#!/usr/bin/env python3

import socket

import dns.resolver

import requests

def get\_ip(domain):

try:

ip = socket.gethostbyname(domain)

return ip

except socket.gaierror:

return None

def get\_dns\_records(domain):

records = {}

try:

for record\_type in ['A', 'AAAA', 'MX', 'NS', 'CNAME', 'TXT']:

answers = dns.resolver.resolve(domain, record\_type)

records[record\_type] = [str(rdata) for rdata in answers]

except dns.resolver.NoAnswer:

records[record\_type] = []

except dns.resolver.NXDOMAIN:

records['error'] = 'Domain does not exist'

except Exception as e:

records['error'] = str(e)

return records

def get\_server\_details(domain):

try:

response = requests.get(f'http://{domain}', timeout=5)

server\_info = response.headers.get('Server')

return server\_info

except requests.exceptions.RequestException:

return None

def gather\_domain\_info(domain):

info = {}

info['IP Address'] = get\_ip(domain)

info['DNS Records'] = get\_dns\_records(domain)

info['Server Details'] = get\_server\_details(domain)

return info

def display\_info(info):

print("Domain Information Gathering Tool\n")

print("IP Address:", info['IP Address'])

print("\nDNS Records:")

for record\_type, records in info['DNS Records'].items():

print(f" {record\_type}:")

for record in records:

print(f" {record}")

print("\nServer Details:", info['Server Details'])

if \_\_name\_\_ == "\_\_main\_\_":

domain = input("Enter the domain: ")

info = gather\_domain\_info(domain)

display\_info(info)