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COM232

ACTIVITY 8

```python
SUSPICIOUS_THRESHOLD = 20

simulated_packets = [
    ("192.168.1.10", "192.168.1.1", "HTTP"),
    ("192.168.1.20", "192.168.1.1", "HTTPS"),
    ("192.168.1.150", "192.168.1.1", "HTTP"),
    ("192.168.1.10", "192.168.1.2", "FTP"),
    ("192.168.1.150", "192.168.1.3", "HTTPS"),
    ("192.168.1.10", "192.168.1.1", "HTTP"),
    ("192.168.1.150", "192.168.1.5", "HTTP"),
    ("192.168.1.20", "192.168.1.2", "SSH"),
    ("192.168.1.10", "192.168.1.4", "HTTP"),
    ("192.168.1.150", "192.168.1.7", "HTTP"),
    ("192.168.1.10", "192.168.1.1", "HTTP"),
    ("192.168.1.150", "192.168.1.8", "HTTPS"),
    ("192.168.1.10", "192.168.1.1", "HTTP"),
    ("192.168.1.150", "192.168.1.9", "HTTP"),
    ("192.168.1.10", "192.168.1.1", "HTTP"),
    ("192.168.1.150", "192.168.1.10", "HTTPS"),
    ("192.168.1.10", "192.168.1.1", "HTTP"),
    ("192.168.1.150", "192.168.1.11", "HTTP"),
    ("192.168.1.150", "192.168.1.12", "HTTPS"),
    ("192.168.1.150", "192.168.1.13", "HTTP"),
] * 2

def analyze_packets(packets):
    print("Analyzing simulated network packets...")

    packet_counts = {}
    for src, dest, proto in packets:
        packet_counts[src] = packet_counts.get(src, 0) + 1

    print("\nPacket counts per source IP:")
    for ip, count in sorted(packet_counts.items()):
        print(f" - {ip}: {count} packets")

    print("\nChecking for suspicious activity...")
    for ip, count in packet_counts.items():
        if count > SUSPICIOUS_THRESHOLD:
            print(f"!!! ALERT: Suspicious activity detected from {ip}. Packets sent: {count}")

if __name__ == "__main__":
    analyze_packets(simulated_packets)
```

```
PS C:\Users\evangelistajd1\Desktop\PROJECT> & C:\Users\evangelistajd1\AppData\Local\Programs\Python\Python313\python.exe c:/Users/evangelistajd1/Desktop/PROJECT/Act-8.py
Analyzing simulated network packets...

Packet counts per source IP:
 - 192.168.1.10: 16 packets
 - 192.168.1.150: 20 packets
 - 192.168.1.20: 4 packets

Checking for suspicious activity...
```

ACTIVITY 9

```python
import sys
from PIL import Image
import piexif

def read_exif(path):
    img = Image.open(path)
    exif_dict = piexif.load(img.info.get("exif", b""))

    make = exif_dict['0th'].get(piexif.ImageIFD.Make, b"").decode(errors='ignore')
    model = exif_dict['0th'].get(piexif.ImageIFD.Model, b"").decode(errors='ignore')
    dt = exif_dict['0th'].get(piexif.ImageIFD.DateTime, b"").decode(errors='ignore')

    gps = exif_dict.get('GPS', {})

    print("EXIF Metadata Analysis:")
    print(f"Camera Make: {make}")
    print(f"Camera Model: {model}")
    print(f"Date/Time: {dt}")
    if gps:
        print("GPS tags found in EXIF (raw):")
        print(gps)
    else:
        print("No GPS metadata found.")

if __name__ == '__main__':
    if len(sys.argv) < 2:
        print("Usage: python exif_reader.py image.jpg")
    else:
        read_exif(sys.argv[1])
```

```
PS C:\Users\evangelistajd1\Desktop\PROJECT> python Act-9.py Canon_PowerShot_S40.jpg
EXIF Metadata Analysis:
Camera Make: Canon
Camera Model: Canon PowerShot S40
Date/Time: 2003:12:14 12:01:44
No GPS metadata found.
```