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Main.py

keyWithoutProxy.py

Implementation without Proxy:

```
PS C:\Users\muSyR> python -m keyWithoutProxy.py
{'Report-To': '{"group":"heroku-nel","max_age":3600,"endpoints":[{"url":"https://nel.heroku.com/reports?ts=1698982734&sid=1b10b0ff-8a76-4548-befa-353fc6c6c045&s=qfwDc9MIBZP%2FqXqNf9bfP0M75BBTEEvtIc0uTyCU2k%3D"}]}', 'Reporting-Endpoints': 'heroku-nel=https://nel.heroku.com/reports?ts=1698982734&sid=1b10b0ff-8a76-4548-befa-353fc6c6c045&s=qfwDc9MIBZP%2FqXqNf9bfP0M75BBTEEvtIc0uTyCU2k%3D', 'Nel': '{"report_to":"heroku-nel","max_age":3600,"success_fraction":0.005,"failure_fraction":0.05,"response_headers":["Via"]}', 'Connection': 'close', 'Server': 'BaseHTTP/0.6 Python/3.11.6', 'Date': 'Fri, 03 Nov 2023 03:38:54 GMT', 'Content-Type': 'text/plain', 'Ecs152a-Resp': '242831638', 'Via': '1.1 vegur'}
```

```
1 import requests
2
3 url = 'https://kartik-labeling-cvpr-0ed3099180c2.herokuapp.com/ecs152a_ass1'
4 headers = {'Student-Id' : '919508305'}
5
6 response = requests.get(url, headers = headers)
7
8 print(response.headers)
```

1. Yes.
2. The secret key is in the Ecs152a-Resp field which is 242429781. This is a response field that comes only when the Student-Id header is given in the HTTP GET request in the py file.

Implementation with Proxy:

```
Flow Details
2023-10-26 01:22:38 GET https://kartik-labeling-cvpr-0ed3099180c2.herokuapp.com/ecs152a_ass1
← 200 OK text/plain 39b 166ms

Request
Host: kartik-labeling-cvpr-0ed3099180c2.herokuapp.com
User-Agent: python-requests/2.31.0
Accept-Encoding: gzip, deflate
Accept: */*
Connection: keep-alive
Student-Id: 919196458
No request content
```

```
Flow Details
2023-10-26 01:22:38 GET https://kartik-labeling-cvpr-0ed3099180c2.herokuapp.com/ecs152a_ass1
← 200 OK text/plain 39b 166ms

Report-To: {"group":"heroku-nel","max_age":3600,"endpoints":[{"url":"https://nel.heroku.com/reports?ts=1698388558&id=1b18b0ff-8a76-4548-befa-353fc6cc845&=USXXCqvgadxbYXIfcTah2BAnAacvvVa7UvciknBgttMKcK3D"}]}
Reporting-Endpoints: heroku-nel=https://nel.heroku.com/reports?ts=1698388558&id=1b18b0ff-8a76-4548-befa-353fc6cc845&=USXXCqvgadxbYXIfcTah2BAnAacvvVa7UvciknBgttMKcK3D
Nel: {"report_to":"heroku-nel","max_age":3600,"success_fraction":0.005,"failure_fraction":0.05,"response_headers":["Via"]}
Connection: close
Server: BaseHTTP/0.6 Python/3.11.6
Date: Thu, 26 Oct 2023 08:22:38 GMT
Content-Type: text/plain
Ecs152a-Resp: 242429781
Via: 1.1 vegur
Raw
You should look at the response headers
```

```
import requests

url = 'https://kartik-labeling-cvpr-0ed3099180c2.herokuapp.com/ecs152a_ass1'
response = requests.get(url, headers={'Student-Id': '919196458'}, verify=False)

print(response.headers)
```

```
/Users/xelathan/Alex/ECS152A/project_one/venv/bin/python /Users/xelathan/Alex/ECS152A/project_one/part_2b/main.py
/Users/xelathan/Alex/ECS152A/project_one/venv/lib/python3.11/site-packages/certifi/cacert.pem
/Users/xelathan/Alex/ECS152A/project_one/venv/lib/python3.11/site-packages/urllib3/connectionpool.py:1188: InsecureRequestWarning: Unverified HTTPS request is being made to host '127.0.0.1'.
  warnings.warn(
{'Connection': 'close', 'Server': 'BaseHTTP/0.6 Python/3.11.6', 'Date': 'Thu, 26 Oct 2023 08:24:01 GMT', 'Content-Type': 'text/plain', 'Ecs152a-Resp': '242429781', 'Via': '1.1 vegur'}

Process finished with exit code 0
```

ChatGPT Implementation:

```
import requests

# Define the URL and custom headers
url = 'https://kartik-labeling-cvpr-0ed3099180c2.herokuapp.com/ecs152a_ass1'
headers = {'Student-Id': '919196458'}

# Configure MITMProxy to intercept requests
# Make sure MITMProxy is running on your local machine
# You may need to set up MITMProxy to capture and inspect the request/response

# Disable SSL certificate verification
proxies = {
    'http': 'http://127.0.0.1:8080', # Change to your MITMProxy's listening address
    'https': 'http://127.0.0.1:8080', # Change to your MITMProxy's listening address
}

# Send the GET request with custom headers and SSL verification disabled
response = requests.get(url, headers=headers, proxies=proxies, verify=False)

# Print the response
print("Headers:", response.headers)
|
```

```
/Users/xelathan/Alex/ECS152A/project_one/venv/bin/python /Users/xelathan/Alex/ECS152A/project_one/part_2b/main_chatgpt.py
/Users/xelathan/Alex/ECS152A/project_one/venv/lib/python3.11/site-packages/urllib3/connectionpool.py:1188: InsecureRequestWarning: Unverified HTTPS request is being made to host '127.0.0.1'. Add
warnings.warn(
Headers: {'Connection': 'close', 'Server': 'BaseHTTP/0.6 Python/3.11.6', 'Date': 'Thu, 26 Oct 2023 08:57:02 GMT', 'Content-Type': 'text/plain', 'Ecs152a-Resp': '242429781', 'Via': '1.1 vegur'}

Process finished with exit code 0
```

```
Flow Details
2023-10-26 01:57:02 GET https://kartik-labeling-cvpr-0ed3099180c2.herokuapp.com/ecs152a_ass1
← 200 OK text/plain 39b 229ms
Request
Host: kartik-labeling-cvpr-0ed3099180c2.herokuapp.com
User-Agent: python-requests/2.31.0
Accept-Encoding: gzip, deflate
Accept: */*
Connection: keep-alive
Student-Id: 919196458
No request content
```

```
Flow Details
2023-10-26 01:57:02 GET https://kartik-labeling-cvpr-0ed3099180c2.herokuapp.com/ecs152a_ass1
← 200 OK text/plain 39b 229ms
Request
Connection: close
Server: BaseHTTP/0.6 Python/3.11.6
Date: Thu, 26 Oct 2023 08:57:02 GMT
Content-Type: text/plain
Ecs152a-Resp: 242429781
Via: 1.1 vegur
Raw
You should look at the response headers
```

<https://chat.openai.com/c/7dcb40ee-2fe0-4be7-ac15-c7ade2784dfe>

1. Yes.
2. The secret key is in the Ecs152a-Resp field which is 242429781. I was able to extract this by setting the headers in the HTTP GET request to my student id. The following response produced the Ecs152a-Resp field which gave me the secret. As you can see the secret is shown in the headers section of mitmproxy as well as the terminal when I print out response.headers from the requests library in python.