

Back to the Future

Goal

In this exercise, we'll wield the power of **Netcat** to go back in time and interact with a website from 2016, without a web browser

Background

Netcat is a versatile command-line tool for network interactions. It supports a wide range of operations, but today we'll focus on its ability to establish connections to HTTP servers. Since HTTP is a textual protocol, it allows us to "converse" with servers directly.

Example usage:

To establish connection to site.com on destination port 80 (Port 80 is used by HTTP)

```
nc -v site.com 80
```

Hint: Replace **site.com** with any site you wish to establish connection with!

Instructions

Part 1: Establishing Connection using NC (Netcat)

1. Open your command prompt and type **nc** to ensure Netcat is installed.
 - Click [here](#) to download Netcat for Windows
 - or Here for the [installation guide](#)

2. Time to power up our time machine! Create a connection to the historic site:

`example.com`. (The website is called example.com!)

Hint: You can refer to the above **Example Usage** to establish a connection via netcat.

3. Upon successful connection, you might see something like:

```
Connection to example.com port 80 [tcp/http]
succeeded!
```

This indicates that our link is established, and we're ready to explore the digital past.

4. Now, let's converse in HTTP. Request the default page from it (`GET / HTTP/1.0`) from `example.com`. Press Enter ONCE
5. When prompted with a new line, write (`Host: example.com`) & press Enter twice after your request
6. Congratulations! You've just communicated with a piece of history.

Part 2: Extracting information from Netcat.

6. HTML is the backbone of web content. Notice how the information given from NC is the HTML code of the website? Try copying the only HTML content (without the headers) into Notepad (or any other text editor) and save it as `example.html`.
7. Open your newly created HTML file in a web browser. Can you see the website that you Netcat out?
8. Next, let's seek out a page that didn't exist back then. Try to access `/notexisting` of example.com using Netcat.
9. What was the response this time? Explain why you received this particular feedback in the submission.

10. There you have it! We've not only visited the first website ever created, but also experienced how early internet explorers might have felt navigating the newly-created web.

To submit

A text file containing the:

- The netcat command you use to establish connection with the site
- The full 1st request you crafted and sent via netcat
- Response Code & Content Type for the 1st request you sent (For the page that exists)
- The full 2nd request you crafted and sent via netcat
- Response Code & Content Type for the 2nd request you sent (For the page that didn't exist)
- Reasons and explanations why the 2nd response is different from the 1st response.

