Design and Development of a Website Blocking System for Ultimate Lab and Medical Supplies

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ABSTRACT
The world’s technology is continuously evolving, and with its use people are able to get almost everything they want through the internet. For this reason, people have been exposed to certain information and to things that are acceptable at a work environment or at a school, it has come to my attention working as a systems administrator working at one of the organizations that most people have been visiting prohibited websites. Hence blocking of these prohibited or unwanted websites has become paramount. Website blocking helps to stop people from accessing or viewing unwanted or prohibited websites and helps protect the public from viewing illegal contents such as pornography as is the case in our communities and in the country at large. The current methods and systems of blocking websites are sometimes characterized by difficulties and almost unreliable in blocking websites due to the mushrooming of new web browsers. Hence, this calls for an easy yet reliable way to block unwanted or prohibited websites. A Website Blocking Application is a computerized system that can block prohibited or unwanted websites. The wide spread use of computers and the advancement of the internet technology has made it easier for people to view prohibited or unwanted websites. With the touch of a button people are able to access these websites.

Keywords—Water fall model, Entity Relation Application Design, System Flow Chart, System Architecture, Browser, Website Blocking, Opera, Fire Fox, Google Chrome.

CHAPTER ONE: INTRODUCTION
1.1 Introduction
In order to curb the on-going cyber-crimes such as social engineering, phishing and other computer related crimes it is important to restrict certain websites and applications in our companies and schools. There is a tendency amongst most people to view prohibited or unwanted websites. Examples of prohibited websites include pornographic sites and a very good example in most learning institutions and work places are www.facebook.com, and www.youtube.com, students and employees would be on their desktop computers or computer labs to research, but unfortunately, they end up interacting and site viewing or window shopping instead of researching or working. Prohibited or unwanted websites are proving to be a problem in most internet cafes and institutions. This is due to lack of reliable systems that could block such websites.

A Website Blocking Application is a computerized system that can block prohibited or unwanted websites. The wide spread use of computers and the advancement of the internet technology has made it easier for people to view, access prohibited or unwanted websites. With the touch of a button people are able to access these websites.

Viewing or accessing prohibited websites (pornographic sites) is an offence and should not be taken lightly, hence means and ways that can put a
stop to this should be implemented. Blocking of prohibited or unwanted websites can either be done automatically or manually. Manual blocking involves several steps and requires the mastery of all the steps, however most people are unable to master all the steps. While the automated method of blocking a website requires less much effort because it automates all the several steps involved in a manual blocking system or method and it does not require one to memorize the several step.

1.2 Motivation and Significance of the study
One of the challenging aspects of the computer world is the hacking most people have been hacked and robbed. In Zambia about 72% of the people have been hacked and most of them don’t even know about it. For this reason, I undertook the task in trying to embark on the search of trying to prevent this from happen. After a tireless search it came to my attention that most of the people are being hacked by using social engineering. The use of social media has become the norm in Zambia to an extent that half of the day people spend their time on social platforms.

Some of the hacks come from watching elicit things like pornography in which hackers have put a program some behind the content in which they can spy or steal some information.

Significance of the study is as follows
a) Most people will be protected from a lot of malicious software
b) There will be a limitation on the use of social media especially in schools and in workplaces
c) Most companies won’t use a lot of data bundles because of the miss use of the same due to social networking

Company Data will be protected because most of the workers won’t be reason, able to expose company policies and important information.

1.3 Scope
It is from my restless research that a successful Website Blocking Application (W.B.A) has been developed which will prohibit access to unwanted websites at Ultimate Lab and Medical Supplies. The Website Blocking Application will address the following issues:

To stop workers and people from always being on social media and accessing or viewing prohibited or unwanted websites

To prevent employers from wasting company time and resources

To provide protection from company data

To prevent un necessary exposure to important resources

1.4 Problem statement
Most companies and institutions of higher learning do not have reliable Website Blocking Systems hence people end up accessing prohibited or unwanted websites. In addition, students and employees waste most of their time as well as that of their employer's by accessing these sites instead of researching or working. This problem will continue if companies and institutions of higher learning are not equipped with such a needed system.

The system will be developed for Ultimate Lab and Medical Supplies. Currently there is no reliable
website blocking system to block prohibited or unwanted websites at Ultimate Lab and Medical Supplies hence the following problems arise:

➢ Employees waste time by accessing prohibited websites
➢ Workers spend more time on the internet than performing their duties
➢ Students spend less time researching on the internet because they would rather go to unnecessary website.
➢ Most workers have ended telling Hackers about the new product they are about to release in their company because of social engineering.
➢ Last but not the least, some people end up committing crimes by going to prohibited website.

1.5 Aim

The purpose is to design and develop a website blocking system at Ultimate Lab and Medical Supplies to stop workers and other people from accessing prohibited or unwanted websites and wasting the company’s resources. Above all this system could also be implemented at internet cafes, institutions higher learning such as Information Communication University (ICU), The University of Zambia (UNZA), The Copperbelt University (CBU) and eventually help the country as a whole.

1.6 Research goals and objectives

The main goal of this research is to design and develop a Website Blocking Application that is going to help Ultimate Lab and Medical Supplies to stop employees and people from accessing prohibited or unwanted websites.

The project will be accomplished by achieving the following objectives:

1. To design and develop a website blocking system
2. To find out how a Website Blocking Application could be used

To find out the major benefits of using a Website Blocking Application

1.7 Research Questions

1. Why design and develop a Website Blocking Application needed?
2. What are the major benefits of using a Website Blocking Application?
3. How will a Website Blocking Application be developed and implemented?

1.8 Organisation of the report

The thesis comprises of the following content, title page, declaration page, certificate of approval page, acknowledgement page, dedication page, glossary page, abstract page. Chapter 1 shares the introduction of the research; chapter 2 contains literature review while chapter 3 is the methodology on how the system was developed and in chapter 4 there are results of the research. The Discussion and conclusion are reflected in Chapter 5.

1.9 Summary

This chapter looked at the basic introduction of the work in this dissertation. It begun by looking at the basic concept of website blocking systems and the development of the website blocking system with the new technologies and the implementation of the same. The motivation, significance and scope of the work in this study were then outlined. Finally, problem statement was outlined, together with the aims, the research contributions and the chapter closed with the outline of the thesis.
CHAPTER TWO: 2.1 LITERATURE REVIEW

Introduction
This literature review includes some research that has been done to come up with the Website Blocking Application (W.B.A) to be developed at Ultimate Lab and Medical Supplies. This chapter discusses some examples of similar systems that exist and have been implemented.

2.2 Reviewed systems

a) Using system hosts file

This particular manual method of blocking prohibited, or unwanted websites takes advantage of the system hosts file on a windows operating system. The system hosts file is a file that contains mappings of IP addresses to host names. This manual method requires one to first locate the hosts file, which is mostly found on the C: or D: local disks. Generally, the root to the hosts file is C:\windows\system32\drive\etc, and then finally assigning the address of the unwanted or prohibited websites to the IP address 127.0.0.1, which is the standard IP address used for loop back network connections. This means that, any site assigned to the IP address 127.0.0.1 will not be found by any browser.

Using browser settings

Blocking of unwanted or prohibited websites using browser setting, is different depending on a browser. The following are some of the commonly used browsers and how the blocking is done.

Internet Explorer. Blocking unwanted or prohibited websites in this particular browser involves the following steps.

- Step 1: Load the internet explorer.
- Step 2: Click Tools.
- Step 3: Click Internet Options.
- Step 4: Click Privacy Tab.

Firefox. Firefox requires an add-on to block unwanted or prohibited websites. An addon is an installable enhancement that allows the user to add application features. Without this add-on it is difficult to block a website in Firefox. One can download this add-on. The steps to blocking a website in Firefox are as follows.

- Step 1: Load Firefox.
- Step 2: Click Tools.
- Step 3: Click Add-ons.
- Step 4: Click Get Add-ons.
- Step 5: Choose Browse ALL Add-ons.
- Step 6: Type block site in the search bar.
- Step 7: After installing the add-on, one is able to block.

Parental control software/ Automated Software

One type of parental control software gaining popularity is called internet filtering parental control software. Internet filtering software works by attempting to block or filter unacceptable content based on certain preprogrammed parameters built into the filtering software.

The goal of the internet filtering software is to prevent various websites from being accessed by the users based on the type of content the site offers. The common filtering criteria might be pornography, or violent content. The internet filtering software could also be set by the user to restrict or block certain keywords or key phrases used in search engines.
Most home networks today have a network router for sharing an Internet connection between multiple devices and can even block websites. We recommend blocking a website through a router because it can be password protected to prevent the block from being bypassed and because it will block a website on all devices. Blocking on the router can prevent your children from accessing a page (e.g., Facebook) from the computer, as well as any cell phone or tablet connected to your home network.

To block a website on a router, connect to the home network router. For most routers, this is done by opening a browser and visiting the default router address: http://192.168.1.1

If this address does not work or you're having trouble accessing your router setup, visit the link below.

- **How do I connect to my home router?**

  After connecting to the router, block a website through one of the below features. Unfortunately, each router setup is different, so you'll need to find one of the below settings for your manufacturer of the router. Generally, one of these options will be available under a "Security," "Parental control," or "Firewall" tab or button.

- **URL Filter** - Some routers may have a URL filter section, which allows you to enter the URL for each website you want to block.

- **Parental controls** - New and more advanced routers have a section dedicated to parental controls, which gives you not only the option to block websites, but also specify the times the Internet can be accessed.

- **Firewall** - Finally, if neither of the above options is available, the router should offer some type of filtering through the Firewall router settings.

### 2.3 Limitations of the reviewed systems

The system hosts file method of blocking a website is difficult to use in the sense that it is mostly hard to memorize and locate the root to the hosts file, and to map the IP addresses to host names. The other problem is that it is only possible to block one site at a time. For instance, if one wanted to block three sites, they would have to repeat the process three times, this results in time wasting. The method of using browser settings is also difficult in the sense that other people are not so good with memorizing all the steps involved since each type of browser has its own different steps. The major drawback of this method is that a website blocked in one type of browser, will go through in another type of browser. This method also has the problem of blocking one site at a time. Internet filtering software comes with its own database, which will contain a list of bad sites. The criteria used to suggest these sites is wide, hence the database easily becomes large. The major problem with this is that when one is surfing the internet while using the internet filtering software, it causes the web browser to run slowly as the software tries to filter and check against its internal database. Another common problem is that it is very common for it to block legitimate content accidentally. For instance, if one was doing a research on breast cancer, depending on the threshold set for the internet filter, it is very likely that it will block the word breast. Last but not the least is that it is a bit expensive to get a full version of such software.
2.4 The Proposed System

The proposed system, the Website Blocking Application (WBA) will be developed on the grounds of the existing systems. This will give it the ability to be reliable and secure since it will possess the advantages and capitalize on the disadvantages of the existing systems. The system will come with its own small database, which will be containing a list of websites to be blocked. The user will be allowed to add unwanted sites to the database, hence giving the system the ability to block more than one site at a time. The system’s database will be linked to the hosts file, this will make the system not to slow down the browser when one is surfing the internet.

Having the system’s database linked to the hosts file will enable the system to take advantage of the loopback address (127.0.0.1) and an ordinary IP address (172.32.233.124).

Taking advantage of the loopback address and an ordinary IP address will involve the system to assign the unwanted sites without the host (www) to the IP address 127.0.0.1 and with the host (www) to the ordinary IP address. The system will have a progress bar, which will notify the user whether a specific task has been successfully completed, or not. When one launches any type of web browser to access the blocked site, the browser will respond with a message “page cannot be found” response, since the browser will first check the hosts file and finds that the IP address of that site is assigned to a loopback address.

2.5 Benefits of the Proposed System

When fully completed, the following benefits will be realized from the Website Blocking Application.

- Save time for companies and institutions of higher learning system administrators in blocking sites since the several manual steps involved will be eliminated by the use of a user-friendly Graphical User Interface (GUI).
- The system will ensure that websites that are blocked will not go through regardless of the browser being changed on that computer.
- The company’s administrator will be able to block more than one site at a time.
- It will be a cheaper and more affordable way of blocking websites.

2.6 Success Criteria

Introduction

This chapter explains the Requirements for the Website Blocking Application (WBA) to be developed at Ultimate Lab and Medical Supplies. This chapter will be useful in ensuring that the proposed system meets the requirements.

2.7 Functional Requirements

The Website blocking Application (WBA) will offer the following services.

- **Blocking.** The system will be able to block unwanted or prohibited websites. This will be achieved through the company’s system administrator typing in the address of the unwanted or prohibited website.
- **Prevent Access.** The system will prevent people from accessing unwanted or prohibited websites.
- **Edit and Update.** The system will provide a way for the company’s system administrator to edit and update the system inbuilt database, which will contain the names of unwanted or prohibited websites and related information.

2.8 Non Functional Requirements

Non-functional requirements define the constraints under which the system must operate and standards which must be met by the system.
2.9 MINIMUM HARDWARE REQUIREMENTS

The system will be developed on an Intel Pentium 4 processor but will work on any computer which at least possesses the following:

➢ Processor Cycle Speed – 2.53 GHz.
➢ 40 GB hard disk size or above.
➢ 256 MB of RAM or above

2.10 Minimum Software Requirements

The following are the specifications of the software support required; including the software tools that will be used to develop the system.

➢ Operating System – Microsoft Windows 8.0 or any compatible Microsoft Operating System.
➢ Python 3.7.0 shell used to write code for the system.
➢ PyCharm which will provide the platform for python to function. It shall also provide the link to the server and Database.

2.12 SCOPE AND OBJECTIVES

This chapter gives a detailed description of the logical and physical design of the system. It specifies the features that have been incorporated in the system to be developed. The main objective of this chapter is to show how the entire system has been designed and how the respective modules relate to each other and how they interact. In relation to the proposed system, the following is an outline of the main areas this document covers:

➢ Data Design: Entity relationship and data tables are described in this section.

➢ Application Design: This section describes the decomposition of the system, describing the modules and flow of data through the system.

➢ System Architecture: This section describes the various components that make up the Website Blocking System.

2.11. SYSTEMS DESIGN AND SPECIFICATIONS

Introduction

System design is the process of designing the architecture, components, modules, interface and data for the system to satisfy the specific requirements. The design document involves an explanation of how the system will be developed in order to fulfill the requirements as outlined in the requirements specification document. It seeks to specify how the proposed system will be implemented. It is a bridge between software requirements and an implementation that satisfies those requirements. The design is what shall be used in the construction of the actual system.

CHAPTER THREE: METHODOLOGY

Introduction

The methodology that was used for the software development process, function and non-functional requirements was the SDLC Waterfall model. The Waterfall Model was the first Process Model to be introduced. It is also referred to as a linear sequential life cycle model. It is very simple to understand and use. In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases. Waterfall model is the earliest SDLC approach that was used for software development. The waterfall Model illustrates the software development process in a linear sequential flow; hence it is also referred to as a linear-sequential life cycle model. This means that any phase in the development process begins only if the previous phase is complete. In the waterfall model phases do not overlap.
3.2 WATERFALL MODEL DESIGN

The Waterfall approach was the first SDLC Model to be used widely in Software Engineering to ensure success of the project. In "The Waterfall" approach, the whole process of software development is divided into separate phases. In Waterfall model, typically, the outcome of one phase acts as the input for the next phase sequentially. Following is a diagrammatic representation of different phases of waterfall model

Figure 1

The Waterfall model was chosen to be the best model of the development of the Website Blocking System because of its simplicity. All the modules of the website blocking system were developed separately or independently and linked together this is done during implementation and testing phases. Changes were made when need arose as per phase.

3.3 Data design

The data used in the system database is illustrated by Entity Relation (ER) diagrams and tables.

The defined entities include:

➢ **ADMINISTRATOR**: This entity describes the general attributes of the administrator.

➢ **WEBSITE**: This entity describes the attributes of the website to be blocked.

The following is the Entity Relation (ER) Diagram for the proposed system: **Figure 2**
Below are the tables that are used in the database:

**Tables**

**Table 1: Administrator table**

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdminID</td>
<td>Number</td>
<td>Administrator number</td>
</tr>
<tr>
<td>Name</td>
<td>Text</td>
<td>Administrator name</td>
</tr>
</tbody>
</table>

**Table 2: Website table**

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AdminID</td>
<td>Number</td>
<td>Administrator number</td>
</tr>
<tr>
<td>SiteName</td>
<td>Text</td>
<td>Site name</td>
</tr>
<tr>
<td>DateBlocked</td>
<td>Date/Time</td>
<td>Date the site was blocked</td>
</tr>
</tbody>
</table>

**3.4 Application design**

**Figure 3:** Below illustrates the modular structure of the system.

![Diagram of the modular structure of the system]
3.5 System Flow Chart

Figure 4: below shows the flow of logic in the system

3.6 System architecture
Figure 5: Below shows the architecture of the system.

- The system will come with an inbuilt database. The database will contain the names of unwanted websites and related information.
- The system writes the site names with (and without) the host (www) to the Host files and assigns the loopback and an ordinary IP address.
- The Hosts file acts as a computer’s personal list of web addresses.
- DNS server acts as a “phonebook” for the internet by translating human-friendly computer hostnames into IP addresses.
- When a request is made in the URL, the browser software first checks the host file. When a corresponding address is found, the browser software is directed to that IP address (in this case the loopback address) without consulting the DNS server, however if a corresponding address is not found the DNS server is consulted.
3.7 IMPLEMENTATION

Introduction
This chapter outlines the implementation stage of the Website Blocking Application. It describes how the design is actually translated into the implementation of the Website blocking Application.

Tools used
The tools that were used in the development process of the Website Blocking Application include:

➢ Python 3.7.0 shell programming language.
➢ PyCharm python platform
➢ Windows 8 or higher version

3.8 Implementation details

b) Database creation
The database will be created called Django which is an inbuilt database or a server it will store all the websites that will be blocked or unblocked.

➢ Administrator: This entity describes the general attribute of the administrator.
➢ Website: This entity describes the attributes of the website to be blocked or unblocked.

3.9 Inbuilt database incorporation
The inbuilt database will be activated after PyCharm has been opened and run. There will be a link which will come and it will direct you to the Database or server which is Django.

Django provides the user with the (GUI) graphic user interface in which the admin can edit, view, block or unblock websites.

3.10 Evaluation and testing

Introduction
Testing is the final process that verifies and validates the system in accordance with the Requirement specification. Therefore, this chapter describes the ways in which the Website Blocking System was subjected to tests in order to determine whether it is working in accordance with the Requirement specification.

3.3.4 Scope and objectives
The main objectives of following a proper procedural system testing include:

➢ Ensuring that the system achieves its functionality.
➢ Ensuring that the system runs without error.
➢ Discovering any improper functionality in the system.
➢ The system accepts valid data.
➢ Portability; that is the ability to run on any machine with windows operating system.

3.3.5 Test plan
Testing of the system will be done in three stages. First the major function of the system will be tested using a modem for internet connection. This function is that of blocking unwanted or prohibited websites in any browser. The second testing will be security and module testing, while the third testing will be a full system testing. The stages are shown as part one, two and three in the figures that follows.

Table 3

<table>
<thead>
<tr>
<th>Part One</th>
<th>Blocking A Website in Any Browser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Case</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Google Chrome</td>
</tr>
<tr>
<td>2</td>
<td>Mozilla Firefox</td>
</tr>
<tr>
<td>3</td>
<td>Opera</td>
</tr>
</tbody>
</table>
### Table 4

<table>
<thead>
<tr>
<th>PART TWO</th>
<th>SECURITY TEST CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Entering incorrect password.</td>
</tr>
<tr>
<td>2</td>
<td>Entering correct password.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PART TWO</th>
<th>MODULE TEST CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ACTIVATE SYSTEM</td>
</tr>
<tr>
<td>2</td>
<td>UPDATE/ADD RECORD</td>
</tr>
<tr>
<td>3</td>
<td>VIEW HOST FILE</td>
</tr>
<tr>
<td>4</td>
<td>Blocked</td>
</tr>
<tr>
<td>5</td>
<td>Unblocked</td>
</tr>
<tr>
<td>6</td>
<td>Delete</td>
</tr>
<tr>
<td>7</td>
<td>FIND RECORD</td>
</tr>
</tbody>
</table>

### Table 5

<table>
<thead>
<tr>
<th>PART THREE</th>
<th>FULL SYSTEM TEST CASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Are all the modules working together?</td>
</tr>
<tr>
<td>2</td>
<td>Is the system able to block unwanted websites?</td>
</tr>
</tbody>
</table>
CHAPTER FOUR:
4.0. TEST RESULTS

The following are the test results depending on the test case.

**Blocking a website in any browser**

Blocking a website in any browser involved three types of browsers, and www.facebook.com was used as the site to be blocked. Testing was done and below are the results that were obtained.

**Opera browser**

When this type of browser tried to access www.facebook.com. The browser displayed a page with a message saying “THIS SITE CANT BE REACHED”.

*Figure 6: Opera Browser*

When this type of browser tried to access www.facebook.com. The browser displayed a page with a message saying “UNABLE TO CONNECT”.

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Figure 7: Fire fox

Unable to connect

Firefox can’t establish a connection to the server at www.facebook.com.

- The site could be temporarily unavailable or too busy. Try again in a few moments.
- If you are unable to load any pages, check your computer’s network connection.
- If your computer or network is protected by a firewall or proxy, make sure that Firefox is permitted to access the Web.

Try Again

When this type of browser tried to access www.facebook.com. The browser displayed a page with a message saying “THIS SITE CAN’T BE REACHED”.

Figure 8: Google chrome

This site can’t be reached

www.facebook.com refused to connect.
Try:
- Checking the connection
- Checking the proxy and the firewall

ERR_CONNECTION_REFUSED

Reload

DETAILS
4.3 Recommendations / future enhancements

Despite the successful implementation of the Website Blocking Application, the Application has the following limitations that will form phase two of the development. Other researchers who would like to make improvement on the system are free to do so.

The limitations include:

➢ Packaging entire script into a desktop executable application.
➢ Add reports that would show how often a particular blocked website was called or how often people tried accessing the sites during working hours.

4.4 Security testing

➢ Entering incorrect password. -When the incorrect password was entered, the system does not open and the system does not activate.
➢ Entering correct password - When the correct password was entered which is (admin123), the system opens the web server and the system gets activated.

4.5 Module testing

<table>
<thead>
<tr>
<th>MODULE TESTED</th>
<th>FUNCTION</th>
<th>HOW THE TEST WAS DONE</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTIVATE SYSTEM</td>
<td>Activate system if password is correct.</td>
<td>Entering incorrect password.</td>
<td>The system was not activated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Entering correct password.</td>
<td></td>
</tr>
<tr>
<td>UPDATE/ADD RECORD</td>
<td>Adds a record to inbuilt database</td>
<td>User/Admin adds the record.</td>
<td>The system adds the record.</td>
</tr>
<tr>
<td>VIEW</td>
<td>Display contents of the host file in the host file display.</td>
<td>Clicking on it.</td>
<td>Contents were displayed in the host file display.</td>
</tr>
<tr>
<td>DELETE</td>
<td>Deletes contents in the host’s file.</td>
<td>Clicking on it.</td>
<td>Contents were deleted in the host file.</td>
</tr>
<tr>
<td>SEARCH RECORD</td>
<td>Filter data in the inbuilt database based on the ID.</td>
<td>Entering the ID and then clicking on it.</td>
<td>Data in the inbuilt database was filtered based on ID number.</td>
</tr>
</tbody>
</table>
CHAPTER FIVE:
5.1 DISCUSSION AND CONCLUSION

5.5.1 Full system testing
The system was further tested and it was observed that it could block unwanted or prohibited websites and all the modules were working properly.

5.2 Reflection
The testing produced the required results in all the areas tested as expected and modifications were made where necessary. Therefore, it was concluded that the system was working according to the stipulated Requirements and Design Specification.

5.3 Installation manual
The following describes how to install the system. It will help the user on how to install the Website Blocking system and set it up for use.

5.4 Installation

Things to install
- PYCHARM COMMUNITY 2018.2
- PYTHON 3.7.0
- PyCharm is the platform on which the application is going to be run

Python is the where the script of the application is going to run.
The following are the procedures on how to get started.
- First and foremost, Python 3.7.0 has to be installed on the server.
- Then PyCharm Community 2018.2 can be installed like shown below.

➢ Open PyCharm to load the script, below are the pictures to show how it is done.
The figure above shows after PyCharm had opened.

Load the project as shown above.
Click on the terminal like shown above when the terminal window opens type the following command. Python manage.py runserver 8000 then press enter. Like it is shown below.
After running the following window will come as shown below.

Click on the link that comes: http://127.0.0.1:8000/ which will take you to the default browser Django will open which is the Web Framework and the server/Database.

Django will open up and a message will be displayed “THE INSTALL WORKED”
SUCCESSFUL! CONGRATULATIONS” in the URL the loopback address will show up like shown above which is 127.0.0.1

On the URL after the loopback address 127.0.0.1:8000 type the following 127.0.0.1:8000/admin which will take you to the admin login window.

The windows show up like the one above and you can set the Username and Password as the administrator. The set default Username is admin and Password is admin123.
After the successfully logging in credentials have been authenticated another window pops up to enter in the system.

After being logged in the window above appears you can view the sites, change password or log out. As the administrator you can give special privileges to specific types of users e.g., Groups or Users as seen above.
You can also view the sites that have been blocked when you click on the Host Blockeds.
In order to make the computer add or delete records on the HostFile the following has to be done.

Go to your C drive and locate the Host File right click on the file and go to “properties.”
This is where the HostFile is located on the C drive - 
\C:\Windows\System32\drivers\etc
In the C: / Drive there is a file called hosts which will hold the websites to be blocked. It is a systems file hence there will be need to change security permissions to allow modification to it.

After right clicking and going to properties click on the properties and go to security you can now change the permission of all the groups or users to give them full permission to modify the HostFile. When you finish click Ok or Apply to make the changes.
5.3 User manual

You can now add or delete from the database like shown above. You can click on the Host Blockeds the following window will pop up.

It shows the ID number Date created Date Updated Blocked and Website URL which is either blocked or unblocked. You can modify or change the status of the website by clicking on the ID number.
Blocking

To add an item to be blocked you have to click on the ADD HOST BLOCKED like shown in the above diagram.

A window will come up like the above which will have a predefined ID you can set the date and time then you go to were its written “WEBSITE URL”
Like shown in the above diagram under the website URL "www.youtube.com" was put and after that you click on the save button like shown above or click on the two other option given like shown using the arrows.

This window pops up and a message comes up saying “THE HOST BLOCKED/ID NUMBER WAS ADDED SUCCESSFULLY” meaning that you have successfully blocked the website in this example "www.youtube.com".
5.4 To unblock

Simply click on the blocked website ID it will take you to the window showing bellow and click on the check box named blocked then you save the changes.

The following window appears again saying “THE HOST BLOCKED/ID NUMBER WAS ADDED SUCCEFULLY” meaning that you have successfully unblocked the website in this example www.youtube.com would have been unblocked and it can be accessed again.

5.5 Conclusion

In conclusion, it is safe to say that the Website blocking system (WBS) has been a success. The system has undergone various changes in the course of development, to suit the user’s needs, and to reduce the possibility of errors. After testing the system with a several test cases, it was pleasing to find that the system is working properly, reliable and easy to use, and the major function of blocking a website in any browser software was achieved.
ACKNOWLEDGEMENT
Firstly, I would like to express my gratitude to the Almighty God, my one and only God, to for giving me the determination, motivation, and perseverance.

I extend my gratitude and thanks to my supervisor Dr. Richard Silumbe, for the guidance and the constructive criticism concerning the project. You have made me a much better and more hardworking person.

Special thanks, to my friends who have been there for me Lameck, Asan Ali, Mr Nswana, Patrick and to all my lecturers.

REFERENCES
APPENDIX:

CODE USED TO MAKE THE SYSTEM

```python
import os import time from datetime import datetime as dt from django.db import connection

os.environ.setdefault("DJANGO_SETTINGS_MODULE", "SiteBlockerApp.settings")

hosts_file = r"C:\Windows\System32\Drivers\etc\hosts" local = "127.0.0.1"

blocked_string = """" SELECT website_url FROM SiteBlocker_hostblocked WHERE deleted = 0 """

response_data = []
cursor = connection.cursor() cursor.execute(blocked_string)
sql_result = cursor.fetchall()
for row in sql_result:
    response_data.append(row[0])
print(response_data)

while True:
    if dt(dt.now().year, dt.now().month, dt.now().day, 8) < dt.now() <
        dt(dt.now().year, dt.now().month, dt.now().day, 19):
        with open(hosts_file, 'r+') as file:
            content = file.read()
            for website in response_data:
                if website in content:
                    pass
                else:
                    file.write(local + " " + website + "n")
        else:
            with open(hosts_file, 'r+') as file:
                content = file.readlines()
                file.seek(0)
                for line in content:
                    if not any(website in line for website in response_data):
                        file.write(line)
                file.truncate()
    time.sleep(5)
```

System::Windows::Forms::DateTimePicker());
this->ADMINISTRATORBindingSource = (gcnew System::Windows::Forms::BindingSource(this->components));
this->dataSet11 = (gcnew WEBSITEBLOCKINGSYSTEM::DataSet1());
this->txtSiteName = (gcnew System::Windows::Forms::TextBox());
this->txtName = (gcnew System::Windows::Forms::TextBox());
this->AdminIDTextBox = (gcnew System::Windows::Forms::TextBox());
this->label10 = (gcnew System::Windows::Forms::Label());
this->statusStrip1 = (gcnew System::Windows::Forms::StatusStrip());
this->statusStrip1 = (gcnew System::Windows::Forms::StatusStrip());
this->tslMessage = (gcnew System::Windows::Forms::ToolStripStatusLabel());
this->tslProgress = (gcnew System::Windows::Forms::ToolStripStatusLabel());
this->tspProgressBar = (gcnew System::Windows::Forms::ToolStripProgressBar());
this->oleDbSelectCommand1 = (gcnew System::Data::OleDb::OleDbCommand());
this->oleDbConnection1 = (gcnew System::Data::OleDb::OleDbConnection());
this->oleDbDataAdapter1 = (gcnew System::Data::OleDb::OleDbDataAdapter());
```
```
this->bindingNavigatorSeparator2 = (gcnew System::Windows::Forms::ToolStripSeparator());
this->ADMINISTRATORBindingNavigatorSaveItem = (gcnew System::Windows::Forms::ToolStripButton());
this->dataGridView1 = (gcnew System::Windows::Forms::DataGridView());
this->adminIDDataGridViewTextBoxColumn = (gcnew System::Windows::Forms::DataGridViewTextBoxColumn());
this->nameDataGridViewTextBoxColumn = (gcnew System::Windows::Forms::DataGridViewTextBoxColumn());
this->siteNameDataGridViewTextBoxColumn = (gcnew System::Windows::Forms::DataGridViewTextBoxColumn());
this->dateBlockedDataGridViewTextBoxColumn = (gcnew System::Windows::Forms::DataGridTextBoxColumn());
this->label2 = (gcnew System::Windows::Forms::Label());
this->listBox1 = (gcnew System::Windows::Forms::ListBox());
this->label3 = (gcnew System::Windows::Forms::Label());
this->txtPass = (gcnew System::Windows::Forms::TextBox());
this->groupBox4 = (gcnew System::Windows::Forms::GroupBox());
this->rbnD = (gcnew System::Windows::Forms::RadioButton());
this->rbnC = (gcnew System::Windows::Forms::RadioButton());
AdminIDLabel = (gcnew System::Windows::Forms::Label());
NameLabel = (gcnew System::Windows::Forms::Label());
SiteNameLabel = (gcnew System::Windows::Forms::Label());
DateBlockedLabel = (gcnew System::Windows::Forms::Label());

AdminIDLabel->AutoSize = true;
AdminIDLabel->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)));
AdminIDLabel->Location = System::Drawing::Point(8, 31);
AdminIDLabel->Name = L"AdminIDLabel";
AdminIDLabel->Size = System::Drawing::Size(65, 16);
AdminIDLabel->TabIndex = 0;
AdminIDLabel->Text = L"Admin ID:";

NameLabel->AutoSize = true;
NameLabel->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)));
NameLabel->Location = System::Drawing::Point(8, 55);
NameLabel->Name = L"NameLabel";
NameLabel->Size = System::Drawing::Size(48, 16);
NameLabel->TabIndex = 2;
NameLabel->Text = L"Name:";

SiteNameLabel->AutoSize = true;
SiteNameLabel->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)));
SiteNameLabel->Location = System::Drawing::Point(8, 31);
SiteNameLabel->Name = L"SiteNameLabel";
SiteNameLabel->Size = System::Drawing::Size(65, 16);
SiteNameLabel->TabIndex = 0;
SiteNameLabel->Text = L"Site Name:";
SiteNameLabel->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)));
SiteNameLabel->Location = System::Drawing::Point(8, 91);
SiteNameLabel->Name = L"SiteNameLabel";
SiteNameLabel->Size = System::Drawing::Size(74, 16);
SiteNameLabel->TabIndex = 4;
SiteNameLabel->Text = L"Site Name:";
//
// DateBlockedLabel
//
DateBlockedLabel->AutoSize = true;
DateBlockedLabel->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)));
DateBlockedLabel->Location = System::Drawing::Point(6, 125);
DateBlockedLabel->Name = L"DateBlockedLabel";
DateBlockedLabel->Size = System::Drawing::Size(93, 16);
DateBlockedLabel->TabIndex = 6;
DateBlockedLabel->Text = L"Date Blocked:";
//
// label1
//
this->label1->AutoSize = true; this->label1->BackColor = System::Drawing::SystemColors::HighlightText;
this->label1->Location = System::Drawing::Point(24, 91);
this->label1->Name = L"label1";
this->label1->Size = System::Drawing::Size(138, 57);
this->label1->TabIndex = 0;
this->label1->TextAlign = System::Drawing::ContentAlignment::TopCenter;
//
// groupBox1
//
this->groupBox1->BackColor = System::Drawing::SystemColors::Info;
this->groupBox1->Location = System::Drawing::Point(346, 25);
this->groupBox1->Name = L"groupBox1";
this->groupBox1->Size = System::Drawing::Size(138, 57);
this->groupBox1->TabIndex = 4;
this->groupBox1->AutoSize = System::Drawing::SystemColors::HighlightText;
this->groupBox1->BackColor = System::Drawing::SystemColors::Info;
this->groupBox1->Controls->Add(this->btnViewHostFile);
this->groupBox1->Controls->Add(this->btnClear);
this->groupBox1->Controls->Add(this->btnUpdate);
this->groupBox1->Controls->Add(this->button2);
this->groupBox1->Controls->Add(this->btnReset);
this->groupBox1->Controls->Add(this->btnView);
this->groupBox1->Controls->Add(this->btmView);
this->groupBox1->Location = System::Drawing::Point(304, 103);
this->groupBox1->Size = System::Drawing::Size(213, 189);
this->groupBox1->TabIndex = 1;
this->groupBox1->TabStop = false;
this->groupBox1->Text = L"OPERATIONS";
//
// btnViewHostFile
//
this->btnViewHostFile->Enabled = false;
this->btnViewHostFile->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)));
this->btnViewHostFile->Location = System::Drawing::Point(24, 91);
this->btnViewHostFile->Name = L"btnViewHostFile";
this->btnViewHostFile->Size = System::Drawing::Size(156, 23);
this->btnViewHostFile->TabIndex = 12;
this->btnViewHostFile->Text = L"VIEW HOST FILE";
this->btnViewHostFile->UseVisualStyleBackColor = true; this->btnViewHostFile->Click += gcnew System::EventHandler(this, &Form1::button7_Click);
// btnClear
// this->btnClear->Enabled = false; this->btnClear->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0));
// this->btnClear->Location = System::Drawing::Point(112, 122); this->btnClear->Name = L"btnClear";
// this->btnClear->Size = System::Drawing::Size(95, 23); this->btnClear->TabIndex = 11;
// this->btnClear->Text = L"Clear"; this->btnClear->UseVisualStyleBackColor = true;
this->btnClear->Click += gcnew System::EventHandler(this, &Form1::button6_Click);
// btnReset
// this->btnReset->Enabled = false; this->btnReset->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0));
// this->btnReset->Location = System::Drawing::Point(42, 164); this->btnReset->Name = L"btnReset";
// this->btnReset->Size = System::Drawing::Size(114, 23); this->btnReset->TabIndex = 4;
// this->btnReset->Text = L"RESET DATA"; this->btnReset->UseVisualStyleBackColor = true;
this->btnReset->Click += gcnew System::EventHandler(this, &Form1::button5_Click);
// btnView
// this->btnView->Enabled = false; this->btnView->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0));
// this->btnView->Location = System::Drawing::Point(6, 122); this->btnView->Name = L"btnView";
// this->btnView->Size = System::Drawing::Size(100, 23); this->btnView->TabIndex = 2;
// this->btnView->Text = L"view"; this->btnView->UseVisualStyleBackColor = true;
this->btnView->Click += gcnew System::EventHandler(this, &Form1::button3_Click);
// button2
this->button2->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0));
this->button2->Location = System::Drawing::Point(6, 31); this->button2->Name = L"button2";
this->button2->Size = System::Drawing::Size(201, 23); this->button2->TabIndex = 1;
this->button2->Text = L"ACTIVATE SYSTEM"; this->button2->UseVisualStyleBackColor = true;
this->button2->Click += gcnew System::EventHandler(this, &Form1::button2_Click);
// btnUpdate
// this->btnUpdate->Enabled = false;
this->btnUpdate->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0));
this->btnUpdate->Location = System::Drawing::Point(6, 60); this->btnUpdate->Name = L"btnUpdate";
this->btnUpdate->Size = System::Drawing::Size(201, 23); this->btnUpdate->TabIndex = 0;
this->btnUpdate->Text = L"UPDATE/ADD RECORD"; this->btnUpdate->UseVisualStyleBackColor = true;
this->btnUpdate->Click += gcnew System::EventHandler(this, &Form1::button1_Click);
The International Journal of Multi-Disciplinary Research  

// btFind
//
this->btFind->Enabled = false;  this->btFind->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0));  this->btFind->Location = System::Drawing::Point(30, 125); this->btFind->Name = L"btFind";  this->btFind->Size = System::Drawing::Size(162, 23);  this->btFind->TabIndex = 3;  this->btFind->Text = L"FIND RECORD";  this->btFind->UseVisualStyleBackColor = true;  this->btFind->Click += gcnew System::EventHandler(this, &Form1::groupBox2_Enter);

// groupBox2
//
this->groupBox2->BackColor = System::Drawing::SystemColors::Info;  this->groupBox2->ForeColor = System::Drawing::SystemColors::InfoText;  this->groupBox2->Location = System::Drawing::Point(547, 119); this->groupBox2->Name = L"groupBox2";  this->groupBox2->Size = System::Drawing::Size(209, 173);  this->groupBox2->TabIndex = 2;  this->groupBox2->Text = L"SEARCH";

this->groupBox2->_Enter += gcnew System::EventHandler(this, &Form1::button4_Click);
// groupBox2
this->groupBox2->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 15.75F, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)); this->groupBox2->ForeColor = System::Drawing::SystemColors::InfoText;  this->groupBox2->Location = System::Drawing::Point(547, 119); this->groupBox2->Name = L"groupBox2";  this->groupBox2->Size = System::Drawing::Size(209, 173);  this->groupBox2->TabIndex = 2;  this->groupBox2->Text = L"SEARCH";

this->groupBox2->Enter += gcnew System::EventHandler(this, &Form1::groupBox2_Enter);
//
// txtFdate
//
this->txtFdate->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)); this->txtFdate->Location = System::Drawing::Point(72, 76); this->txtFdate->Name = L"txtFdate";

this->txtFdate->TabIndex = 7;
//
// txtFadm
//
this->txtFadm->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)); this->txtFadm->Location = System::Drawing::Point(72, 119); this->txtFadm->Name = L"txtFadm";

this->txtFadm->TabIndex = 3;
//
// label9
//
this->label9->AutoSize = true;  this->label9->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)); this->label9->Location = System::Drawing::Point(6, 76); this->label9->Name = L"label9";

this->label9->TabIndex = 3;
//
// label6
//
this->label6->AutoSize = true;  this->label6->Font = gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9.75F, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)); this->label6->Location = System::Drawing::Point(6, 119); this->label6->Name = L"label6";

this->label6->TabIndex = 3;


33
9.75F, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point; static_cast<System::Byte>(0));
this->label6->Location = System::Drawing::Point(6, 42);
this->label6->Name = L"label6";
this->label6->Size = System::Drawing::Size(68, 16);
this->label6->TabIndex = 0;
this->label6->Text = L"AdminID :";

// groupBox3

this->groupBox3->BackColor = System::Drawing::SystemColors::Info;
this->groupBox3->Location = System::Drawing::Point(15, 118);
this->groupBox3->Size = System::Drawing::Size(259, 174);
this->groupBox3->TabIndex = 3;
this->groupBox3->Text = L"DETAILS";

// DateBlockedDateTimePicker
this->DateBlockedDateTimePicker->DataBindings->Add((gcnew System::Windows::Forms::Binding(L"Value", this->ADMINISTRATORBindingSource, L"DateBlocked", true)));
this->DateBlockedDateTimePicker->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)));
this->DateBlockedDateTimePicker->Name = L"DateBlockedDateTimePicker";
this->DateBlockedDateTimePicker->Size = System::Drawing::Size(145, 21);
this->DateBlockedDateTimePicker->TabIndex = 7;

// ADMINISTRATORBindingSource
this->ADMINISTRATORBindingSource->DataMember = L"ADMINISTRATOR";
this->ADMINISTRATORBindingSource->DataSource = this->dataSet11;

// dataSet11

this->dataSet11->DataSetName = L"DataSet1";
this->dataSet11->SchemaSerializationMode = System::Data::SchemaSerializationMode::IncludeSchema;

// txtSiteName
this->txtSiteName->Enabled = false;
this->txtSiteName->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 9, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0)));
this->txtSiteName->Location = System::Drawing::Point(105, 86);
this->txtSiteName->Name = L"txtSiteName";
this->txtSiteName->TabIndex = 7;
this->txtSiteName->Size = System::Drawing::Size(145, 21);

The International Journal of Multi-Disciplinary Research


35

static_cast<System::Windows::Forms::ToolStripStatusLabelBorderSides>((System::Windows::Forms::ToolStripStatusLabelBorderSides::Left | System::Windows::Forms::ToolStripStatusLabelBorderSides::Top)), this->tslProgress->BorderStyle = System::Windows::Forms::Border3DStyle::Sunken;
this->tslProgress->Font = (gcnew System::Drawing::Font(L"Segoe UI", 9, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point, static_cast<System::Byte>(0))); this->tslProgress->Name = L"tslProgress";
this->tslProgress->Size = System::Drawing::Size(72, 21);
this->tslProgress->Text = L"PROGRESS";
// tspProgressBar
//
this->tspProgressBar->Name = L"tspProgressBar";
this->tspProgressBar->Size = System::Drawing::Size(100, 20);
this->tspProgressBar->Step = 5;
// oleDbSelectCommand1
//
this->oleDbSelectCommand1->CommandText = resources->GetString(L"oleDbSelectCommand1.CommandText"); this->oleDbSelectCommand1->Connection = this->oleDbConnection1;
// oleDbConnection1
//
this->oleDbConnection1->ConnectionString = L"Provider=Microsoft.Jet.OLEDB.4.0;Data Source=C:\WEBSITE BLOCKING SYSTEM DATABASE" L".mdb"";
// oleDbDataAdapter1
//
this->oleDbDataAdapter1->SelectCommand = this->oleDbSelectCommand1; cli::array<System::Data::Common::DataColumnMapping^>^ __mcTemp__1 = gcnew cli::array<System::Data::Common::DataColumnMapping^>(4) { (gcnew System::Data::Common::DataColumnMapping(L"AdminID", L"AdminID"), (gcnew System::Data::Common::DataColumnMapping(L"Name", L"Name")), (gcnew System::Data::Common::DataColumnMapping(L"SiteName", L"SiteName"), (gcnew System::Data::Common::DataColumnMapping(L"DateBlocked", L"DateBlocked"))};
this->oleDbDataAdapter1->TableMappings->AddRange(gcnew cli::array<System::Data::Common::DataTableMapping^>(1) { (gcnew System::Data::Common::DataTableMapping(L"Table", L"ADMINISTRATOR", __mcTemp__1)) });
// // ADMINISTRATORBindingNavigator
//
this->ADMINISTRATORBindingNavigator->AddNewItem = this->ADMINISTRATORBindingNavigator->BindingSource = this->ADMINISTRATORBindingNavigator->CountItem = this->ADMINISTRATORBindingNavigator->DeleteItem = this->ADMINISTRATORBindingNavigator->Items->AddRange(gcnew cli::array<System::Windows::Forms::ToolStripItem^>(12) { this->ADMINISTRATORBindingNavigator->MoveFirstItem, this->ADMINISTRATORBindingNavigator->MovePreviousItem, this->ADMINISTRATORBindingNavigator->MoveNextItem, this->ADMINISTRATORBindingNavigator->MoveLastItem, this->ADMINISTRATORBindingNavigator->AddNewItem, this->ADMINISTRATORBindingNavigator->DeleteItem, this->ADMINISTRATORBindingNavigator->PositionItem, this->ADMINISTRATORBindingNavigator->CountItem,
The International Journal of Multi-Disciplinary Research

this->bindingNavigatorSeparator1, this->bindingNavigatorMoveFirstItem, this->bindingNavigatorMoveLastItem, this->bindingNavigatorSeparator2, this->bindingNavigatorAddNewItem, this->bindingNavigatorDeleteItem, this->ADMINISTRATORBindingNavigatorSaveItem); this->ADMINISTRATORBindingNavigator->MoveFirstItem = this->ADMINISTRATORBindingNavigator->MoveLastItem = this->ADMINISTRATORBindingNavigator->MovePreviousItem = this->ADMINISTRATORBindingNavigator->MoveNextItem = this->ADMINISTRATORBindingNavigator->Name = L"ADMINISTRATORBindingNavigator"; this->ADMINISTRATORBindingNavigator->PositionItem = this->ADMINISTRATORBindingNavigator->Size = System::Drawing::Size(768, 25); this->ADMINISTRATORBindingNavigator->Text = L"bindingNavigator1";

// bindingNavigatorAddNewItem

// bindingNavigatorCountItem

// bindingNavigatorDeleteItem

// bindingNavigatorMoveFirstItem

// bindingNavigatorMovePreviousItem

this->ADMINISTRATORBindingNavigatorAddNewItem->DisplayStyle = System::Windows::Forms::ToolStripItemDisplayStyle::Image;
this->ADMINISTRATORBindingNavigatorAddNewItem->Image = (cli::safe_cast<System::Drawing::Image^ >(resources->GetObject(L"bindingNavigatorAddNewItem.Image"))); this->ADMINISTRATORBindingNavigatorAddNewItem->Name = L"bindingNavigatorAddNewItem";
this->ADMINISTRATORBindingNavigatorAddNewItem->RightToLeftAutoMirrorImage = true; this->ADMINISTRATORBindingNavigatorAddNewItem->Size = System::Drawing::Size(23, 22); this->ADMINISTRATORBindingNavigatorAddNewItem->Text = L"Add new";

// bindingNavigatorCountItem

// bindingNavigatorDeleteItem

// bindingNavigatorMoveFirstItem

// bindingNavigatorMovePreviousItem

this->ADMINISTRATORBindingNavigatorDeleteItem->DisplayStyle = System::Windows::Forms::ToolStripItemDisplayStyle::Image;
this->ADMINISTRATORBindingNavigatorDeleteItem->Image = (cli::safe_cast<System::Drawing::Image^ >(resources->GetObject(L"bindingNavigatorDeleteItem.Image"))); this->ADMINISTRATORBindingNavigatorDeleteItem->Name = L"bindingNavigatorDeleteItem";
this->ADMINISTRATORBindingNavigatorDeleteItem->RightToLeftAutoMirrorImage = true; this->ADMINISTRATORBindingNavigatorDeleteItem->Size = System::Drawing::Size(23, 22); this->ADMINISTRATORBindingNavigatorDeleteItem->Text = L"Delete";

// bindingNavigatorMoveFirstItem

// bindingNavigatorMovePreviousItem

this->ADMINISTRATORBindingNavigatorMoveFirstItem->DisplayStyle = System::Windows::Forms::ToolStripItemDisplayStyle::Image;
this->ADMINISTRATORBindingNavigatorMoveFirstItem->Image = (cli::safe_cast<System::Drawing::Image^ >(resources->GetObject(L"bindingNavigatorMoveFirstItem.Image"))); this->ADMINISTRATORBindingNavigatorMoveFirstItem->Name = L"bindingNavigatorMoveFirstItem";
this->ADMINISTRATORBindingNavigatorMoveFirstItem->RightToLeftAutoMirrorImage = true; this->ADMINISTRATORBindingNavigatorMoveFirstItem->Size = System::Drawing::Size(23, 22); this->ADMINISTRATORBindingNavigatorMoveFirstItem->Text = L"Move first";

The International Journal of Multi-Disciplinary Research

// bindingNavigatorMovePreviousItem
//
this->bindingNavigatorMovePreviousItem->DisplayStyle = System::Windows::Forms::ToolStripItemDisplayStyle::Image;
this->bindingNavigatorMovePreviousItem->Image = (cli::safe_cast<System::Drawing::Image^ >(resources->GetObject(L"bindingNavigatorMovePreviousItem.Image"))); this->bindingNavigatorMovePreviousItem->Name = L"bindingNavigatorMovePreviousItem";
true;
this->bindingNavigatorMovePreviousItem->RightToLeftAutoMirrorImage = 22);
this->bindingNavigatorMovePreviousItem->Size = System::Drawing::Size(23,
this->bindingNavigatorMovePreviousItem->Text = L"Move previous";
//
// bindingNavigatorSeparator
//
this->bindingNavigatorSeparator->Name = L"bindingNavigatorSeparator";
this->bindingNavigatorSeparator->Size = System::Drawing::Size(6, 25);
//
// bindingNavigatorMoveNextItem
//
this->bindingNavigatorMoveNextItem->DisplayStyle = System::Windows::Forms::ToolStripItemDisplayStyle::Image;
this->bindingNavigatorMoveNextItem->Image = (cli::safe_cast<System::Drawing::Image^ >(resources->GetObject(L"bindingNavigatorMoveNextItem.Image")));
this->bindingNavigatorMoveNextItem->Name = L"bindingNavigatorMoveNextItem";
this->bindingNavigatorMoveNextItem->RightToLeftAutoMirrorImage = true;
this->bindingNavigatorMoveNextItem->Size = System::Drawing::Size(23, 22);
this->bindingNavigatorMoveNextItem->Text = L"Move next";
//
// bindingNavigatorSeparator1
//
this->bindingNavigatorSeparator1->Name = L"bindingNavigatorSeparator1";
this->bindingNavigatorSeparator1->Size = System::Drawing::Size(6, 25);
//
// bindingNavigatorMoveLastItem
//
this->bindingNavigatorMoveLastItem->DisplayStyle = System::Windows::Forms::ToolStripItemDisplayStyle::Image;
this->bindingNavigatorMoveLastItem->Image = (cli::safe_cast<System::Drawing::Image^ >(resources->GetObject(L"bindingNavigatorMoveLastItem.Image")));
this->bindingNavigatorMoveLastItem->Name = L"bindingNavigatorMoveLastItem";
this->bindingNavigatorMoveLastItem->RightToLeftAutoMirrorImage = true;
this->bindingNavigatorMoveLastItem->Size = System::Drawing::Size(23, 22);
this->bindingNavigatorMoveLastItem->Text = L"Move last";
//
// bindingNavigatorSeparator2
// this->bindingNavigatorSeparator2->Name = L"bindingNavigatorSeparator2"; this->bindingNavigatorSeparator2->Size = System::Drawing::Size(6, 25);
//
// ADMINISTRATORBindingNavigatorSaveItem
//
this->ADMINISTRATORBindingNavigatorSaveItem->DisplayStyle = System::Windows::Forms::ToolStripItemDisplayStyle::Image;
this->ADMINISTRATORBindingNavigatorSaveItem->Enabled = false; this->ADMINISTRATORBindingNavigatorSaveItem->Image = (cli::safe_cast<System::Drawing::Image^>(resources->GetObject(L"ADMINISTRATORBindingNavigatorSaveItem.Image")));
this->ADMINISTRATORBindingNavigatorSaveItem->Name = L"ADMINISTRATORBindingNavigatorSaveItem";
this->ADMINISTRATORBindingNavigatorSaveItem->Size = System::Drawing::Size(23, 22);
this->ADMINISTRATORBindingNavigatorSaveItem->Text = L"Save Data";
//
// dataGridView1
//
dataGridView1->AutoGenerateColumns = false; dataGridView1->DataSource = this->ADMINISTRATORBindingSource; dataGridView1->_Location = System::Drawing::Point(12, 333); dataGridView1->Name = L"dataGridView1";
this->dataGridView1->TabIndex = 8; dataGridView1->CellContentClick += gcnew System::Windows::Forms::DataGridViewCellEventHandler(this, &Form1::dataGridView1_CellContentClick);
//
// adminIDDataGridViewTextBoxColumn
//
adminIDDataGridViewTextBoxColumn->DataPropertyName = L"AdminID"; adminIDDataGridViewTextBoxColumn->HeaderText = L"AdminID"; adminIDDataGridViewTextBoxColumn->Name = L"adminIDDataGridViewTextBoxColumn";
//
// nameDataGridViewTextBoxColumn
//
nameDataGridViewTextBoxColumn->DataPropertyName = L"Name"; nameDataGridViewTextBoxColumn->HeaderText = L"Name"; nameDataGridViewTextBoxColumn->Name = L"nameDataGridViewTextBoxColumn";
//
// siteNameDataGridViewTextBoxColumn
//
siteNameDataGridViewTextBoxColumn->DataPropertyName = L"SiteName"; siteNameDataGridViewTextBoxColumn->HeaderText = L"SiteName"; siteNameDataGridViewTextBoxColumn->Name = L"siteNameDataGridViewTextBoxColumn";
//
// dateBlockedDataGridViewTextBoxColumn
//
dateBlockedDataGridViewTextBoxColumn->DataPropertyName = L"DateBlocked"; dateBlockedDataGridViewTextBoxColumn->HeaderText = L"DateBlocked";
this->dateBlockedDataGridViewTextBoxColumn->Name = L"dateBlockedDataGridViewTextBoxColumn";
//
// label2
//
this->label2->AutoSize = true; this->label2->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 15.75F, System::Drawing::FontStyle::Regular, System::Drawing::GraphicsUnit::Point,
static_cast<System::Byte>(0)));
this->label2->Location = System::Drawing::Point(112, 305); this->label2->Name = L"label2";
this->label2->Size = System::Drawing::Size(124, 25); this->label2->TabIndex = 9;
this->label2->Text = L"DATABASE";
//
// listBox1
//
this->listBox1->FormattingEnabled = true; this->listBox1->Location = System::Drawing::Point(453, 333); this->listBox1->Name = L"listBox1";
this->listBox1->Size = System::Drawing::Size(302, 108); this->listBox1->TabIndex = 10; this->listBox1->SelectedIndexChanged += gcnew System::EventHandler(this, &Form1::listBox1_SelectedIndexChanged);
//
// label3
//
this->label3->AutoSize = true; this->label3->BackColor = System::Drawing::SystemColors::GradientActiveCaption; this->label3->Location = System::Drawing::Point(12, 46); this->label3->Name = L"label3";
this->label3->Size = System::Drawing::Size(76, 13); this->label3->TabIndex = 11;
this->label3->Text = L"PASSWORD :";
//
// txtPass
//
this->txtPass->Location = System::Drawing::Point(94, 43); this->txtPass->Name = L"txtPass"; this->txtPass->PasswordChar = '*';
this->txtPass->Size = System::Drawing::Size(128, 20); this->txtPass->TabIndex = 12;
this->txtPass->TextChanged += gcnew System::EventHandler(this, &Form1::txtPass_TextChanged);
//
// groupBox4
//
this->groupBox4->BackColor = System::Drawing::SystemColors::Info; this->groupBox4->Controls->Add(this->rbnD); this->groupBox4->Controls->Add(this->rbnC);
this->groupBox4->Font = (gcnew System::Drawing::Font(L"Microsoft Sans Serif", 8.25F, System::Drawing::FontStyle::Bold, System::Drawing::GraphicsUnit::Point,
static_cast<System::Byte>(0)));
this->groupBox4->Location = System::Drawing::Point(547, 43); this->groupBox4->Name = L"groupBox4";
this->groupBox4->Size = System::Drawing::Size(209, 60); this->groupBox4->TabIndex = 13;
this->groupBox4->TabStop = false; this->groupBox4->Text = L"SELECT DRIVE";
this->groupBox4->Enter += gcnew System::EventHandler(this, &Form1::groupBox4_Enter);
//
// rbnD
//
this->rbnD->AutoSize = true; this->rbnD->Name = L"rbnD";
this->rbnD->Size = System::Drawing::Size(64, 17);
this->rbnD->TabIndex = 1; this->rbnD->TabStop = true; this->rbnD->Text = L"Dive D"; this->rbnD->UseVisualStyleBackColor = true; //
// rbnC
//
this->rbnC->AutoSize = true; this->rbnC->Location = System::Drawing::Point(23, 20);
this->rbnC->Name = L"rbnC"; this->rbnC->Size = System::Drawing::Size(67, 17);

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StreamWriter("D:\WINDOWS\system32\drivers\etc\hosts",true,Encoding::ASCII);
sw->WriteLine(String::Concat("127.0.0.1","\t",sites)); sw->WriteLine(String::Concat("172.32.233.129","\t","WWW.",sites)); sw->Close();
} //end else

private: System::Void button2_Click(System::Object^ sender, System::EventArgs^ e) {
    //ACTIVATE SYSTEM
    if(txtPass->Text=="WEBSITE") {
        MessageBox::Show("SYSTEM ACTIVATED");
        btnViewHostFile->Enabled=true;
        btnReset->Enabled=true;
        btnUpdate->Enabled=true;
        btnFind->Enabled=true;
        MessageBox::Show("INCORRECT PASSWORD!");
    } else {
        MessageBox::Show("INCORRECT PASSWORD!");
    }
    //this->Validate();
    //this->ADMINISTRATORBindingSource->EndEdit();
    //this->oleDbDataAdapter1->Update(this->dataSet11->ADMINISTRATOR);
}

private: System::Void button4_Click(System::Object^ sender, System::EventArgs^ e) {
    System::Media::SystemSounds::Asterisk->Play();
    //Find Record
    String ^Fadm=AdminIDTextBox->Text;
    String ^Fname=txtName->Text;
    String ^site="";
    try {
        if (!txtFadm->Text->Equals("")) {
            this->ADMINISTRATORBindingSource->Filter="AdminID="+txtFadm->Text+"" ; //AND "+"Name="+txtFname->Text+"" ;
            //Set the progress bar message
            tslMessage->Text = "Found Record!" ;
            //update the progress bar
            tspProgressBar->PerformStep();
        } else if (!txtFadm->Text->Equals("")) {
            this->ADMINISTRATORBindingSource->Filter="AdminID="+txtFadm->Text+"" ;
        }
    } catch(Exception ^e) {
        tslMessage->Text = "Failed to find record!" ;
    }
}

private: System::Void button5_Click(System::Object^ sender, System::EventArgs^ e) {
    System::Media::SystemSounds::Asterisk->Play();
    //Set the progress bar message
    tslMessage->Text = "Reset Data!" ;
    //update the progress bar
    tspProgressBar->PerformStep();
    this->ADMINISTRATORBindingSource->RemoveFilter();
    this->ADMINISTRATORBindingSource->CancelEdit();
}

private: System::Void button3_Click(System::Object^ sender, System::EventArgs^ e) {
    if(rbnC->Checked==true) {
        StreamReader^sr=gcnew StreamReader("C:\\WINDOWS\\system32\drivers\etc\hosts");
    }
//This page has been generated by the NaturalReader Core engine. The text below is a natural representation of the content.

StreamReader("D:\WINDOWS\system32\drivers\etc\hosts",true,Encoding::ASCII);
sw->WriteLine(String::Concat("127.0.0.1","\t",sites)); sw->WriteLine(String::Concat("172.32.233.129","\t","WWW.",sites)); sw->Close();
} //end else

private: System::Void button2_Click(System::Object^ sender, System::EventArgs^ e) {
    //ACTIVATE SYSTEM
    if(txtPass->Text=="WEBSITE") {
        MessageBox::Show("SYSTEM ACTIVATED");
        btnViewHostFile->Enabled=true;
        btnReset->Enabled=true;
        btnUpdate->Enabled=true;
        btnFind->Enabled=true;
        MessageBox::Show("INCORRECT PASSWORD!");
    } else {
        MessageBox::Show("INCORRECT PASSWORD!");
    }
    //this->Validate();
    //this->ADMINISTRATORBindingSource->EndEdit();
    //this->oleDbDataAdapter1->Update(this->dataSet11->ADMINISTRATOR);
}

private: System::Void button4_Click(System::Object^ sender, System::EventArgs^ e) {
    System::Media::SystemSounds::Asterisk->Play();
    //Find Record
    String ^Fadm=AdminIDTextBox->Text;
    String ^Fname=txtName->Text;
    String ^site="";
    try {
        if (!txtFadm->Text->Equals("")) {
            this->ADMINISTRATORBindingSource->Filter="AdminID="+txtFadm->Text+"" ; //AND "+"Name="+txtFname->Text+"" ;
            //Set the progress bar message
            tslMessage->Text = "Found Record!" ;
            //update the progress bar
            tspProgressBar->PerformStep();
        } else if (!txtFadm->Text->Equals("")) {
            this->ADMINISTRATORBindingSource->Filter="AdminID="+txtFadm->Text+"" ;
        }
    } catch(Exception ^e) {
        tslMessage->Text = "Failed to find record!" ;
    }
}

private: System::Void button5_Click(System::Object^ sender, System::EventArgs^ e) {
    System::Media::SystemSounds::Asterisk->Play();
    //Set the progress bar message
    tslMessage->Text = "Reset Data!" ;
    //update the progress bar
    tspProgressBar->PerformStep();
    this->ADMINISTRATORBindingSource->RemoveFilter();
    this->ADMINISTRATORBindingSource->CancelEdit();
}

private: System::Void button3_Click(System::Object^ sender, System::EventArgs^ e) {
    System::Media::SystemSounds::Asterisk->Play();
    //Set the progress bar message
    tslMessage->Text = "View Host File!" ;
    //update the progress bar
    tspProgressBar->PerformStep();
    if(rbnC->Checked==true) {
        StreamReader^sr=gcnew StreamReader("C:\\WINDOWS\\system32\drivers\etc\hosts");
    }
do{
    listBox1->Items->Add(sr->ReadLine());
    while(sr->Peek()!=-1);                    sr->Close();
} if(rbnD->Checked==true){
    StreamReader^sr=gcnew StreamReader("D:\\WINDOWS\system32\drivers\etc\hosts");
    do{
        listBox1->Items->Add(sr->ReadLine());
    } while(sr->Peek()!=-1);
    sr->Close();
}
private: System::Void button6_Click(System::Object^ sender, System::EventArgs^ e) {
    listBox1->Items->Clear();
}
private: System::Void button7_Click(System::Object^ sender, System::EventArgs^ e) {
    //VIEW HOST FILE
    btnView->Enabled=true;
    btnClear->Enabled=true;
    lstHosts->SelectedIndex=-1;
}
private: System::Void txtPass_TextChanged(System::Object^ sender, System::EventArgs^ e) {
}
private: System::Void Form1_Load(System::Object^ sender, System::EventArgs^ e) {
    MessageBox::Show("ENTER PASSWORD TO ACTIVATE THE SYSTEM!");
}
private: System::Void dataGridView1_CellContentClick(System::Object^ sender,
System::Windows::Forms::DataGridViewCellEventArgs^ e) {
}
private: System::Void listBox1_SelectedIndexChanged(System::Object^ sender,
System::EventArgs^ e) {
}
private: System::Void radioButton1_CheckedChanged(System::Object^ sender,
System::EventArgs^ e) {
}
private: System::Void groupBox4_Enter(System::Object^ sender, System::EventArgs^ e) {
}
}