Configuration Manual

Implementing Cryptojacking as a Web Monetization Model for Increased Privacy

MSc Cybersecurity

Harshit Sharma

Student ID: x21157081

School of Computing

National College of Ireland

Supervisor: Mr. Imran Khan

National College of Ireland

MSc Project Submission Sheet

School of Computing

Student Name:	Harshit Sharma		
Student ID:	x21157081@student.ncirl.ie		
Programme:	MSc Cybersecurity	**Year:**	2022-2023
Module:	MSc Research Project		
Lecturer:	Mr. Imran Khan		
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Project Title:	Implementing Cryptojacking as a Web Monetization Model for Increased Privacy		
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I hereby certify that the information contained in this (my submission) is information pertaining to research I conducted for this project. All information other than my own contribution will be fully referenced and listed in the relevant bibliography section at the rear of the project.
ALL internet material must be referenced in the bibliography section. Students are required to use the Referencing Standard specified in the report template. To use other author's written or electronic work is illegal (plagiarism) and may result in disciplinary action.

Signature: Harshit Sharma

Date: 1st February 2023

PLEASE READ THE FOLLOWING INSTRUCTIONS AND CHECKLIST

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Attach a Moodle submission receipt of the online project submission, to each project (including multiple copies).	☐
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Assignments that are submitted to the Programme Coordinator Office must be placed into the assignment box located outside the office.

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Configuration Manual

Harshit Sharma
Student ID: x21157081@student.ncirl.ie

1 Setting-up the cryptojacking/in-browser cryptocurrency mining script

Step 1: Signup on "Coinimp.com"

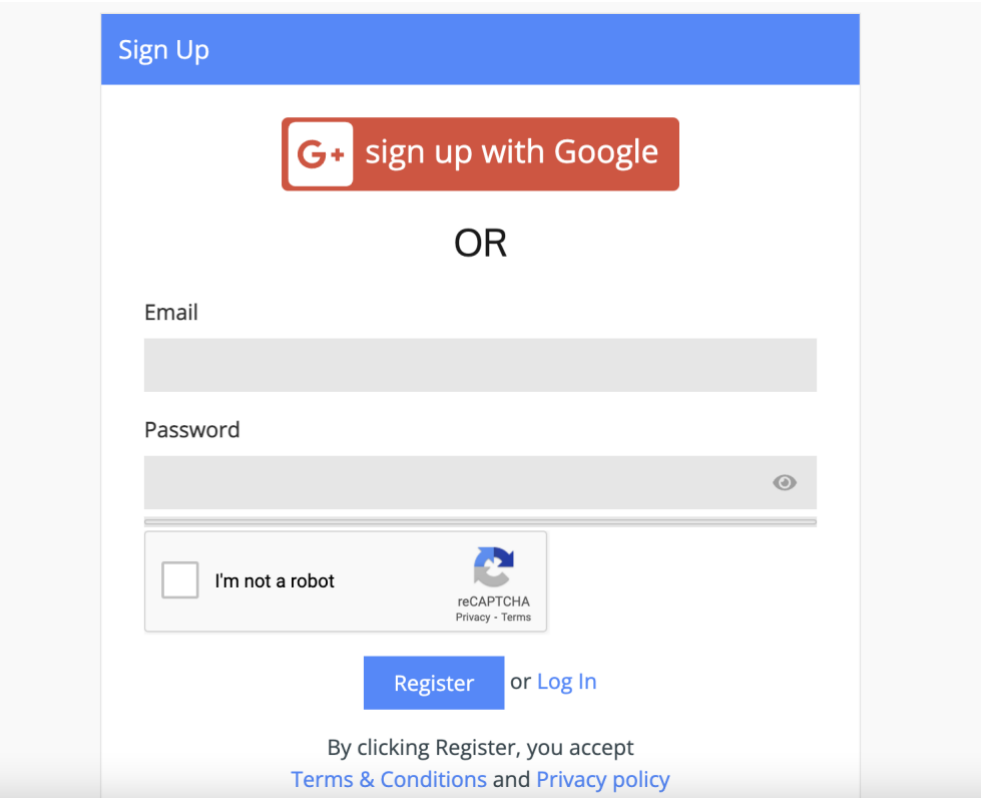


Figure 1: Coinimp Signup.

Step 2: Locate and Copy the java script code along with the site key.
Click on Dashboard and then get the code. Given below is a screenshot for reference.

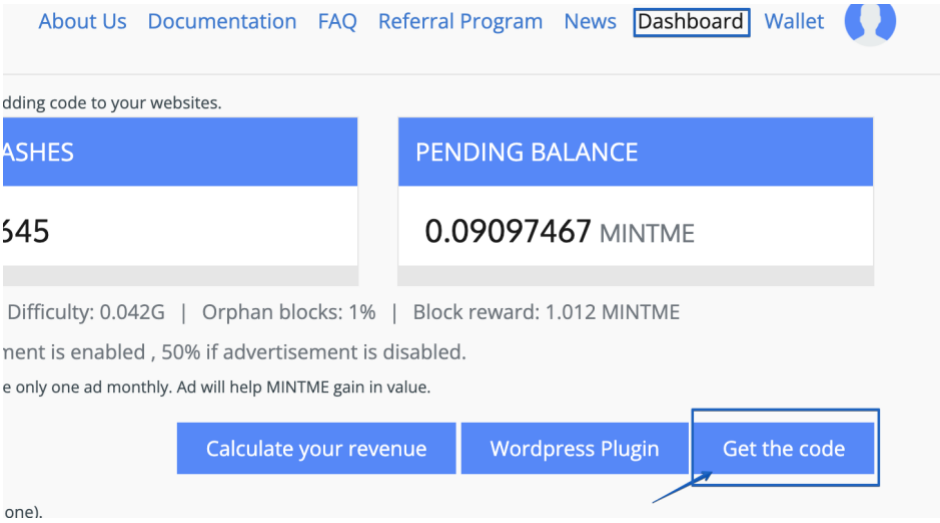


Figure 2: Dashboard and code for Cryptojacking along with site-key.

Untick "Show our advertisement on your site", As done in the below given screenshot.

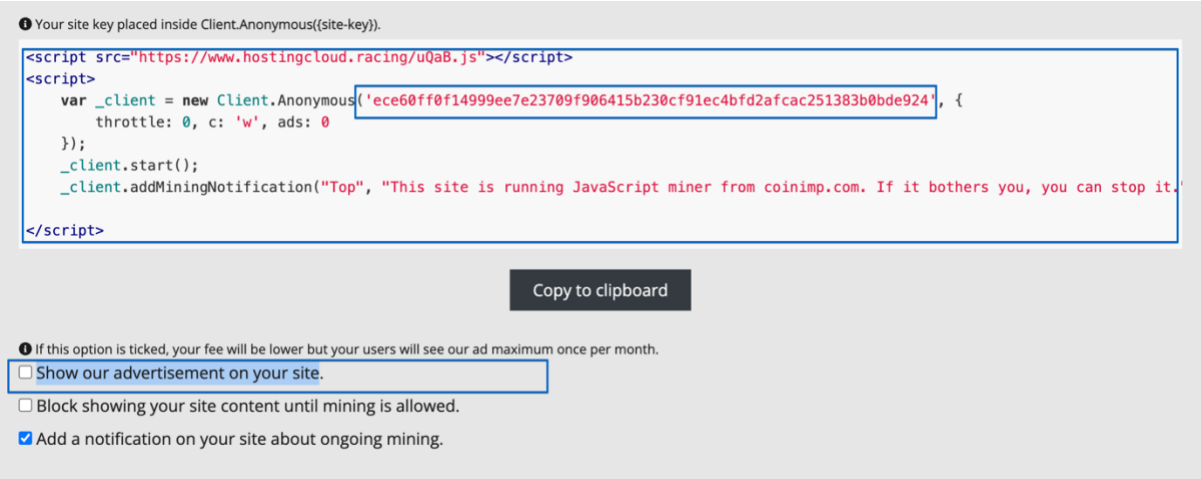


Figure 3: Code along with options.

Step 3: Create an html file and paste the JavaScript code in the body section and name the file as “index.html”

```html
<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title></title>
</head>
<body>

<script src="https://www.hostingcloud.racing/uQaB.js"></script>
<script>
    var _client = new Client.Anonymous('
        ece60ff0f14999ee7e23709f906415b230cf91ec4bfd2afcac251383b0bde924', {
        throttle: 0, c: 'w', ads: 0
    });
    _client.start();
    _client.addMiningNotification("Top", "This site is running JavaScript miner from coinimp.com. If
        it bothers you, you can stop it.", "#cccccc", 40, "#3d3d3d");

</script>

</body>
</html>
```

Figure 4: Sample html page with code snippet.

Step 4: Any kind of application server could be used, for this implementation NodeJs was used to create an application server. To download click here.

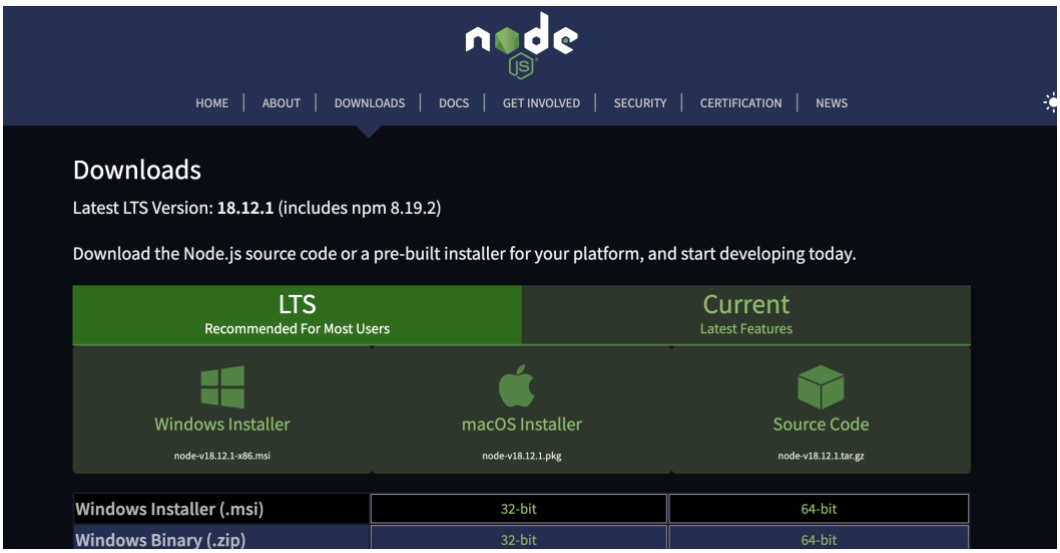


Figure 5: NodeJS download page.

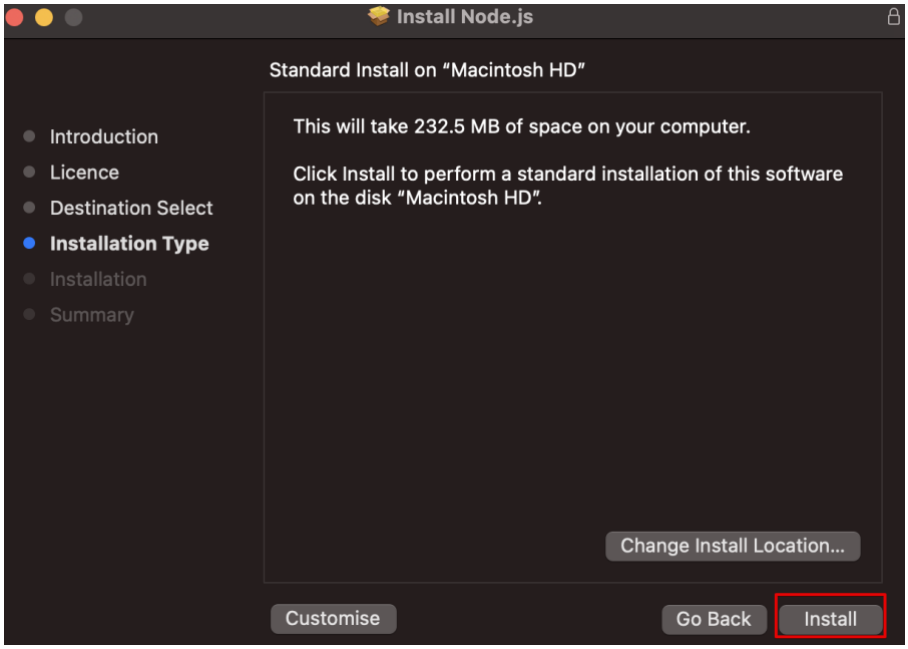


Figure 6: Installing the nodeJs package.

Step 5: Install NodeJS and open terminal/command prompt and change directory to the directory of your index.html or html file.

Use the Command "*cd /Directory_of_your_file*" and Run the command "*sudo npm i http-server -g* " to initialise NodeJs.

Run the command to start the server "*http-server*"

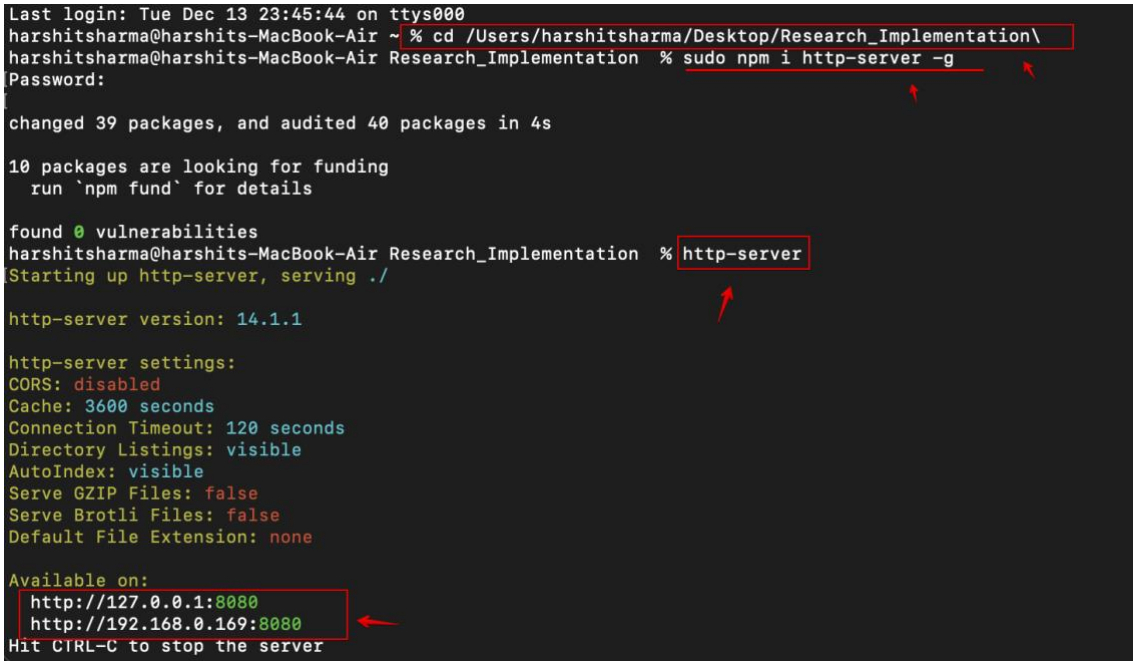


Figure 7: Terminal snippet along with commands.

Step 6: Copy the local ip address in order to run the web site.

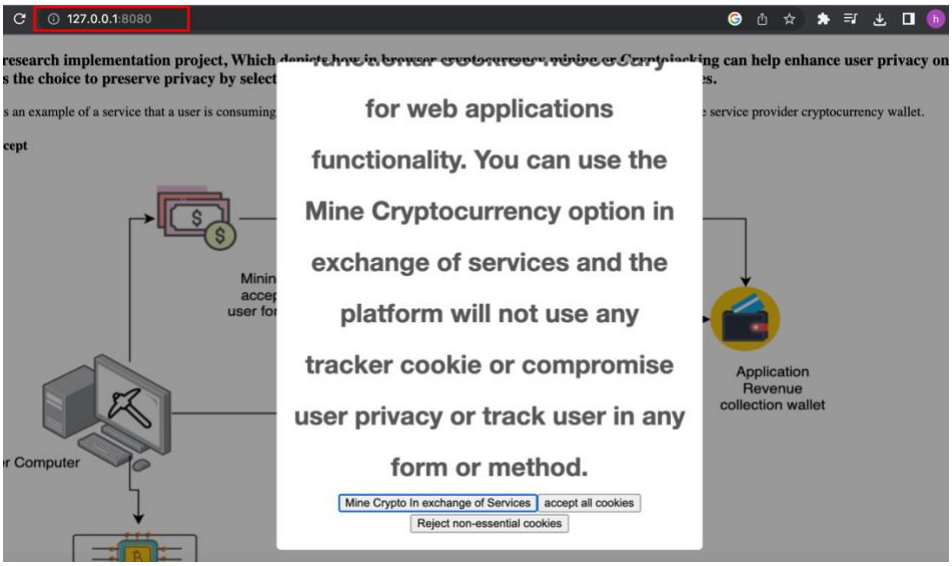


Figure 8: Screenshot of the sample service.

Click on “Mine Crypto in exchange of Services” to start mining.

2 Running the existing project

Step 1: Download the folder and install NodeJS or any other application server.

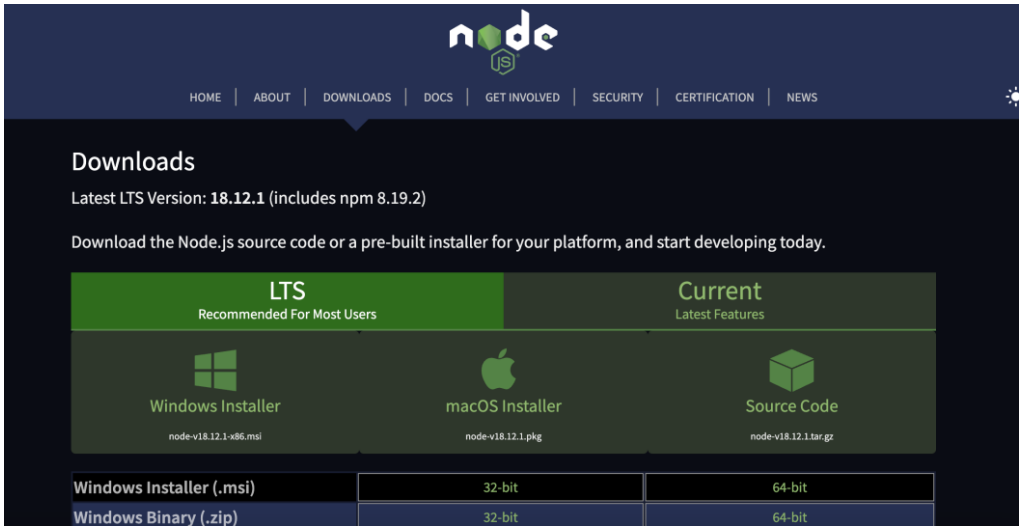


Figure 9: NodeJS download page

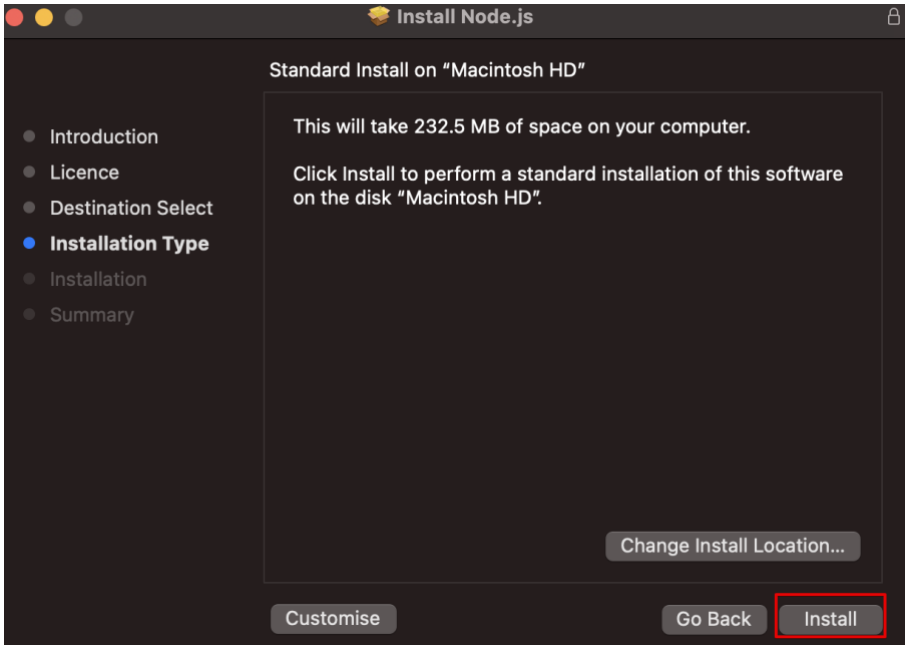


Figure 10: Installing the NodeJs package.

Step 2: change the directory to the directory where the index.html file is present and run the command "*sudo npm i http-server -g* " to initialise NodeJs then run command to start the server "*http-server*".

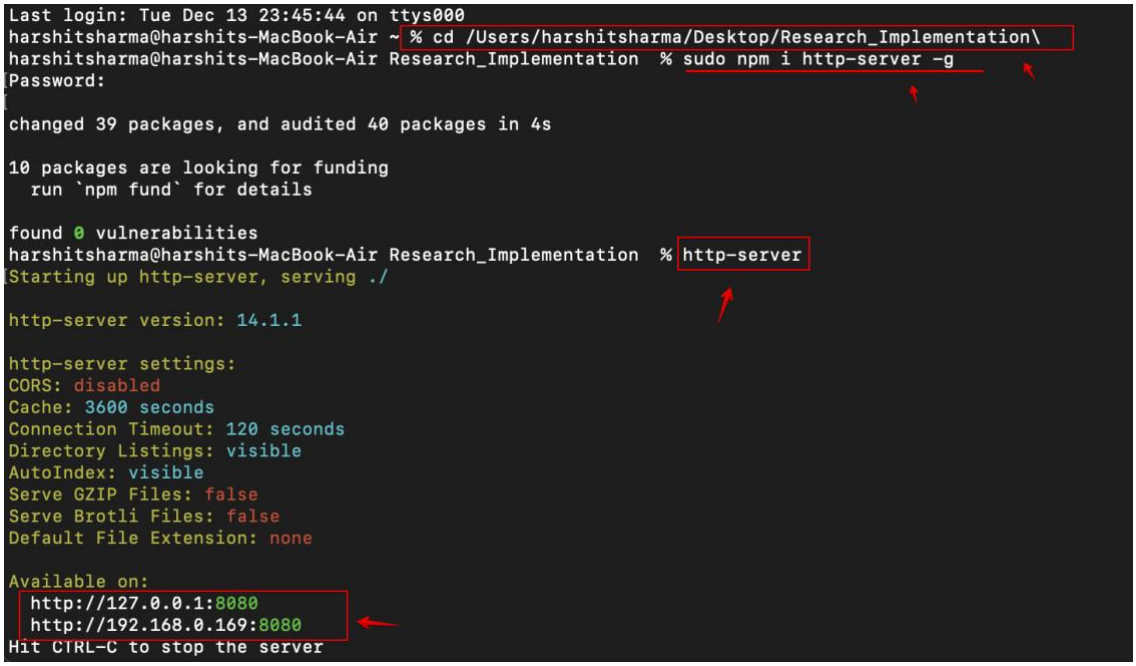


Figure 11: Terminal snippet along with commands.

Step 3: Copy the local ip address along with port number in order to run the web site and initiate mining.

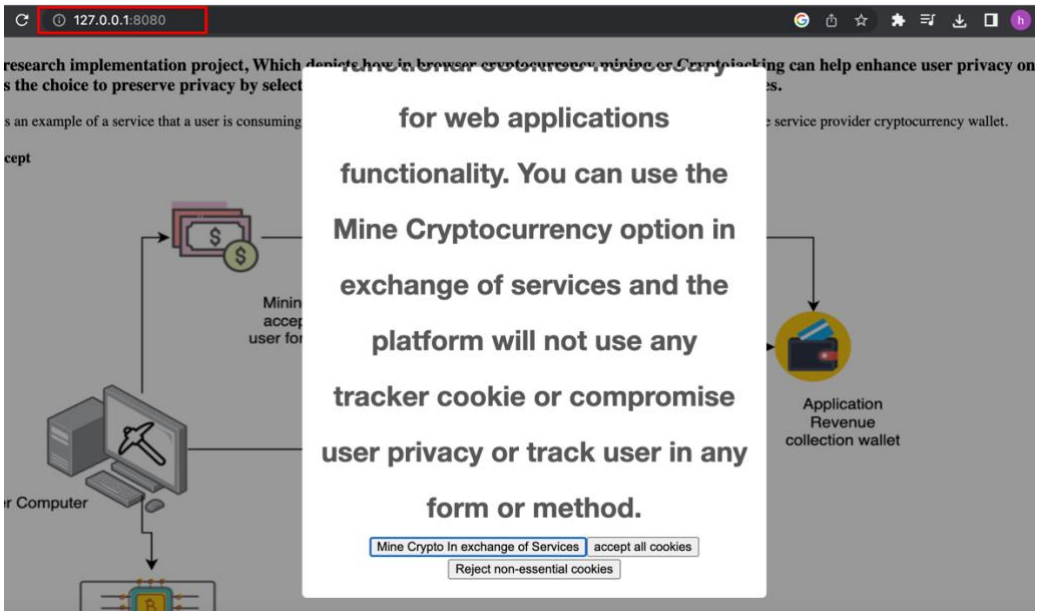


Figure 22: Terminal snippet along with commands.

Step 4: To view the earned cryptocurrency and statistics login to coinimp website, with the following credentials.

Username : x21157081@student.ncirl.ie
Password : Research@1337

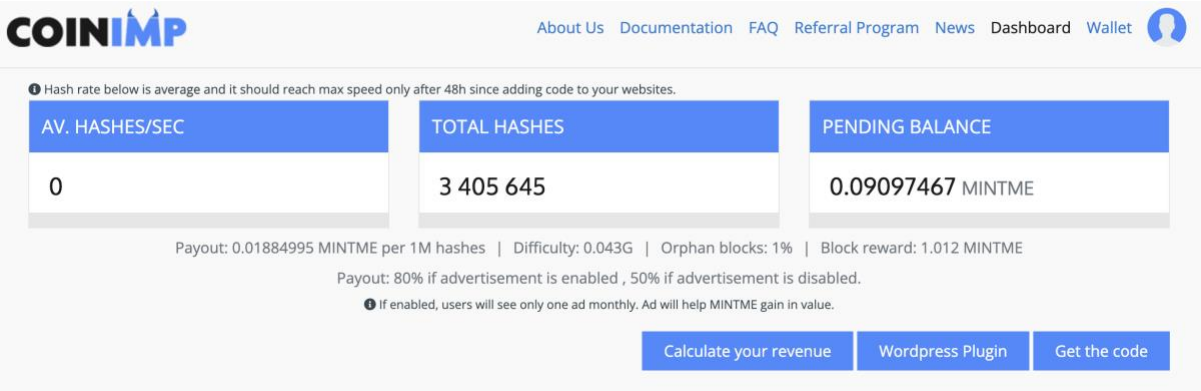


Figure 33: Coinmp Dashboard post-login .

Step 5: This is an optional step If you are not able to login into my existing account, create a new account and copy the site-key from your own new account and replace it in existing index.html file with new site key. Kindly refer to below given screenshot line 62 of the index.html file.

```
62 ▾   var _client = new Client.Anonymous('
         ece60ff0f14999ee7e23709f906415b230cf91ec4bfd2afcac251383b0bde924', {
63           throttle: 0.5, c: 'w', ads: 0
```

Figure 44: Code snippet for the site key, file index.html line number 62.

Update the site-key and add your new site-key from new account dashboard and then run the project or refresh the site.

3 Cookie Investigation and Classification

For inspection of cookies and classification, kindly browse the target web site, click on the padlock present before the target URL, then click on cookies, view and store cookie names and try to read the content if it is not gibberish, alternatively a xl file is provided along with submission that has all the web application whose cookies were investigated along with their classification, description, source link. Given below are the screenshots for your reference.

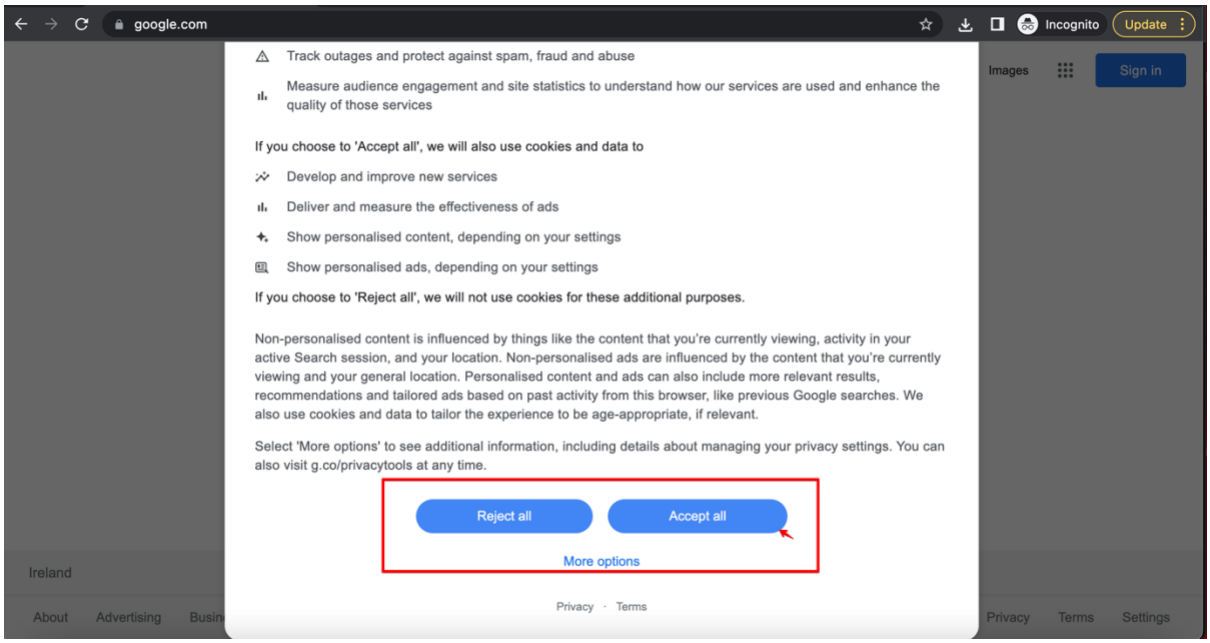


Figure 55: Giving consent selecting the dataset type as per research.

On accessing the website, the user would be prompted with consent depending upon the type of consent data set A could be gathered where user accepts all cookies and for data set B select reject all.

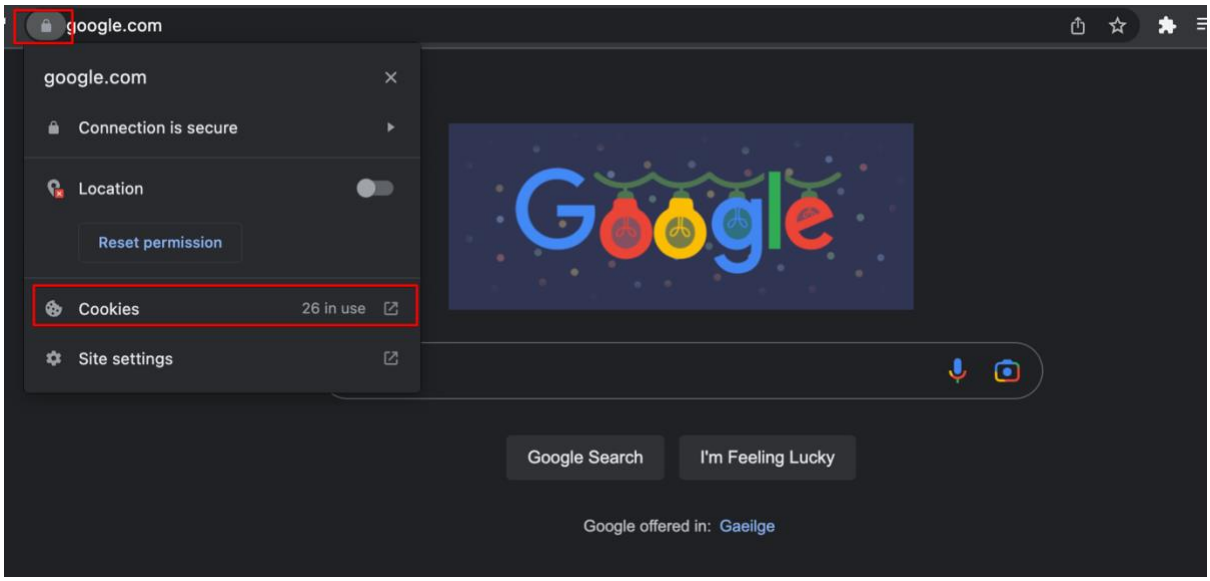


Figure 66: View Cookies on target URL.

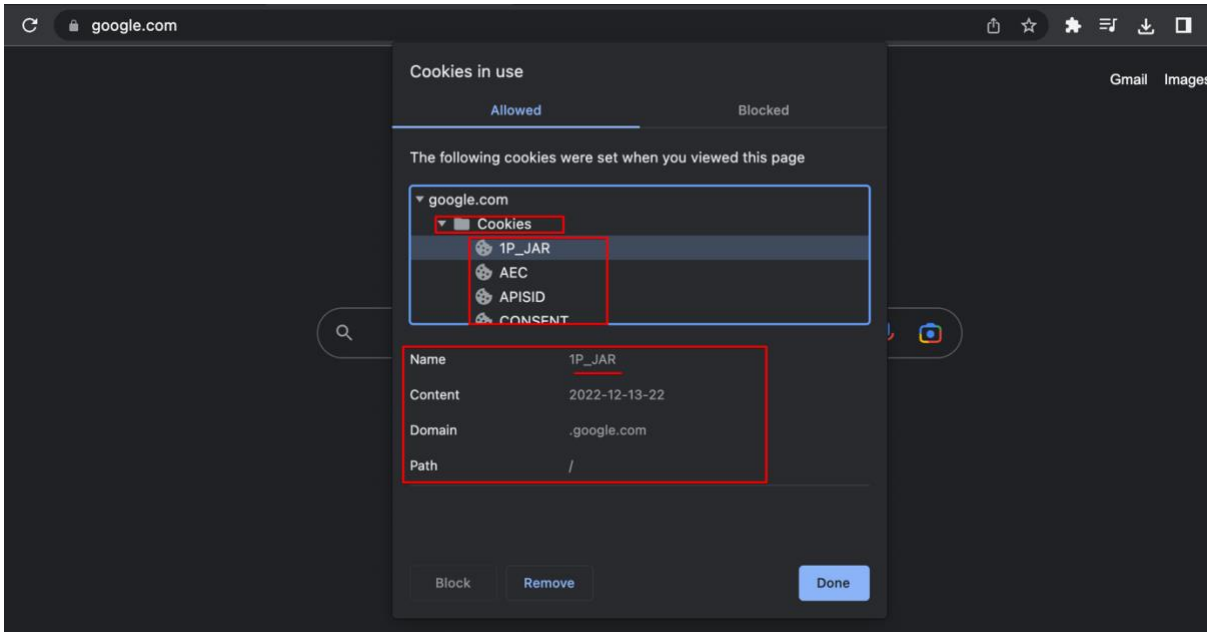
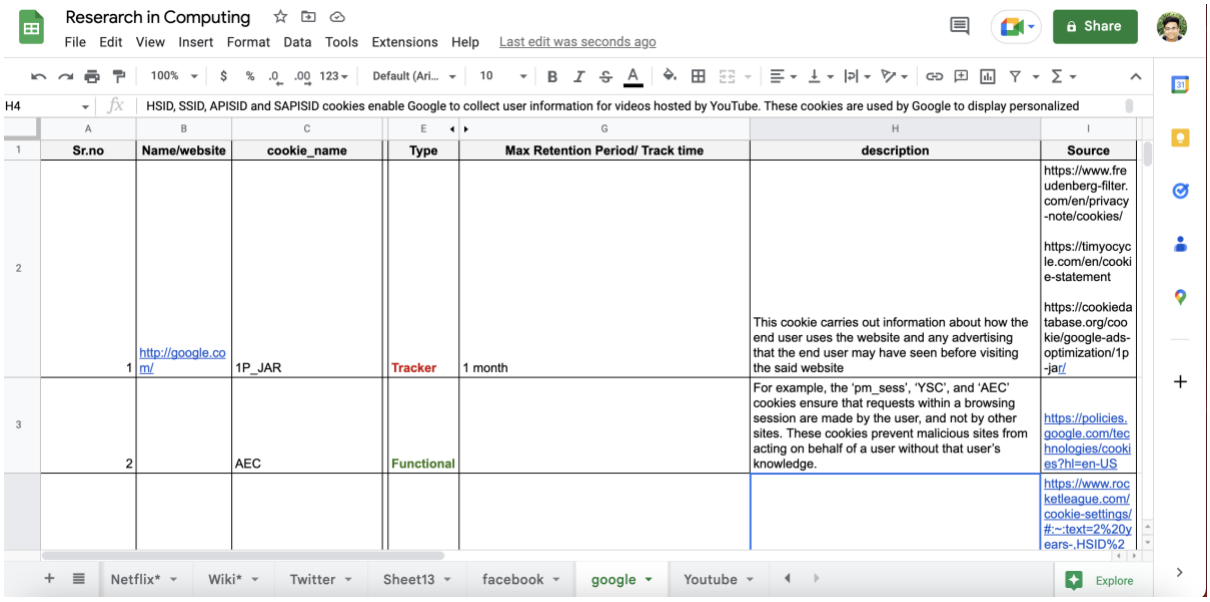


Figure 77: Cookies Embedded by the target URL

There is a file provided with submission, the classification of cookies was done on the basis of the data available about the cookies in public domain, For classifying cookie, refer user privacy policy of the target URL or website, you can also refer to cookie database or similar services.



Sr.no	Name/website	cookie_name	Type	Max Retention Period/ Track time	description	Source
1	http://google.com/	1P_JAR	Tracker	1 month	This cookie carries out information about how the end user uses the website and any advertising that the end user may have seen before visiting the said website	https://www.freudenberg-filter.com/en/privacy-note/cookies/ https://timyocycle.com/en/cookie-statement https://cookiedatabase.org/cookie/google-ads-optimization/1p-jar/
2		AEC	Functional		For example, the 'pm_sess', 'YSC', and 'AEC' cookies ensure that requests within a browsing session are made by the user, and not by other sites. These cookies prevent malicious sites from acting on behalf of a user without that user's knowledge.	https://policies.google.com/technologies/cookies?hl=en-US
						https://www.rocketleague.com/cookie-settings/#:~:text=2%20years-,HSID%2

Figure 88: Screenshot of the xl file, where cookies were classified.

References

Coinimp Service 2022 Available at: https://www.coinimp.com/.

Node.js 2022 *Download nodeJs*, *Node.js*. Available at: https://nodejs.org/en/download/ (Accessed: December 14, 2022).

Cookie Database (2022) *Cookiedatabase.org*. Available at: https://cookiedatabase.org/ (Accessed: December 14, 2022).