

WEBSITE BLOCKER USING PYTHON

GROUP 3

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IN TODAY'S DIGITAL AGE, DISTRACTIONS ARE EVERYWHERE, OFTEN LEADING TO DECREASED PRODUCTIVITY. THE OBJECTIVE OF THIS PROJECT IS TO CREATE A SIMPLE YET EFFECTIVE TOOL TO HELP USERS BLOCK ACCESS TO SPECIFIC WEBSITES, ENABLING THEM TO STAY FOCUSED ON THEIR TASKS.

OVERVIEW

THIS PROJECT IS A PYTHON-BASED SOLUTION THAT BLOCKS ACCESS TO SPECIFIED WEBSITES BY MODIFYING THE HOSTS FILE ON THE USER'S SYSTEM. THE BLOCKER RUNS IN THE BACKGROUND AND CHECKS THE TIME TO ENFORCE THE BLOCKING RULES.

HOW IT WORKS:

The website blocker operates by redirecting the specified websites to a local IP address (127.0.0.1), effectively making them inaccessible. The user can specify which websites to block and during which hours.

- **BLOCK SPECIFIC WEBSITES BY ADDING THEM TO A LIST.**
- **SET TIME PERIODS DURING WHICH THE WEBSITES WILL BE BLOCKED.**
- **THE BLOCKER RUNS AUTOMATICALLY IN THE BACKGROUND.**
- **EASILY CUSTOMIZABLE AND EXTENDABLE.**

TECHNICAL IMPLEMENTATION

INITIALIZATION:

LOAD THE LIST OF WEBSITES TO BLOCK AND THE BLOCKING SCHEDULE.

BLOCKING LOGIC:

CHECK THE CURRENT TIME AND MODIFY THE HOSTS FILE TO BLOCK/UNBLOCK WEBSITES.

CONTINUOUS RUNNING:

THE SCRIPT RUNS IN AN INFINITE LOOP, CONTINUOUSLY CHECKING AND ENFORCING THE BLOCKING RULES.

CODE SNIPPETS

- IMPORTING MODULES
- DEFINING VARIABLES
- SETTING THE TIME RANGE FOR BLOCKING
- INFINITE LOOP
- GETTING THE CURRENT TIME
- CHECKING IF CURRENT TIME IS WITHIN BLOCKING HOURS
- BLOCKING WEBSITES
- UNBLOCKING WEBSITES OUTSIDE WORKING HOURS
- PAUSING THE LOOP

```
import time
from datetime import datetime as dt

hosts_path = r"C:\Windows\System32\drivers\etc\hosts"
redirect_ip = "127.0.0.1"
websites_to_block = ["www.wscubetech.com"]

start_hour = 19
end_hour = 20
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while True:
    current_time = dt.now()

    if start_hour <= current_time.hour < end_hour:
        print("Working hours... Blocking websites")
        with open(hosts_path, "r+") as file:
            content = file.read()
            for website in websites_to_block:
                if website not in content:
                    file.write(f"{redirect_ip} {website}\n")
    else:
        print("Outside working hours... Unblocking websites")
        with open(hosts_path, "r+") as file:
            content = file.readlines()
            file.seek(0)
            for line in content:
                if not any(website in line for website in websites_to_block):
                    file.write(line)
            file.truncate()

    time.sleep(5)
```


FUTURE ENHANCEMENTS

POTENTIAL IMPROVEMENTS:

- **GUI: DEVELOP A USER-FRIENDLY GRAPHICAL INTERFACE FOR EASIER CONFIGURATION.**
- **PASSWORD PROTECTION: ADD A FEATURE TO PROTECT THE BLOCKER WITH A PASSWORD TO PREVENT UNAUTHORIZED CHANGES.**
- **CUSTOM BLOCKING MESSAGES: ALLOW USERS TO SET CUSTOM MESSAGES DISPLAYED WHEN A BLOCKED WEBSITE IS ACCESSED.**

This project provides a simple and effective solution for improving productivity by blocking distracting websites during work hours. It's a tool that can be easily customized and expanded based on user needs.

THANK YOU