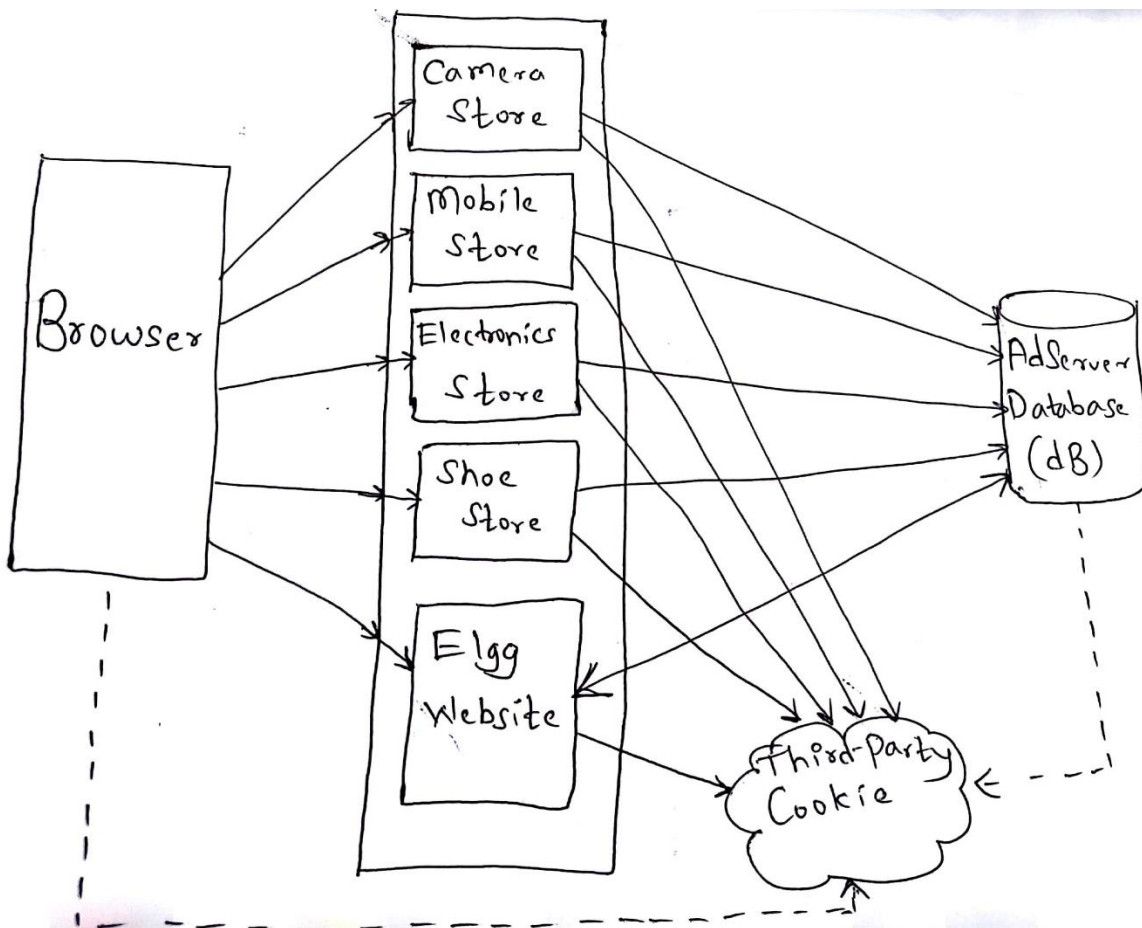


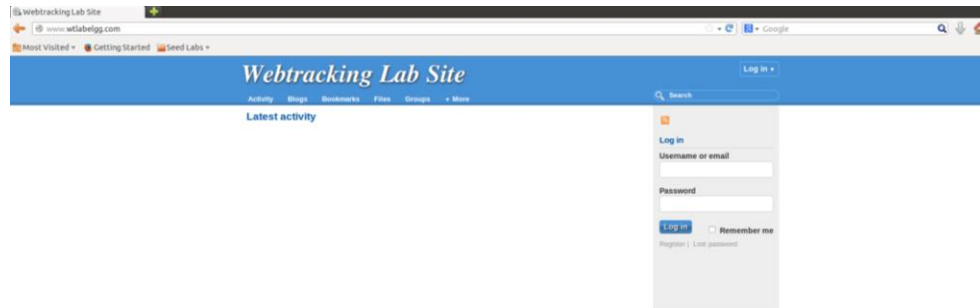
ITIS 6200  
Parag Mhatre  
Project 2  
28<sup>th</sup> November 2018

I downloaded the SeedUbuntu VM file and loaded it up on my VBox. The Network Environment for the same was as shown in the diagram below. I started the Apache Server on the machine and followed the instructions (Tasks) as given in the procedure of the project. In the network configuration, there are 4 e-commerce websites – CameraStore, Mobile Store, ShoeStore and ElectronicsStore. There is also a social media website – The Elgg website. All of these websites are communicating with the Advertise server called the AdServer which acts like the database of the ad system and displays advertisements according to a users preference. This is done with the use of Third-Party cookies.

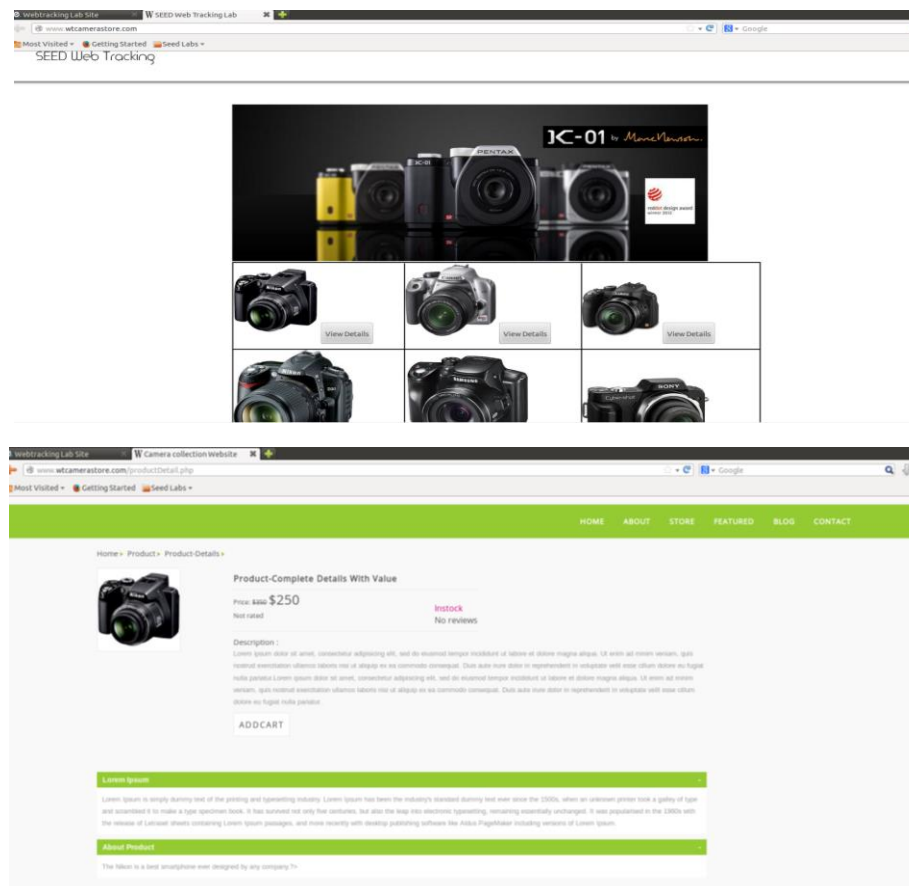


## Task 1:

The first thing I did was to clear all the History and cookies from the Firefox options. As I opened the Elgg website, there was a pane for username and password. I didn't see any advertisement on the webpage.



Then, I opened the e-commerce websites - CameraStore, MobileStore, ElectronicStore and ShoeStore. I viewed random product details on the websites as shown in the screenshots below.




webtracking Lab SiteCamera collection websiteW shoestore website

www.wtshoestore.com/productDetail.php

Most VisitedGetting StartedSeed Labs

HOMEABOUTSTOREFEATUREDBLOGCONTACT

Home> Product> Product Details>



Product-Complete Details With Value

Price: ~~base~~ \$250

Not rated

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No reviews

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ADDCART

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Lorem ipsum is simply dummy text of the printing and typesetting industry. Lorem ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem ipsum passages, and more recently with desktop publishing software like Adobe PageMaker including versions of Lorem ipsum.


webtracking Lab SiteCamera collection websiteShoestore websiteW Electronic Website

www.wtelectronicstore.com/productDetail.php

Most VisitedGetting StartedSeed Labs

HOMEABOUTSTOREFEATUREDBLOGCONTACT

Home> Product> Product Details>



Product-Complete Details With Value

Price: ~~base~~ \$250

Not rated

Instock

No reviews

Description :

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ORDER-ONLINE

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webtracking Lab SiteCamera collection websiteShoestore websiteElectronic websiteW Mobilestore Website

www.wtmobilestore.com/productDetail.php

Most VisitedGetting StartedSeed Labs

HOMEABOUTSTOREFEATUREDBLOGCONTACT

Home> Product> Product Details>



Product-Complete Details With Value

Price: ~~base~~ \$250

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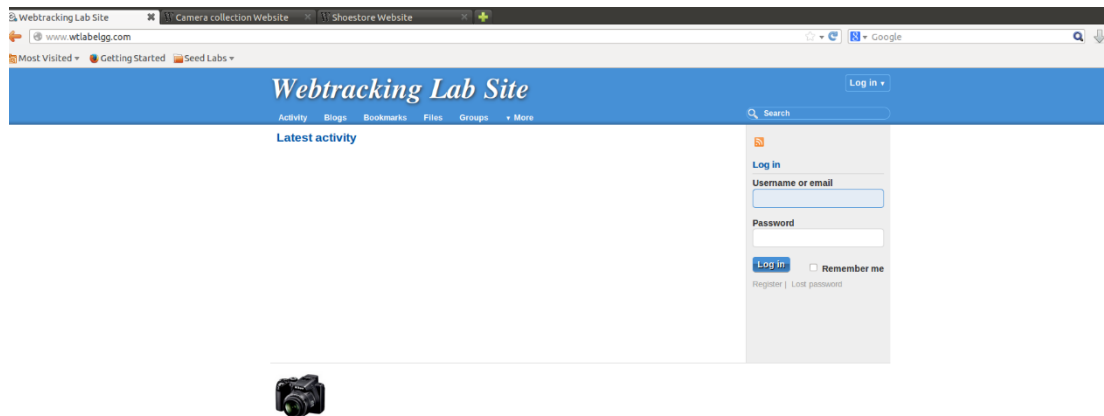
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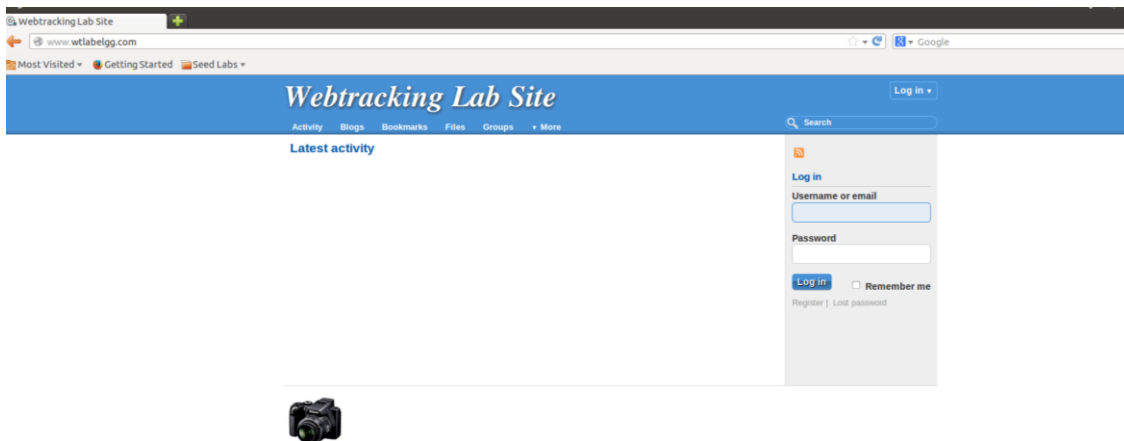
ORDER-ONLINE

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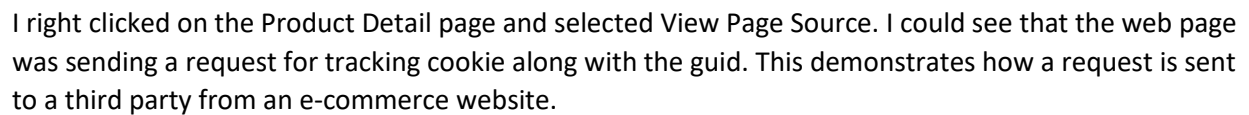
I refreshed the Elgg website and I could see a camera advertisement being displayed over on the webpage. This tells me that somehow the server had knowledge about my previous browsing/searches to show me advertisement of a product that I was searching for.



After closing and reopening the browser, I could see that the same ad was being displayed on the web page and this tells me that the server will remember my previous searches/browsing history even if I close the session/browser.



I clicked on “View Details” of a random product on the camerastore website. Then, opening up the “Live HTTP Headers”, I identified the HTTP request, which set the third-party cookies and took a screenshot.

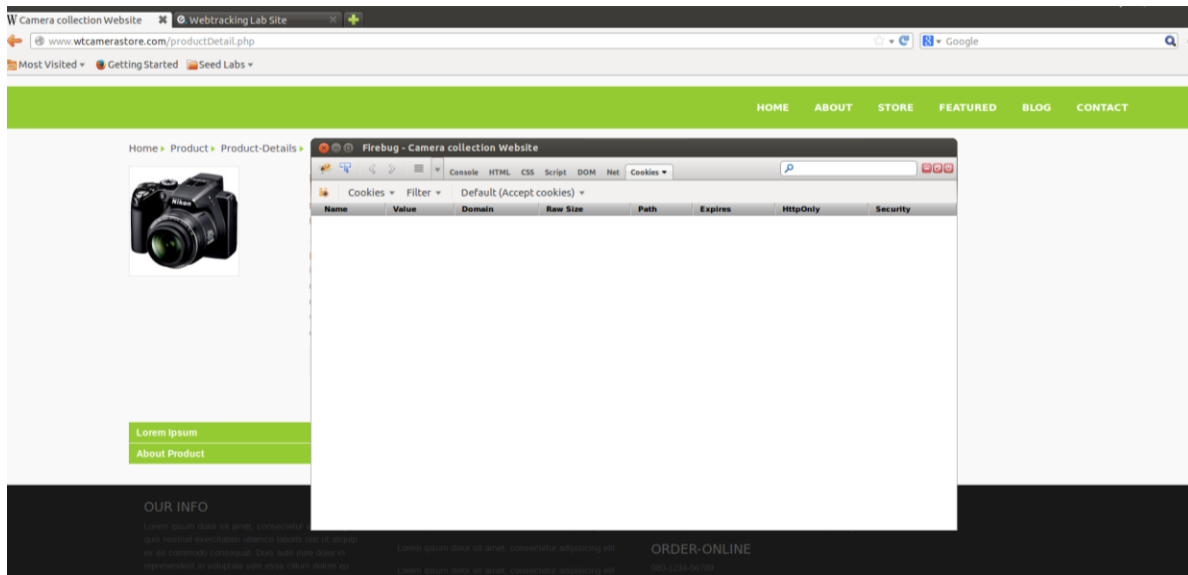


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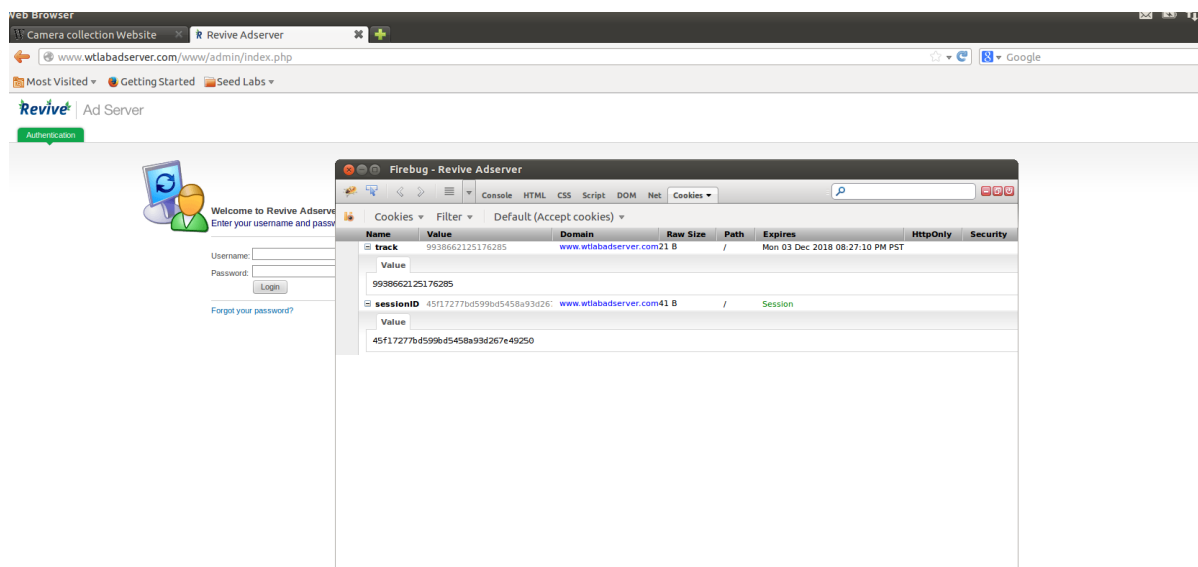
1 http://www.w3schools.com/productDetail.php - Mozilla Firefox
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I opened Firebug on the Product detail page of the Camera store website and Firebug had no cookie that was captured.

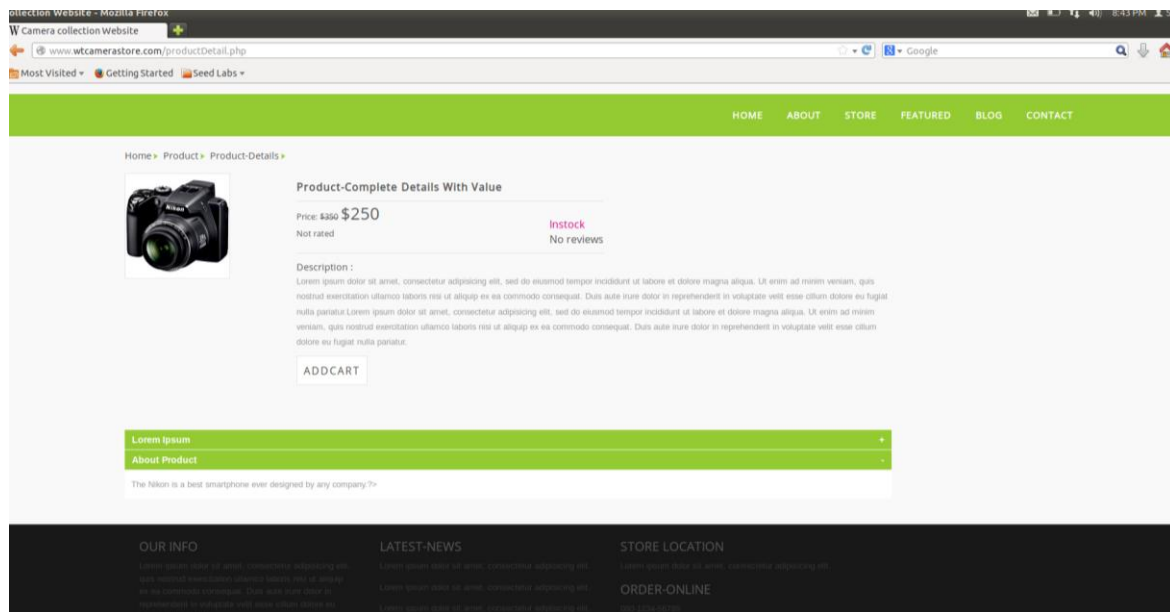


Then I launched Firebug after opening the www.labadsrver.com and I found another cookie which had a session ID. This was a session cookie which meant that it will expire immediately after the session is closed.



### Task 3:

I opened a product detail page on camera store website.



On the [www.wtlabserver.com/preferences.php](http://www.wtlabserver.com/preferences.php), the activity of a user is logged wherein the user is linked with a product and the number of times the user opened that particular product.

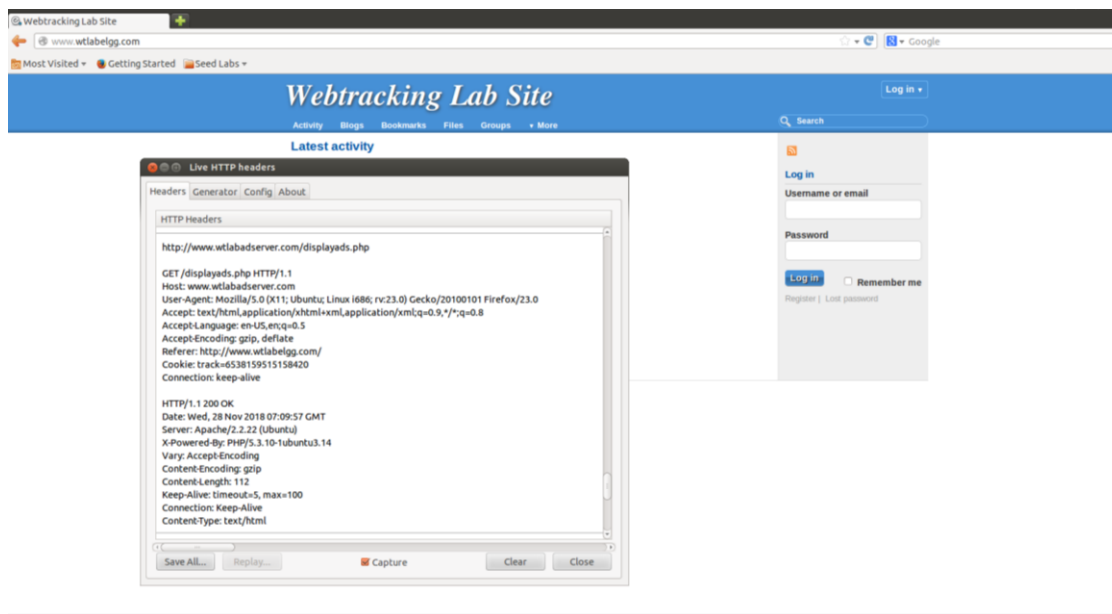
The user is linked with the product via linking their userTrack IDs and the respective Product Guid. The user track ids are unique ids assigned to a user. The number of times a product is opened by the user is denoted by the impression\_count.

The screenshot shows a web browser window displaying a preferences page. The browser's address bar shows the URL 'http://www.wtlabserver.com/preferences.php'. The page has a header with navigation links: Most Visited, Getting Started, and Seed Labs. Below the header is a table with the following data:

| Product Guid     | Product    | Category | Impression Count | UserTrackID      |
|------------------|------------|----------|------------------|------------------|
| 5890502497057826 | Nikon 1011 | Camera   | 2                | 9938662125176285 |
| 3957353166949466 | Adidas     | Shoes    | 1                | 9938662125176285 |

#### Task 4:

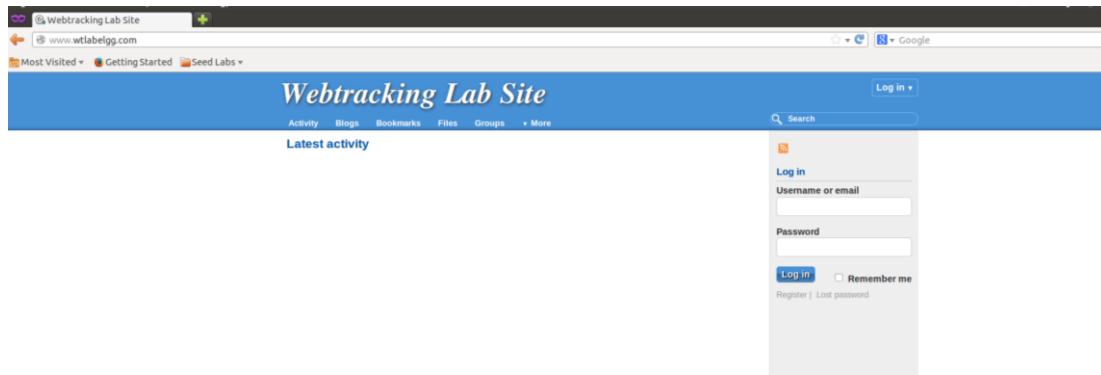
I opened the Elgg website of the browser and launched “Live HTTP headers” and identified the HTTP request that are from a different domain. The track id of a cookie is set in this product. The Elgg website displays targeted ads to the users depending on the data collected through the cookies. The ads will be displayed for the product that has been visited the most number of times.



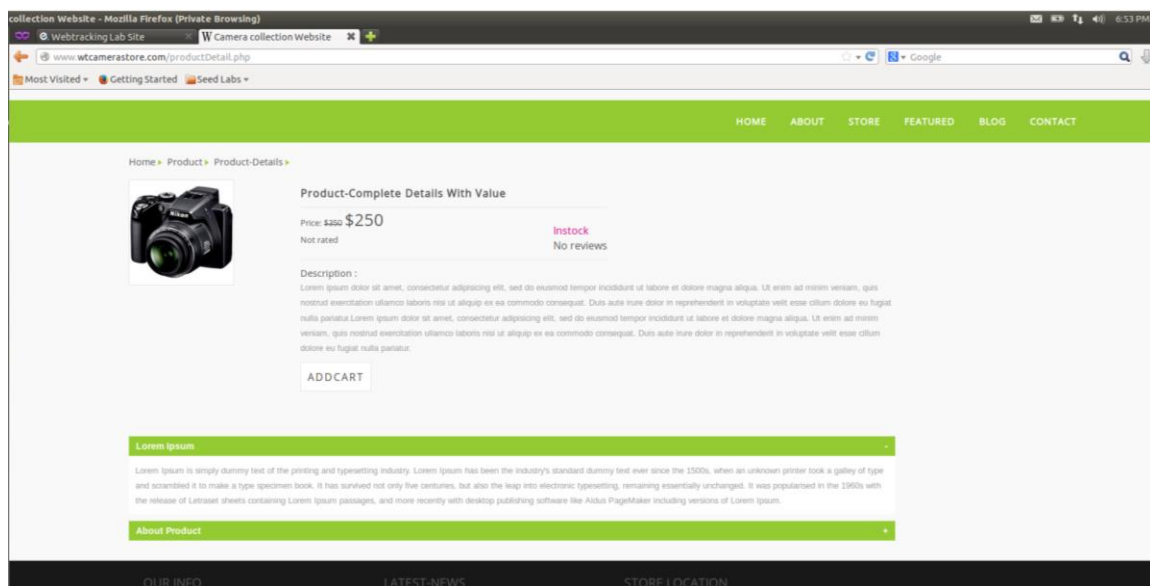
#### Task 5:

In the private browsing, I opened up the Elgg website and the observations were that no advertisements were displayed on the web page. Thus, if you are browsing through a private tab, the adserver will not have your identity. In other words, the user will have a different identity.

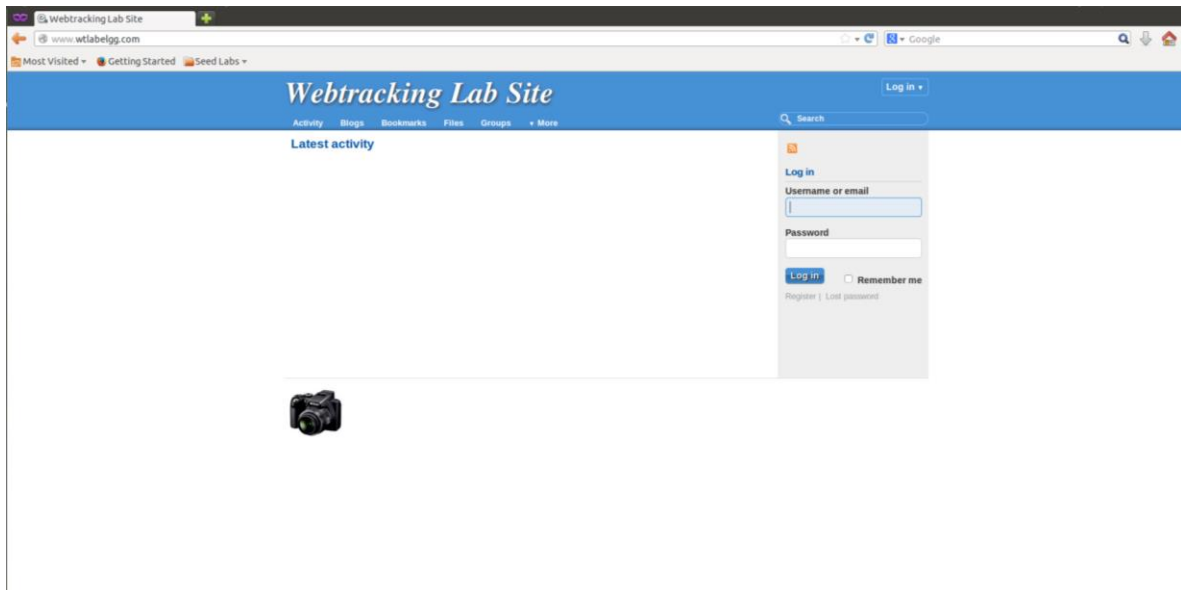




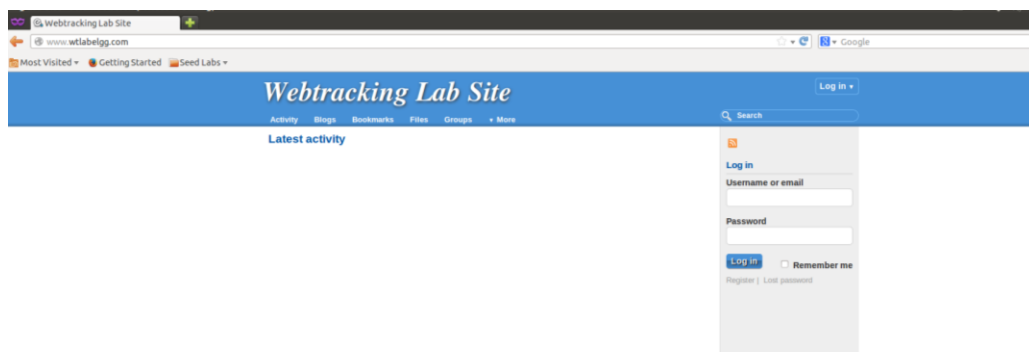
I clicked on “View details” on a the Camera product on an e-commerce website.



When I refreshed the Elgg website, an advertisement for the camera that I visited previously from the private window was displayed. This tells us that third party cookie tracking can be done in a private tab.



Now, I closed the Firefox browser and relaunched it. Then I reopened the Elgg website to find that no advertisements are displayed on the website now.

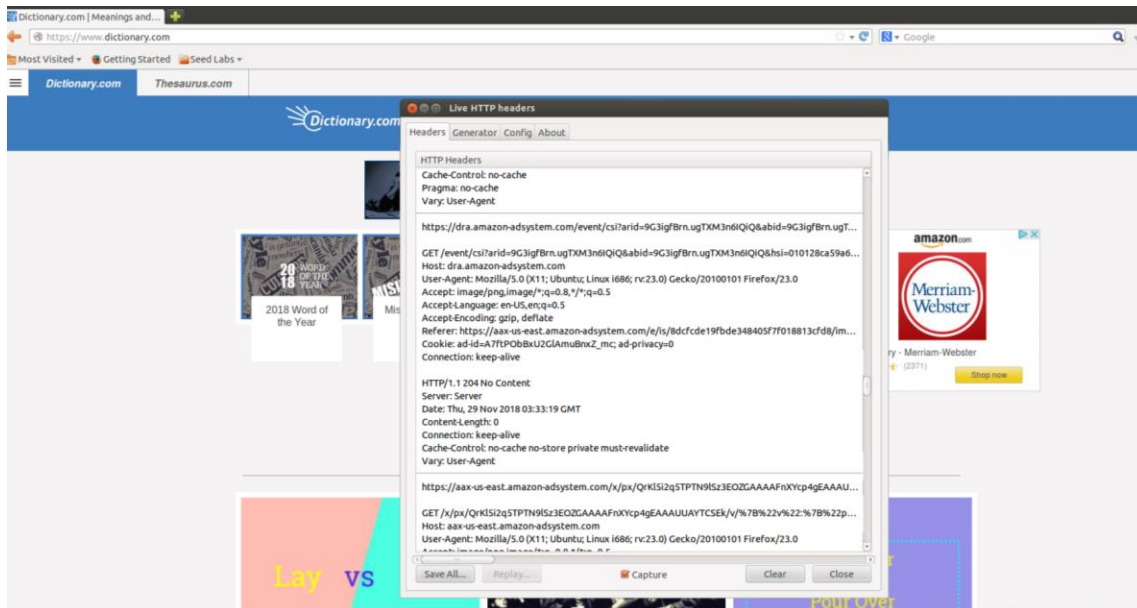
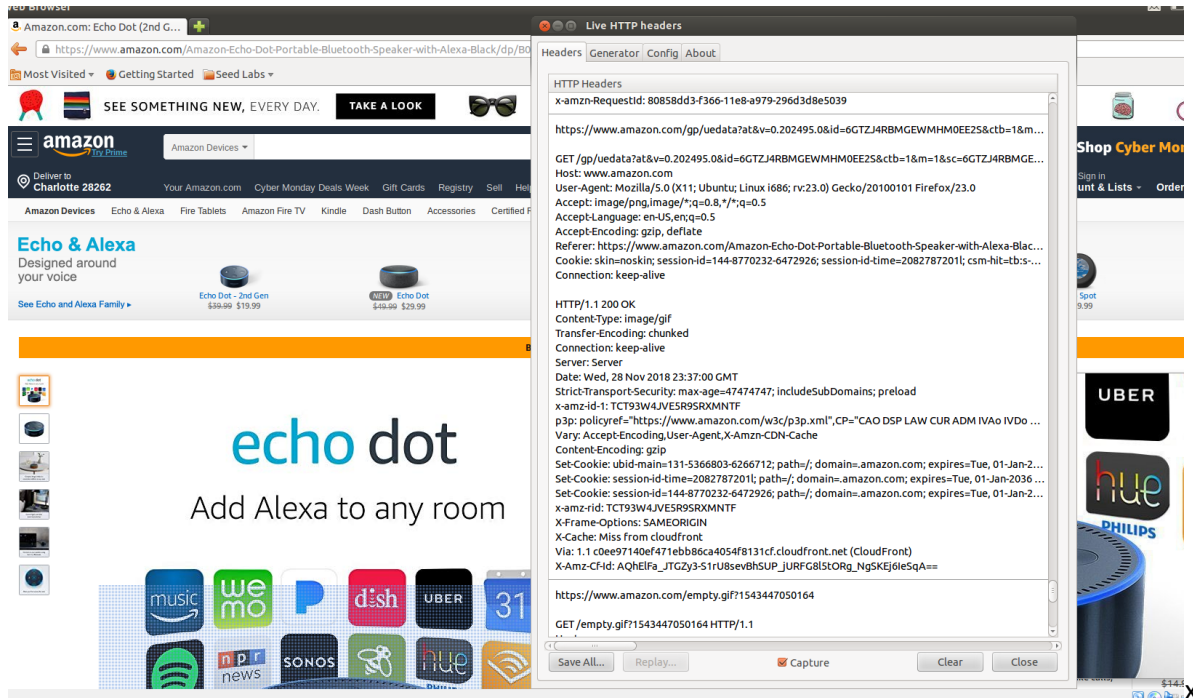


When compared to the Task 1, it is seen that when we close the browser, no advertisement is displayed when the browser is relaunched. In Task 1, the same advertisement was displayed.

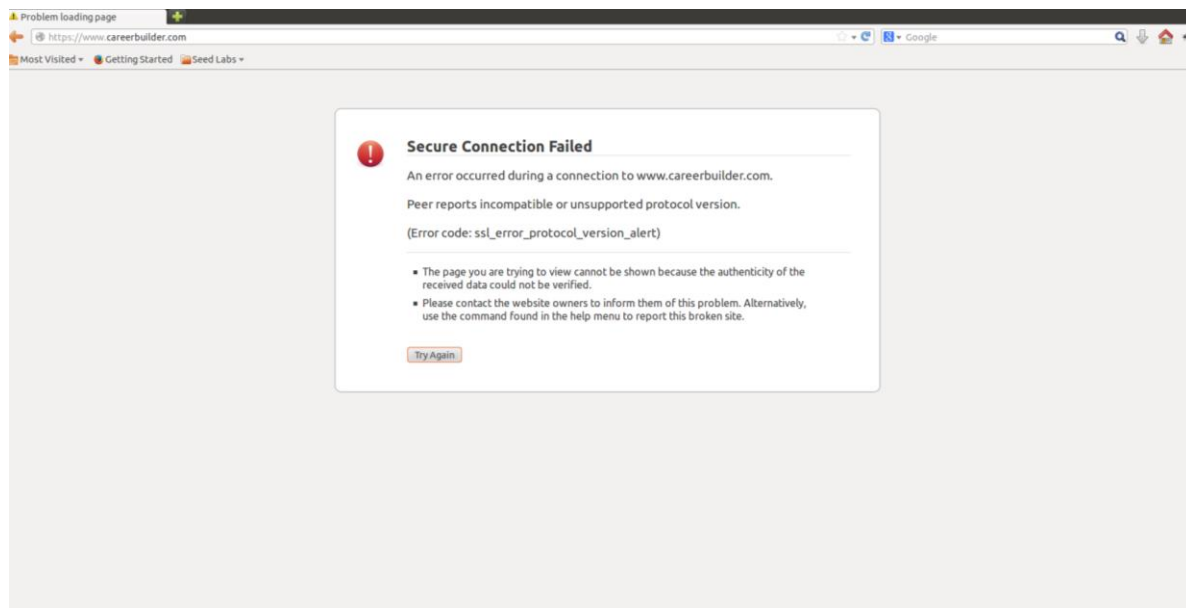
This tells us that, in a Private Browsing session, Firefox will delete all the cookies when the application is closed. Thus, when we relaunch Firefox, no advertisements are displayed.

## Task 6:

I visited real websites on the Internet – [www.amazon.com](http://www.amazon.com) and [www.dictionary.reference.com](http://www.dictionary.reference.com), and searched for the web requests using the “Live HTTP Headers” extension and identified the third party cookie.

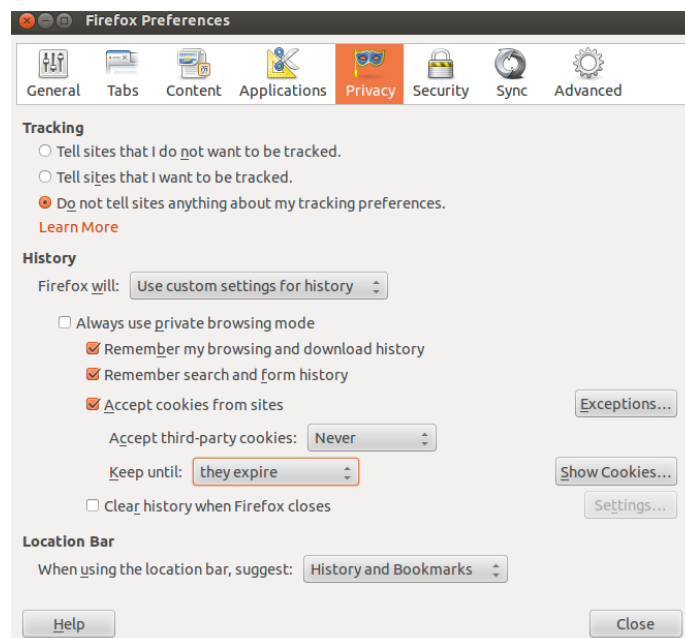


I couldn't access the [www.careerbuilder.com](https://www.careerbuilder.com) as there was a SSL error while accessing it.

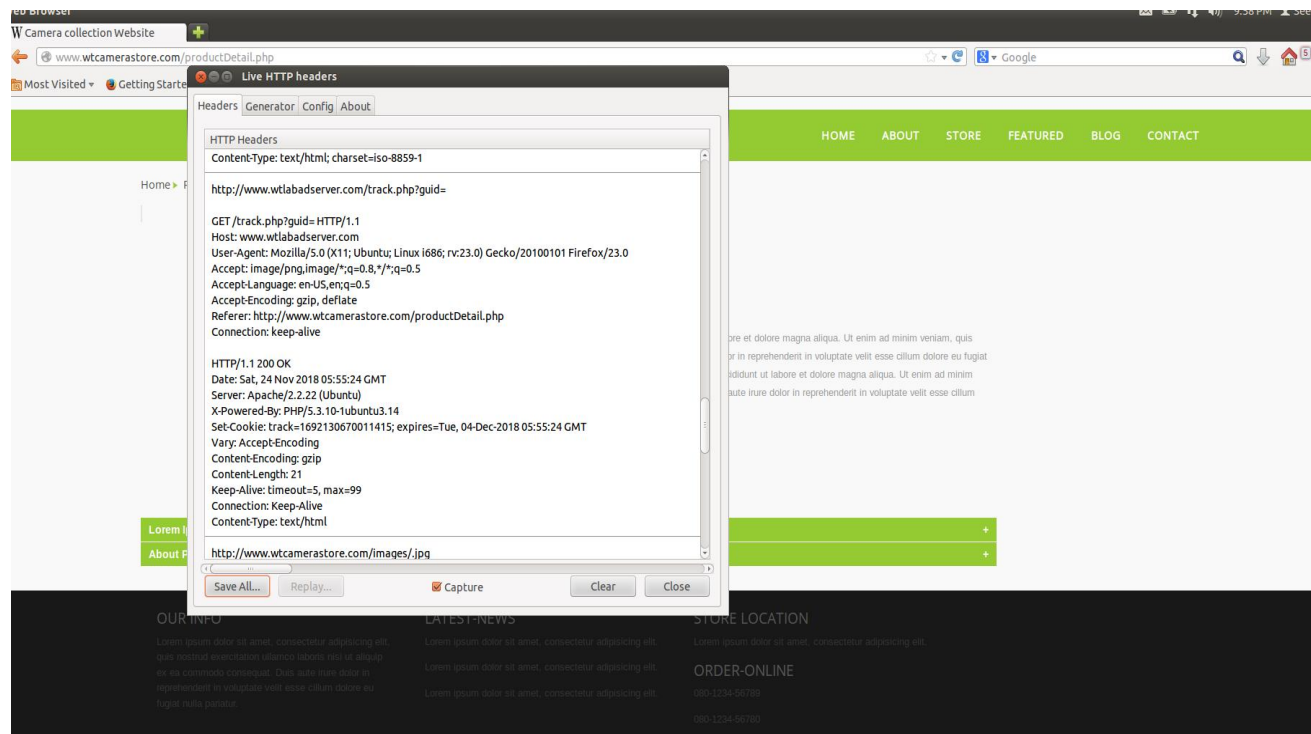


## Task 7:

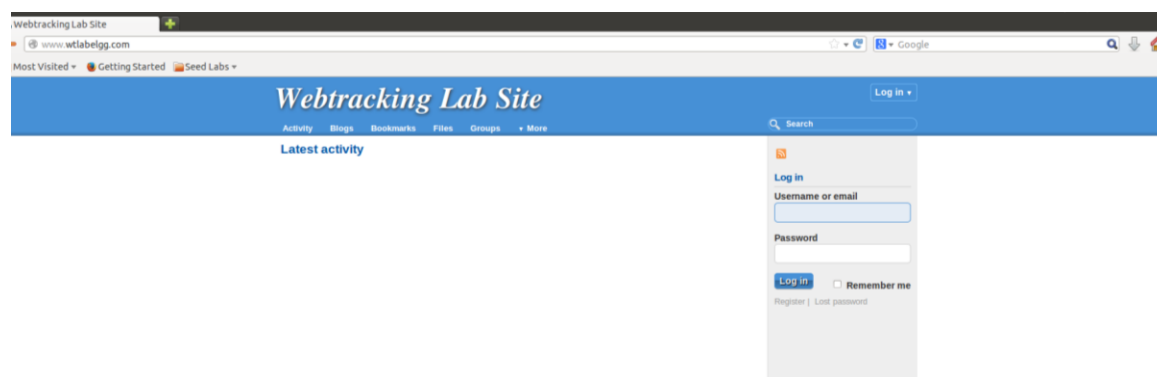
Now, to disable the Third Party cookies in the browser, I selected Edit>Preferences>Privacy>Use custom settings. In “Accept Third Party cookies”, select “Never”.



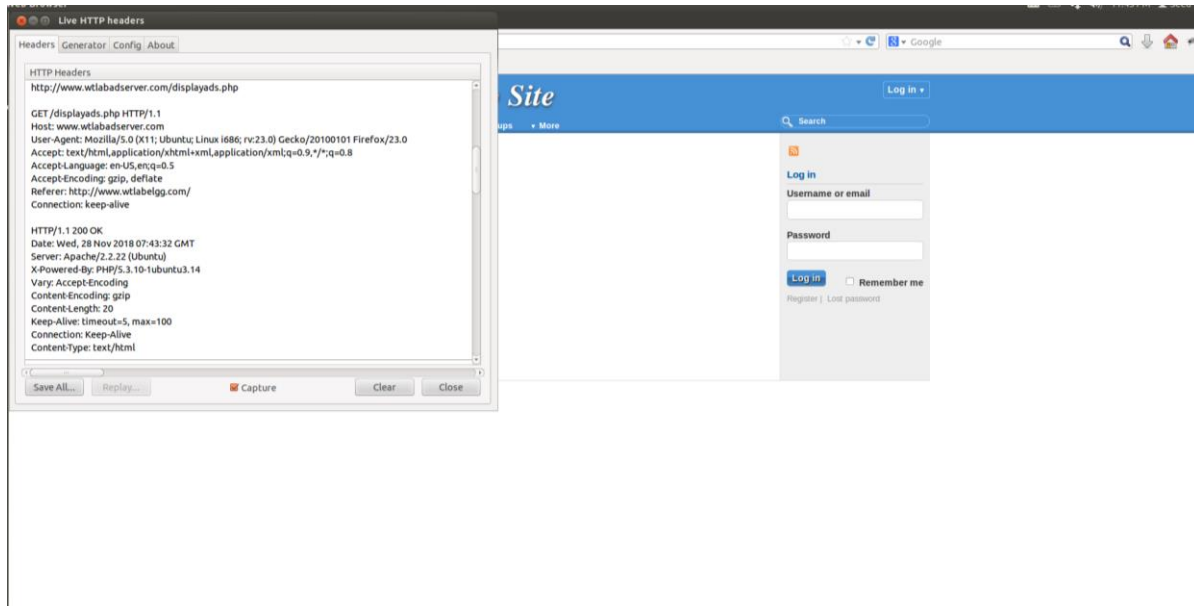
Then, I surfed one of the e-commerce websites and clicked on the “View Details” of a product after opening the “Live HTTP Header” extension.



Now, when I opened the Elgg website, I can see that there is no advertisement displayed on the webpage.



I found the HTTP request from the Elgg website using the Live HTTP Headers. While comparing it to the one in Task 4, I can see that there is no Cookie set in this request. This is because the Third-Party cookies have now been disabled.



## Surprising Results:

In this project, while surfing and studying websites and their behaviors, I saw that a third party cookie is tracking the products that I visit. Now, when I open the Social media site – Elgg, it sends a HTTP request to the Ad Server with the tracking id and shows the user relevant advertisements that are targeted towards that particular user. I followed similar series of steps with variations multiple times to find different results.

Some of the surprising results were as follows:

When we open the website using a private session from the browser, the cookies are retained only till the browser is up and working. All the cookies for that particular session are retained only till the application is working. i.e. They will be deleted after the browser is closed.

In the task 6, the cookie request is sent only when we load the webpage for the first time. If the webpage has to set the cookie for the same ad server again, then it just has to send the tracking id to the AdServer.