Задание 1

1) curl -v -i [http://google.ru](http://google.ru/)

Trying 173.194.220.94...

\* TCP\_NODELAY set

\* Expire in 149945 ms for 3 (transfer 0x55eadee80f90)

\* Expire in 200 ms for 4 (transfer 0x55eadee80f90)

\* Connected to google.ru (173.194.220.94) port 80 (#0)

> GET / HTTP/1.1

> Host: google.ru

> User-Agent: curl/7.64.0

> Accept: \*/\*

HTTP/1.1 301 Moved Permanently

Location: http://www.google.ru/

Content-Type: text/html; charset=UTF-8

Date: Thu, 11 Feb 2021 16:48:36 GMT

Expires: Sat, 13 Mar 2021 16:48:36 GMT

Cache-Control: public, max-age=2592000

Server: gws

Content-Length: 218

X-XSS-Protection: 0

X-Frame-Options: SAMEORIGIN

X-Cache: MISS from proxy-10

X-Cache-Lookup: MISS from proxy-10:3128

Via: 1.1 proxy-10 (squid/4.6)

Connection: keep-alive

2) curl -v -i [http://www.google.ru](http://www.google.ru/)

OK

Вывод: потребовалось обратиться по адресу http://www.google.ru

3) curl -v -i [http://ya.ru](http://ya.ru/)

Trying 87.250.250.242:80...

\* TCP\_NODELAY set

\* Connected to ya.ru (87.250.250.242) port 80 (#0)

> GET / HTTP/1.1

> Host: ya.ru

> User-Agent: curl/7.68.0

> Accept: \*/\*

\* Mark bundle as not supporting multiuse

HTTP/1.1 302 Found

Cache-Control: no-cache,no-store,max-age=0,must-revalidate

Content-Length: 0

Date: Wed, 17 Feb 2021 18:30:47 GMT

Expires: Wed, 17 Feb 2021 18:30:47 GMT

Last-Modified: Wed, 17 Feb 2021 18:30:47 GMT

Location: https://ya.ru/

P3P: policyref="/w3c/p3p.xml", CP="NON DSP ADM DEV PSD IVDo OUR IND STP PHY PRE NAV UNI"

Set-Cookie: yandexuid=3178553571613586647; Expires=Sat, 15-Feb-2031 18:30:47 GMT; Domain=.ya.ru; Path=/

Set-Cookie: is\_gdpr=0; Path=/; Domain=.ya.ru; Expires=Fri, 17 Feb 2023 18:30:47 GMT

Set-Cookie: is\_gdpr\_b=COuhXRCtHigC; Path=/; Domain=.ya.ru; Expires=Fri, 17 Feb 2023 18:30:47 GMT

X-Content-Type-Options: nosniff

4) curl -v -i [https://ya.ru](https://ya.ru/)

OK

Вывод: потребовалось обратиться по адресу [https://ya.ru](https://ya.ru/)

Задание 2

1) curl -v -i http://google.ru -H "User-Agent:Mozilla/5.0 (Macintosh; Intel Mac OS X 11\_0\_1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.96 Safari/537.36"

Trying 108.177.14.94:80...

\* TCP\_NODELAY set

\* Connected to google.ru (108.177.14.94) port 80 (#0)

> GET / HTTP/1.1

> Host: google.ru

> Accept: \*/\*

> User-Agent:Mozilla/5.0 (Macintosh; Intel Mac OS X 11\_0\_1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.96 Safari/537.36

>

\* Mark bundle as not supporting multiuse

HTTP/1.1 301 Moved Permanently

Location: http://www.google.ru/

Content-Type: text/html; charset=UTF-8

Date: Wed, 17 Feb 2021 18:26:38 GMT

Expires: Fri, 19 Mar 2021 18:26:38 GMT

Cache-Control: public, max-age=2592000

Server: gws

Content-Length: 218

X-XSS-Protection: 0

X-Frame-Options: SAMEORIGIN

X-Cache: MISS from proxy-10

X-Cache-Lookup: MISS from proxy-10:3128

Via: 1.1 proxy-10 (squid/4.6)

Connection: keep-alive

2) curl -v -i http://www.google.ru -H "User-Agent:Mozilla/5.0 (Macintosh; Intel Mac OS X 11\_0\_1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.96 Safari/537.36"

Trying 173.194.222.94:80...

\* TCP\_NODELAY set

\* Connected to www.google.ru (173.194.222.94) port 80 (#0)

> GET / HTTP/1.1

> Host: www.google.ru

> Accept: \*/\*

> User-Agent:Mozilla/5.0 (Macintosh; Intel Mac OS X 11\_0\_1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.96 Safari/537.36

\* Mark bundle as not supporting multiuse

HTTP/1.1 302 Found

Location: https://www.google.ru/?gws\_rd=ssl

Cache-Control: private

Content-Type: text/html; charset=UTF-8

Date: Wed, 17 Feb 2021 18:29:17 GMT

Server: gws

Content-Length: 230

X-XSS-Protection: 0

X-Frame-Options: SAMEORIGIN

Set-Cookie: 1P\_JAR=2021-02-17-18; expires=Fri, 19-Mar-2021 18:29:17 GMT; path=/; domain=.google.ru; Secure; SameSite=none

X-Cache: MISS from proxy-10

X-Cache-Lookup: MISS from proxy-10:3128

Via: 1.1 proxy-10 (squid/4.6)

Connection: keep-alive

3) curl -v -i https://www.google.ru/?gws\_rd=ssl -H "User-Agent:Mozilla/5.0 (Macintosh; Intel Mac OS X 11\_0\_1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.96 Safari/537.36"

OK

Вывод: потребовалось обратиться по адресу <https://www.google.ru/?gws_rd=ssl>. На первой итерации в ответе отсутствовали заголовки X-\*, Content-Length, Server, Via, Connection.

4) curl -v -i http://ya.ru -H "User-Agent:Mozilla/5.0 (Macintosh; Intel Mac OS X 11\_0\_1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.96 Safari/537.36"

[Trying 87.250.250.242:80...](https://ya.ru/)

\* TCP\_NODELAY set

\* Connected to ya.ru (87.250.250.242) port 80 (#0)

> GET / HTTP/1.1

> Host: ya.ru

> Accept: \*/\*

> User-Agent:Mozilla/5.0 (Macintosh; Intel Mac OS X 11\_0\_1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.96 Safari/537.36

\* Mark bundle as not supporting multiuse

HTTP/1.1 302 Found

Cache-Control: no-cache,no-store,max-age=0,must-revalidate

Content-Length: 0

Date: Wed, 17 Feb 2021 18:31:55 GMT

Expires: Wed, 17 Feb 2021 18:31:56 GMT

Last-Modified: Wed, 17 Feb 2021 18:31:56 GMT

Location: https://ya.ru/

P3P: policyref="/w3c/p3p.xml", CP="NON DSP ADM DEV PSD IVDo OUR IND STP PHY PRE NAV UNI"

Set-Cookie: yandexuid=1325560521613586715; Expires=Sat, 15-Feb-2031 18:31:55 GMT; Domain=.ya.ru; Path=/; Secure; SameSite=None

Set-Cookie: yuidss=1325560521613586715; Expires=Sat, 15-Feb-2031 18:31:55 GMT; Domain=.ya.ru; Path=/; Secure; SameSite=None

Set-Cookie: is\_gdpr=0; Path=/; Domain=.ya.ru; Expires=Fri, 17 Feb 2023 18:31:55 GMT; SameSite=None; Secure

Set-Cookie: is\_gdpr\_b=COuhXRCtHigC; Path=/; Domain=.ya.ru; Expires=Fri, 17 Feb 2023 18:31:55 GMT; SameSite=None; Secure

X-Content-Type-Options: nosniff

5) curl -v -i https://ya.ru -H "User-Agent:Mozilla/5.0 (Macintosh; Intel Mac OS X 11\_0\_1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.96 Safari/537.36"

OK

Вывод: потребовалось обратиться по адресу [https://ya.ru](https://ya.ru/)

Задание 3

GET-запросом:

curl -v -X GET -i www.google.ru

HTTP/1.1 200 OK

Date: Mon, 08 Feb 2021 14:33:29 GMT

Expires: -1

Cache-Control: private, max-age=0

Content-Type: text/html; charset=windows-1251

P3P: CP="This is not a P3P policy! See g.co/p3phelp for more info."

Server: gws

X-XSS-Protection: 0

X-Frame-Options: SAMEORIGIN

Set-Cookie: 1P\_JAR=2021-02-08-14; expires=Wed, 10-Mar-2021 14:33:29 GMT; path=/; domain=.google.ru; Secure

Set-Cookie: NID=208=RUU35zbnqrxUodpHEsy91-XrwN5\_Js7\_edJLKfjX9tD2l89HsU-JGXXNB6L\_ZIUw4LIb1Wm0898g3dVNNrhDa4S8y5OZoJaFon68sZEjSJXpmMhfF\_cHGMpzHos-fn1\_c5MiFoWKsMZPZ9d\_c5fP3DTGrbSJkmGXFFmCp8CHQLI; expires=Tue, 10-Aug-2021 14:33:29 GMT; path=/; domain=.google.ru; HttpOnly

Accept-Ranges: none

Vary: Accept-Encoding

X-Cache: MISS from proxy-10

X-Cache-Lookup: MISS from proxy-10:3128

Transfer-Encoding: chunked

Via: 1.1 proxy-10 (squid/4.6)

Connection: keep-alive

HEAD-запросом:

curl -X HEAD -i www.google.ru

HTTP/1.1 200 OK

Content-Type: text/html; charset=windows-1251

P3P: CP="This is not a P3P policy! See g.co/p3phelp for more info."

Date: Mon, 08 Feb 2021 14:32:21 GMT

Server: gws

X-XSS-Protection: 0

X-Frame-Options: SAMEORIGIN

Expires: Mon, 08 Feb 2021 14:32:21 GMT

Cache-Control: private

Set-Cookie: 1P\_JAR=2021-02-08-14; expires=Wed, 10-Mar-2021 14:32:21 GMT; path=/; domain=.google.ru; Secure

Set-Cookie: NID=208=Dq4K0h7StMSGVb0Q7j8Y\_rrefdykoEbRcfrmiNUOknh6qHyrRQi4GtQ8vls3LsUNfUZzld80iShBSNgcidHv2wIGo86Khioo\_eLZIoyHzRjgpURuDB5lThTAhRwKhdIZGN-b2XL8kS0b\_9CEO6kWwsWvSFlX8TfTfrUy5GHlB3o; expires=Tue, 10-Aug-2021 14:32:21 GMT; path=/; domain=.google.ru; HttpOnly

X-Cache: MISS from proxy-10

X-Cache-Lookup: MISS from proxy-10:3128

Via: 1.1 proxy-10 (squid/4.6)

Connection: keep-alive

Отличающиеся заголовки: Expires, Cache-Control, Accept-Ranges, Vary, Transfer-Encoding.

Задание 4

GET-запросом:

curl -X GET -H "User-Agent:Mozilla/5.0 (Macintosh; Intel Mac OS X 11\_0\_1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.96 Safari/537.36" -i [www.google.ru](http://www.google.ru/)

HTTP/1.1 302 Found

Location: https://www.google.ru/?gws\_rd=ssl

Cache-Control: private

Content-Type: text/html; charset=UTF-8

Date: Mon, 08 Feb 2021 14:42:35 GMT

Server: gws

Content-Length: 230

X-XSS-Protection: 0

X-Frame-Options: SAMEORIGIN

Set-Cookie: 1P\_JAR=2021-02-08-14; expires=Wed, 10-Mar-2021 14:42:35 GMT; path=/; domain=.google.ru; Secure; SameSite=none

X-Cache: MISS from proxy-10

X-Cache-Lookup: MISS from proxy-10:3128

Via: 1.1 proxy-10 (squid/4.6)

Connection: keep-alive

HEAD-запросом:

curl -X HEAD -H "User-Agent:Mozilla/5.0 (Macintosh; Intel Mac OS X 11\_0\_1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/88.0.4324.96 Safari/537.36" -i [www.google.ru](http://www.google.ru/)

HTTP/1.1 200 OK

Content-Type: text/html; charset=UTF-8

Date: Mon, 08 Feb 2021 14:44:30 GMT

Server: gws

X-XSS-Protection: 0

X-Frame-Options: SAMEORIGIN

Expires: Mon, 08 Feb 2021 14:44:30 GMT

Cache-Control: private

Set-Cookie: 1P\_JAR=2021-02-08-14; expires=Wed, 10-Mar-2021 14:44:30 GMT; path=/; domain=.google.ru; Secure; SameSite=none

X-Cache: MISS from proxy-10

X-Cache-Lookup: MISS from proxy-10:3128

Via: 1.1 proxy-10 (squid/4.6)

Connection: keep-alive

Отличающиеся заголовки: Content-Length, Location.

Задание 5

[http://i-ts.sirius-systems.ru/req.shtml?param1=val1&param2=val2#loc](http://i-ts.sirius-systems.ru/req.shtml?param1=val1&param2=val2" \l "loc)

здесь

URI: [http://i-ts.sirius-systems.ru/req.shtml?param1=val1&param2=val2#loc](http://i-ts.sirius-systems.ru/req.shtml?param1=val1&param2=val2" \l "loc)

URL: [http://i-ts.sirius-systems.ru/req.shtml?param1=val1&param2=val2#loc](http://i-ts.sirius-systems.ru/req.shtml?param1=val1&param2=val2" \l "loc)

URN:

Query string: ?[param1=val1&param2=val2](http://i-ts.sirius-systems.ru/req.shtml?param1=val1&param2=val2" \l "loc)

Fragment: #[loc](http://i-ts.sirius-systems.ru/req.shtml?param1=val1&param2=val2" \l "loc)

Задание 6

1) curl -i -v -X GET "http://i-ts.sirius-systems.ru/req.shtml?param1=val1&param2=val2"

Trying 194.12.56.4:80...

\* TCP\_NODELAY set

\* Connected to i-ts.sirius-systems.ru (194.12.56.4) port 80 (#0)

> GET /req.shtml?param1=val1&param2=val2 HTTP/1.1

> Host: i-ts.sirius-systems.ru

> User-Agent: curl/7.68.0

> Accept: \*/\*

\* Mark bundle as not supporting multiuse

HTTP/1.1 200 OK

Server: nginx

Date: Wed, 17 Feb 2021 18:18:10 GMT

Content-Type: text/html; charset=utf-8

Transfer-Encoding: chunked

Connection: keep-alive

2) curl -i -v -X POST -d "aram1=val1&param2=val2" "http://i-ts.sirius-systems.ru/req.shtml"

Trying 194.12.56.4:80...

\* TCP\_NODELAY set

\* Connected to i-ts.sirius-systems.ru (194.12.56.4) port 80 (#0)

> POST /req.shtml?param1=val1&param2=val2 HTTP/1.1

> Host: i-ts.sirius-systems.ru

> User-Agent: curl/7.68.0

> Accept: \*/\*

\* Mark bundle as not supporting multiuse

HTTP/1.1 405 Not Allowed

Server: nginx

Date: Wed, 17 Feb 2021 18:18:47 GMT

Content-Type: text/html; charset=utf-8

Transfer-Encoding: chunked

Connection: keep-alive

Вывод: GET-запрос может быть использован, а POST-запрос к данной странице запрещен.

Задание 8

Браузер выполнил 3 запроса:

1) получение содержимого страницы;

2) загрузка картинки по ссылке в html-документе, она встречается несколько раз, но загружается лишь один.

3) загрузка иконки страницы — error 404

Задание 9

3 картинки из 11 загрузились.

Для запросов на 8 картинок был отправлен ответ с 429 ошибкой, которая говорит о слишком большом количестве запросос в один момент, что может говорить о ddos-атаке.