August 14, 2024

[1]:
```
!pip install scapy
```

```
Requirement already satisfied: scapy in c:\users\prati\anaconda3\lib\site-
packages (2.5.0)
```

[2]:
```
# Mock version of the Wi-Fi Intrusion
from collections import defaultdict
import random
failed_attempts = defaultdict(int)

def simulate_packet_sniffing():
    for _ in range(10):
        mac_address = f"00:11:22:33:{random.randint(10, 99)}:{random.randint(10,␣
 ↪99)}"
        packet_type = random.choice(["normal", "deauth"])
        if packet_type == "deauth":
            failed_attempts[mac_address] += 1
        print(f"Packet from {mac_address}, Type: {packet_type}")

def detect_intrusions():
    for mac, attempts in failed_attempts.items():
        if attempts > 2:
            print(f"Possible intrusion detected from MAC address: {mac}")

simulate_packet_sniffing()
detect_intrusions()
```

```
Packet from 00:11:22:33:91:37, Type: normal
Packet from 00:11:22:33:70:74, Type: normal
Packet from 00:11:22:33:81:76, Type: normal
Packet from 00:11:22:33:22:68, Type: normal
Packet from 00:11:22:33:97:57, Type: deauth
Packet from 00:11:22:33:37:18, Type: deauth
Packet from 00:11:22:33:97:91, Type: normal
Packet from 00:11:22:33:44:52, Type: normal
Packet from 00:11:22:33:83:45, Type: deauth
Packet from 00:11:22:33:98:86, Type: normal
```

[3]:
```
# Simulate a binary file containing "deleted" data
with open("sample_drive.bin", "wb") as f:
    f.write(b"This is a sample file.\xff\xd8\xff\xe0JPEG file data\xff\xd9Some␣
 ↪other data.")
def simulate_recover_deleted_files(file_path):
    try:
        with open(file_path, "rb") as disk:
            data = disk.read()
            # Simulate searching for deleted file headers (e.g., JPEG headers)
            jpg_signature = b'\xff\xd8\xff\xe0'
            position = data.find(jpg_signature)
            recovered_files = 0
            while position != -1:
                recovered_files += 1
                end_position = data.find(b'\xff\xd9', position)
                file_data = data[position:end_position+2]
                recovered_file_name = f"recovered_file_{recovered_files}.jpg"
                with open(recovered_file_name, "wb") as f:
                    f.write(file_data)
                print(f"Recovered file: {recovered_file_name}")
                position = data.find(jpg_signature, end_position)
            print(f"{recovered_files} files recovered.")
    except FileNotFoundError:
        print(f"File {file_path} not found.")

simulate_recover_deleted_files("sample_drive.bin")
```

```
Recovered file: recovered_file_1.jpg
1 files recovered.
```

[ ]: