JTeC

# *Website Advertisement Validation*

Nur Faezah Binti Sulaiman
Universiti Kuala Lumpur
UniKL MIIT
Kuala Lumpur, Malaysia
nfaezah.sulaiman@s.unikl.edu.my

Dr.Shahrinaz Ismail
Universiti Kuala Lumpur
UniKL MIIT
Kuala Lumpur, Malaysia
shahrinaz@unikl.edu.my

*Abstract*— this study was designed to focus on the user who always search about information on internet from website to solve their problems. The widely use of website can cause lots of problem such as many ads and link that can cause the virus to occur within the website. So, every time when user access the website, user need to have to always stay alert not to click unwanted link or ads from the website. Using this systems can prevent user from accidently click on the advertisement because the system will validate and block unauthorized ads.

*Keywords—website advertisement, validte, virus*

## I. INTRODUCTION

This project is about website advertisement validation to add more security for the website page. This project is to identify the validity of advertisement to prevent from users click the untrusted ads. Using this system user can check either the ads is valid from the website or not. From this project is to check the advertisement from the website is truly from their website. Website is used for educational, inspiring, entertaining. So when every time used the website user will mess with unauthorized advertisement. So this project bring website advertisement validation for trusted ads. Using this system user can check the ads is really secure and valid or not. With the rise of fake news and brand safety issues making headlines, it's more important than ever to ensure the advertisement appears alongside content that right for the brand.

Advance in internet technology have evolved the business world in a number of ways, including taking advertising techniques to a new level. It has a lack of advertising on a website that we do not know. Most ads on each website may not be created by the company. This also causes any problems that may occur when a user clicks the ad and theft of data can be stolen through artificial ads or spoofing that wants to extract user information for the wrong purpose EASE OF USE

## II. RESEARCH OBJECTIVE

This project was done in order to achieve some objectives at the end of the project timeline. First is to identify the website advertisement malicious link and also to develop a web system to check advertisement on the website and last to test the website advertisement validation.

## III. METHODOLOGY

### A. Authors and Affiliations

This project using Rapid Application Development (RAD). This is a type of software development that does not spend a lot of time or resources on planning and instead uses a method of prototyping to introduce the product. The website advertisement is many spoofing advertisement from website. The solution therefore is to provide a system to check the website is posted by the website is trusted or spoofing advertisement.

Figure 1: RAD Model Phase (Bentley,2015).

### B. Methodology Explains
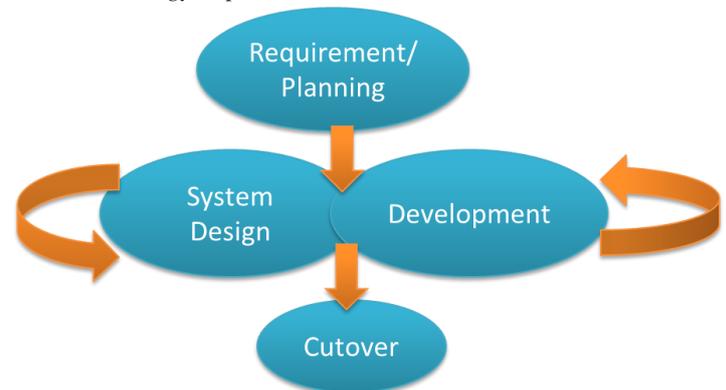


In project requirement or planning is the first phase of this project. In the project requirement or planning, the work that needed to be complete to development this project has been

identified. In order to complete the development, the project has been separated into several tasks. Gantt chart has been created in order to schedule the project and identified the time needed to complete every task. By creating the Gantt chart, the time was well managed and the project will ensure to complete in timely manner.

In system design Designing phase focused on the designing the system that will solve all the problem based on the user needs to create a system to give the website advertisement validation to check whether it can be trusted or not. System design phase also have literature analysis, current systems comparison, software requirements.

In development on this phase of the project, the development or implementation of the system started during this phase. We have translated the modules identified in design phase into the programming code. The system use a VB using Visual Studio 2017. Website advertisement validation is use VB.NET languages to build the system.

Lastly, the stage of this methodology is cutover, all the testing works followed by maintenance work are in the last phase of system development. In this case, the system must testing on system design and development, to meet the requirements and have a result.

## IV.    TESTING AND RESULT

### A.  Automated Script Ecxuting

This chapter will represent the various testing where all compulsory and applicable testing mechanism is applied on. The testing and results phase can be initiated properly to test the project functionality. This testing is inevitable to make sure that the application is error free and reaches the quality standard required and also meet the objectives. This prototype later has been tested and evaluated on its usage on personal computer



Figure 2: Parts of testing

Student divides testing into two parts. First to test the project functionality and for the second part is usability testing. The objective of this stage is to ensure all the systems are running successfully according to the objectives. Usability testing is a technique used to evaluate a product by testing it on users. The aim is to observe people using the product to discover errors and areas of the improvement.

I.    Project functionality testing:

It need to test every single form before running the fully system. This is because to avoid major error in the system.
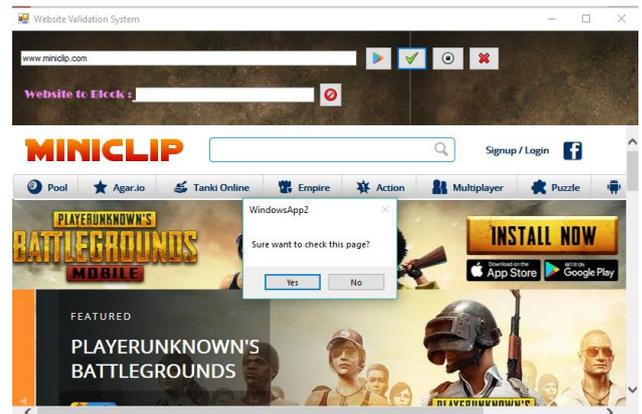


But the website advertisement validation have error in certain part to check the malicious advertisement cannot running.
Figure 2: Example website Advertisement

The figure 2 show the part of interface to test the malicious link from existing website advertisement, but the function is not works because the coding is not compatible with this system and have error.
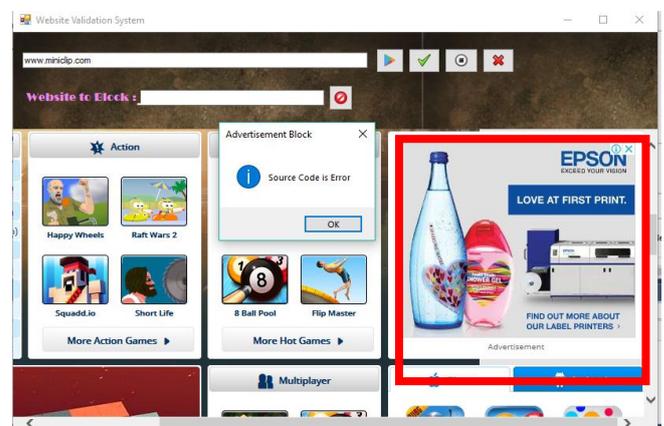


Figure 3: Example pop up blocker advertisement

The figure 3 show the system only can block the pop up advertisement only because the vb.net languages can access the pop up blocker. But the pop up blocker does not show any threats because the system has blocked the user from redirecting to the ads. But ads that are not popup blocker like the above image cannot be implemented in this system. This causes the system to not be used safely.

Overall, this project can not be completed properly because there is a language code unreadable by the compiler. this causes this system to be made only half without perfect results. The table 1 show the result of the system.

| Test Module | Description | Expected Result | Actual Result |
|---|---|---|---|
| Verify the login page connection | Enter the valid Username and valid password | A message pop up " You are now logged in" | PASS |
| Verify the website | Enter the website have ads in search box to validate. | The result will come out after search. | PASS |
| Validate the website ads | Enter the website want to validate the ads. | A message pop up " The website have malicious code" | FAIL |
| Conclusion | This system is for the user to be secure before browse any website because many website in World Wide Web is dangerous and have malicious link if user clicking wrongly. The data will be lost and the PC or laptop will become slowly because the virus spreading inside the system. | | |

Table 1: Result of the system

## V. CONCLUSION

Nowadays internet no more secure for online surfing because there is always have invalid advertisement from website that can cause user click on unauthorized advertisement that contain viruses. Example of attack can be happen such as website spoofing, spam and virus. Hackers normally, like to trap user by asking click on advertisement because like to click without knowing that the advertisement have virus.

When surf on some free Wi-Fi, Log in to some of usual sites. The hacker will easier to log in to the site because free Wi-Fi is easy to stranger sniffing or attack the packet traffic to stolen the data. It essentially happens each time user visit the website that doesn't bother to encrypt the traffic to browser.

So this project brings website advertisement validation to make the user access the website without worries. The system will reduce negligence cause by user. This system validate the unauthorized advertisement and block it from user to click. With the system being able to reduce the users pressing advertisement in the website directly to the next page.

There are many things that need to be consider before and after implement this project. First of all is the network technologies that want to be used. This project is use the software to development to create the system. The system creating using Microsoft Visual Studio to build the system. Many user don't know all about the malicious link, after click the untrusted ads the data or personal detail inside the laptop can be lost or stolen by the third partier. This project if to give a warning message pop up information about the malicious link if the website have any type of malicious such as sniffing, man-in-the-browser and etc.

## VI. RECOMMENDATION

This system is designed and developed for the use in personal computers, with some limitations to be improved in future research. Although this system is function as expected and reached the basic goal, there still some improvement on the information purposes which is to be more effective and real.

This product has the potential for future development and research and examines some ways in which this application could be extended in the future. Future enhancement on this system:

- The system can work with any other operating system other than Windows XP.
- The system is compatible with other internet browser.
- Enabling the system to be used by everyone and can use it successfully
- Optional button for users to block malicious scripts from the website ads.
- Detection and returning report on level of risk based on types of attacks, e.g. sniffing, man-in-the-middle, man-in-the-browser.

### REFERENCES

[1] An effective defense against intrusive web advertising. In Privacy, Security and Trust, 2008. PST'08. Sixth Annual Conference on (pp. 3–14). IEEE.

[2] Singh, A. K., & Potdar, V. (2009). Blocking online advertising-A state of the art. In Industrial Technology, 2009. ICIT 2009. IEEE International Conference on (pp. 1–10). IEEE..

[3] Post, E. L., & Sekharan, C. N. (2015). Comparative study and evaluation of online ad-blockers. In Information science and security (iciss), 2015 2nd international conference on (pp. 1–4). IEEE.K. Elissa, "Title of paper if known," unpublished.

[4] Robinson, H., Wysocka, A., & Hand, C. (2007). Internet advertising effectiveness. International Journal of Advertising, 26(4), 527–541.

[5] Pathak, P. (2016). Malware a Growing Cybercrime Threat: Understanding and Combating Malvertising Attacks. International Journal of Advanced Research in Computer Science, 7(2).

[6] A. Ranadive, S. Rizvi, and N. M. Daswani, Malicious advertisement detection and remediation. Google Patents, 2013.