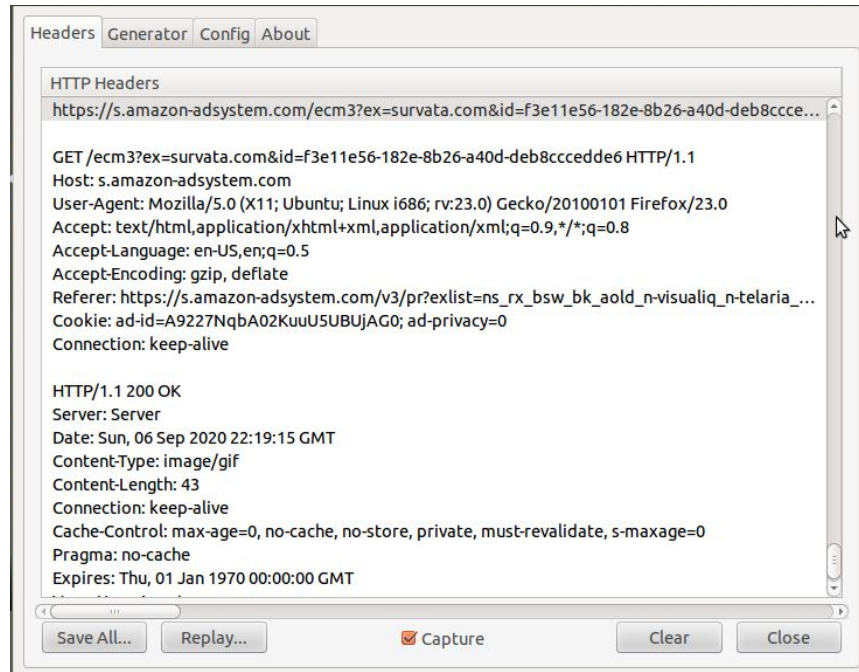
Task 5: Tracking in a Private browser window

This task is similar to task 1 but a **private window** was used in this task. When I clicked on a product, the relevant ad had started appearing on **wtlabelgg.com**. After restarting the browser, the ad had disappeared. This behavior was caused by the use of a **private window**, which does not store any tracking details about the user.



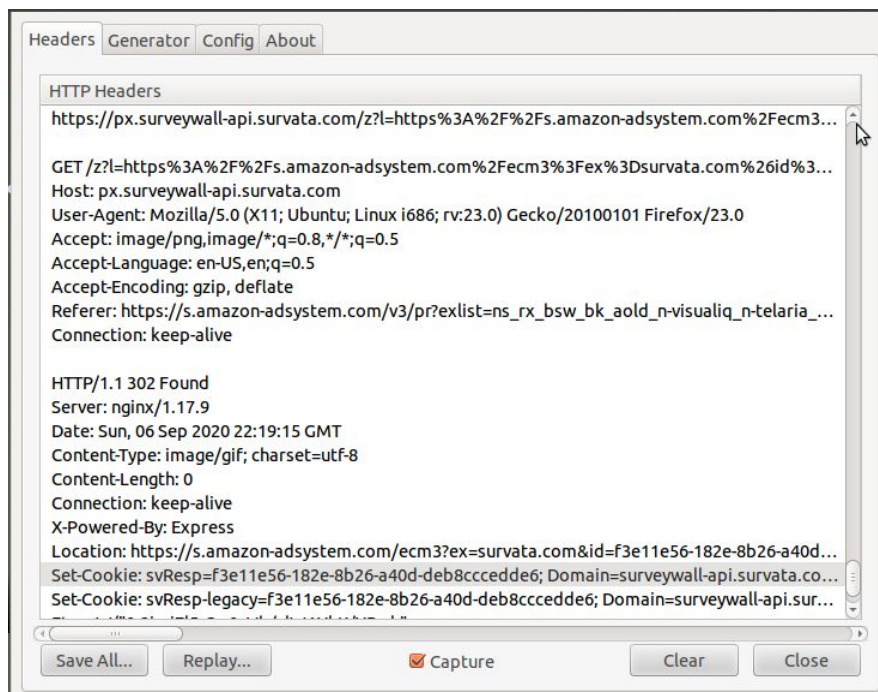
Task 6: Real world tracking

In this task, amazon store was visited and the monitoring of traffic was being executed in LiveHTTPHeader:



Capture cookie:

The following screenshot shows the third party cookie being used by amazon store:



Task 7: Countermeasures

In this task, third party cookies were disabled by navigating to the settings of the browser. This practice did not provide the ad server any tracking information for displaying ads on **wlabelgg.com**. The LiveHTTPHeaders' screenshots can be observed that third party cookies were behaving as dummy cookies providing no tracking information.

