

Ques: Explain what and how the below command does what it does
`printf 'HEAD / HTTP/1.1\r\nHost: en.wikipedia.org\r\n\r\n' | nc en.wikipedia.org 80`

- How will you modify the above command to fetch the contents of www.rediff.com?

Soln: The provided command is using `printf` and `nc` (netcat) to send an HTTP HEAD request to the Wikipedia server on port 80. The command is structured to inquire about the headers of the root path ("/") on the server.

- `printf` Command:
 - `printf` is used to format and print text. In this case, it is used to create an HTTP HEAD request.
- HTTP HEAD Request:
 - The string passed to `printf` represents an HTTP HEAD request:
 - **HEAD:** Specifies that the server should only return the headers, not the full content.
 - **/:** The path being requested on the server (root in this case).
 - **HTTP/1.1:** The HTTP version.
 - **Host: en.wikipedia.org:** The host header specifying the target domain.
 - Piping to `nc` (Netcat):
 - The `printf` output is piped (`|`) to `nc`, which is the netcat command.
 - `nc en.wikipedia.org 80:` Connects to the Wikipedia server (`en.wikipedia.org`) on port 80.

Modification to Fetch Contents of www.rediff.com:

- To modify the command to fetch the contents of www.rediff.com, you can change the host header in the `printf` part. For example:

`printf 'GET / HTTP/1.1\r\nHost: www.rediff.com\r\n\r\n' | nc www.rediff.com 80`

This command sends an HTTP GET request to the root path ("/") of www.rediff.com and prints the content to the terminal.

```
pranjal.mukharjee@PF3HRQF1:~$ printf 'HEAD / HTTP/1.1\r\nHost: en.wikipedia.org\r\n\r\n' | nc en.wikipedia.org 80
HTTP/1.1 301 Moved Permanently
content-length: 0
location: https://en.wikipedia.org/
server: HAProxy
x-cache: cp5023 int
x-cache-status: int-tls
connection: close
```

```
pranjal.mukharjee@PF3HRQF1:~$ printf 'GET / HTTP/1.1\r\nHost: www.rediff.com\r\n\r\n' | nc www.rediff.com 80
HTTP/1.1 301 Moved Permanently
Server: AkamaiGHost
Content-Length: 0
Location: https://www.rediff.com/
Date: Wed, 24 Jan 2024 12:20:21 GMT
Connection: keep-alive
```