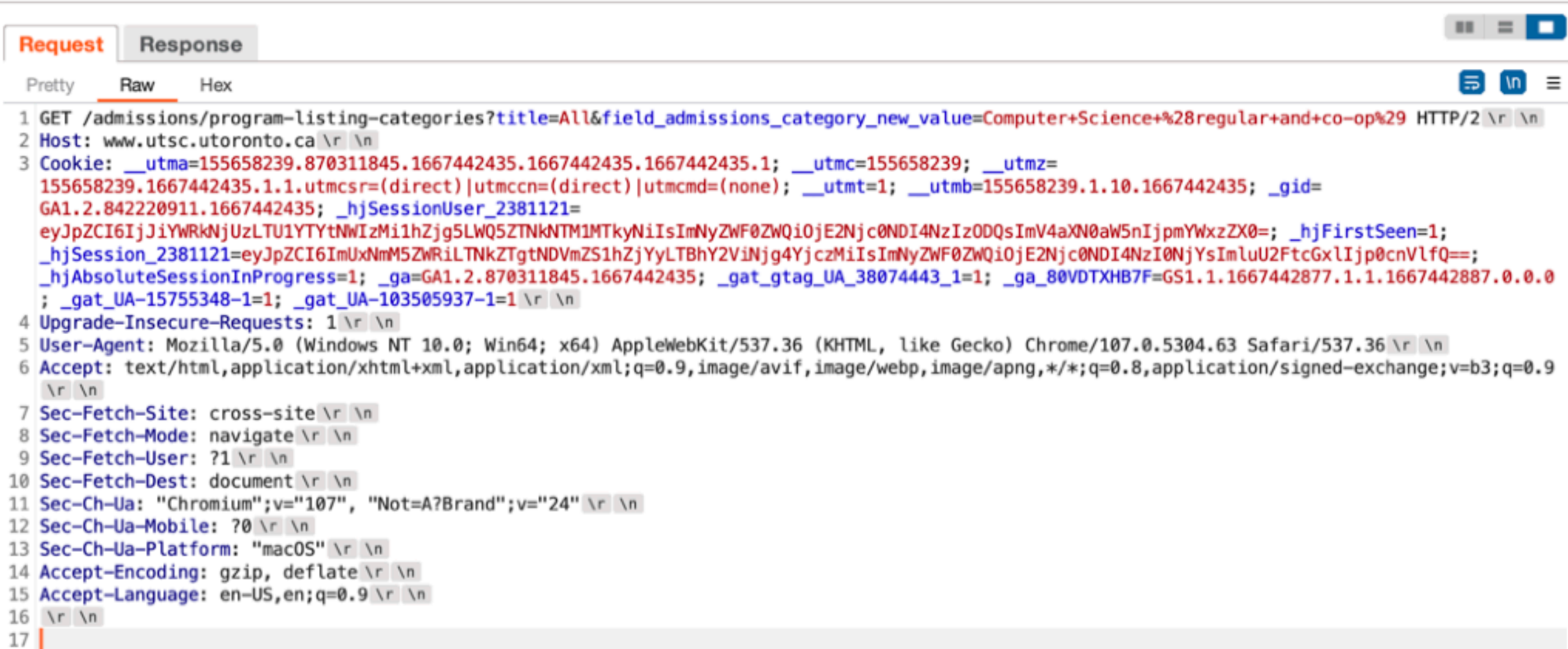# The HTTP protocol

Stateless <u>application layer protocol</u> for requesting/receiving data on the Web

- Standard TCP protocol on **port 80** (by default)

- **URI/URL** specifies what resource is being accessed

- Different **request methods**

- <u>Evolution</u>: … HTTP/1.1, HTTP/2.0, HTTP/3.0

- Clients are also called "User-agents"

The HTTP protocol: Requests

Request **Response**

Pretty   Raw   Hex

```
1  GET /admissions/program-listing-categories?title=All&field_admissions_category_new_value=Computer+Science+%28regular+and+co-op%29 HTTP/2 \r \n
2  Host: www.utsc.utoronto.ca \r \n
3  Cookie: __utma=155658239.870311845.1667442435.1667442435.1667442435.1; __utmc=155658239; __utmz=
   155658239.1667442435.1.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none); __utmt=1; __utmb=155658239.1.10.1667442435; _gid=
   GA1.2.842220911.1667442435; _hjSessionUser_2381121=
   eyJpZCI6IjJiYWRkNjUzLTU1YTYtNWIzMi1hZjg5LWQ5ZTNkNTM1MTkyNiIsImNyZWF0ZWQiOjE2Njc0NDI4NzIzODQsImV4aXN0aW5nIjpmYWxzZX0=; _hjFirstSeen=1;
   _hjSession_2381121=eyJpZCI6ImUxNmM5ZWRiLTNkZTgtNDVmZS1hZjYyLTBhY2ViNjg4YjczMiIsImNyZWF0ZWQiOjE2Njc0NDI0NjYsImluU2FtcGxlIjp0cnVlfQ==;
   _hjAbsoluteSessionInProgress=1; _ga=GA1.2.870311845.1667442435; _gat_gtag_UA_38074443_1=1; _ga_80VDTXHB7F=GS1.1.1667442877.1.1.1667442887.0.0.0
   ; _gat_UA-15755348-1=1; _gat_UA-103505937-1=1 \r \n
4  Upgrade-Insecure-Requests: 1 \r \n
5  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.5304.63 Safari/537.36 \r \n
6  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9
    \r \n
7  Sec-Fetch-Site: cross-site \r \n
8  Sec-Fetch-Mode: navigate \r \n
9  Sec-Fetch-User: ?1 \r \n
10 Sec-Fetch-Dest: document \r \n
11 Sec-Ch-Ua: "Chromium";v="107", "Not=A?Brand";v="24" \r \n
12 Sec-Ch-Ua-Mobile: ?0 \r \n
13 Sec-Ch-Ua-Platform: "macOS" \r \n
14 Accept-Encoding: gzip, deflate \r \n
15 Accept-Language: en-US,en;q=0.9 \r \n
16  \r \n
17 |
```

- https://developer.mozilla.org/en-US/docs/Web/HTTP/Messages#http_requests