

PYTHON AUTOMATION & SECURITY – DEMO

Automation Basics using Python

Simple Automation Script Demo

Mini Project Demo

WiFi Security Awareness using VBS

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■ **WHAT IS AUTOMATION?**

Automation

- Automation is the process of performing tasks automatically using programs.
- It reduces human effort in repetitive work.
- Automation saves time and improves accuracy.

Examples

- Automatic file checking
- Automatic scanning
- Automatic report generation

■ ROLE OF AUTOMATION IN CYBERSECURITY

Why Automation is Important in Cybersecurity?

Repetitive Monitoring

Cybersecurity involves repetitive monitoring tasks.

Speed & Accuracy

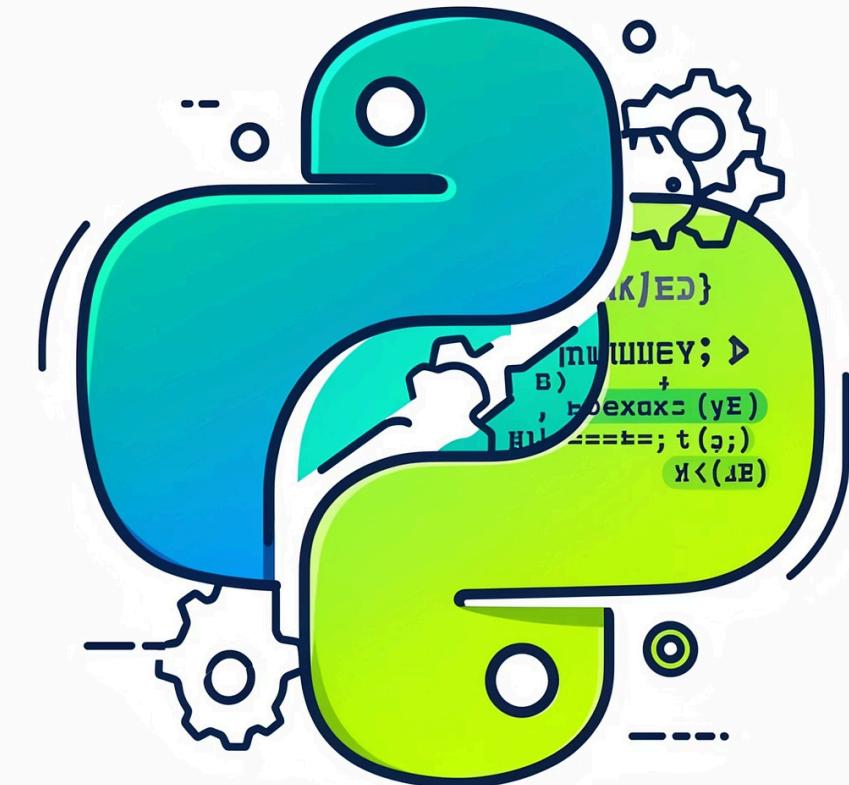
Manual checking is slow and error-prone.

Threat Detection

Automation helps in quick detection of threats.

Uses

- Network scanning
- Log monitoring
- Vulnerability detection



WHY PYTHON FOR AUTOMATION?

Python for Automation

- Simple and easy to learn
- English-like syntax
- Requires fewer lines of code
- Works on Windows, Linux, and Mac

Python is used for

- Security tools
- Network scanning
- System automation

PYTHON AUTOMATION DEMO

Demo: Simple Python Automation Script

Task Performed

- Automatically check files in a folder
- Identify .txt files
- Count total text files

Python Concepts Used

- Loop
- Condition
- OS automation

How the Automation Script Works



Open Folder

Open the specified folder



Read Files

Read all files in the folder



Check Extension

Check file extension



Count Files

Count .txt files



Display Result

Display the result

Automation removes manual checking

Simple Port Scanner

```
print("scanning started")

import socket

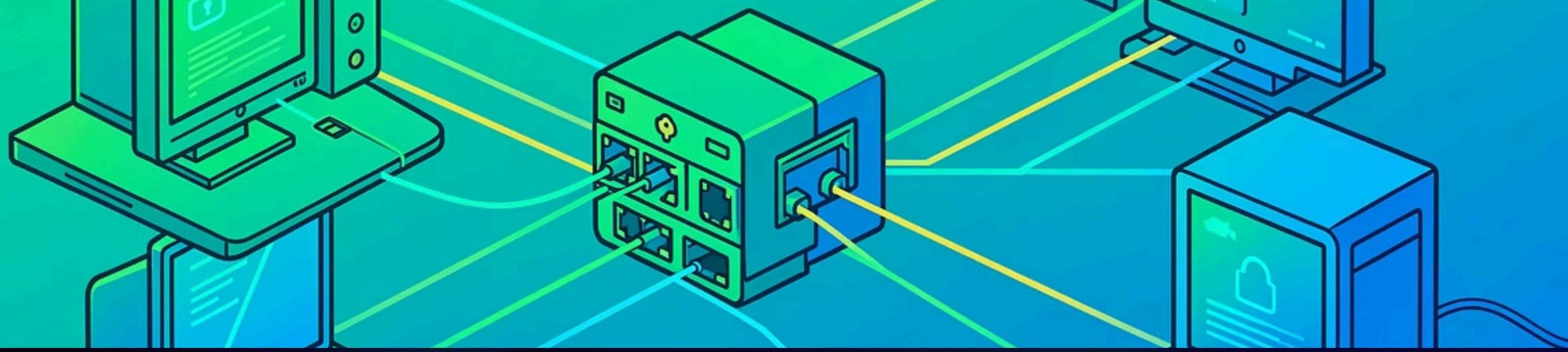
ip = "127.0.0.1"

for port in range(1, 101):
    s = socket.socket()

    s.settimeout(1)

    result = s.connect_ex((ip, port))
    if result == 0:
        print("Port", port, "is OPEN")
    s.close()

print("scan Completed")
```



MINI PROJECT DEMO

Mini Project: Basic Port Scanner

Project Objective

Scan open ports in a system automatically

Input

IP Address

Output

List of open ports

Technology Used

Python

PORT SCANNER WORKING LOGIC

Port Scanner Logic

01

Get IP address from user

02

Select a range of ports

03

Try connecting to each port

04

If connection is successful → Port is OPEN

05

Display open ports

This is automation in cybersecurity

VBS SCRIPT: WiFi SECURITY AWARENESS

Important Note

- WiFi hacking without permission is illegal
- This demo is for security awareness only

VBS Script Usage

- View saved WiFi profiles in a system
- Understand risks of saved credentials

Learning

- Importance of system security

CONCLUSION

Learning Outcomes



Automation Basics

Understand automation basics



Python Concepts

Learn Python automation concepts



Security Tools

Understand simple security tools



Ethical Practices

Learn ethical cybersecurity practices

Conclusion

Automation should be used to secure systems, not to misuse them.