

Ejercicio Protocolos de Comunicación

Estructura:

- Clase Main
 - Socket a la Web de la Universidad
 - Seguir protocolo para obtener el index de la web
 - Mandamos mensaje de petición a la web de la universidad:
 - Primera línea:
 - Cabecera:
 - CRLF
 - Entity Body:

Para mayor facilidad la clase se implementará como un Hilo

Obtener cabecera

Para obtener la cabecera usamos firefox en modo para desarrolladores, vamos a la pestaña de red y seleccionamos la URL de la Web en cuestión:

The screenshot shows the Firefox Developer Tools interface. The top part displays the UCAM website. The bottom part shows the Network tab with a list of requests. The selected request is a GET request to https://www.ucam.edu. The Headers panel on the right shows the request headers for this request.

Estado	Método	Dominio	Archivo	Iniciador	Tipo	Transferido	Tamaño
301	GET	ucam.edu	/	document	html	38,06 KB	186,52 KB
200	GET	www.ucam.edu	/	document	html	38,95 KB	186,52 KB
200	GET	www.ucam.edu	css_lfuz2hPigECfBzJrdtJSTbN2BjPpeubQqjwebQ.css	stylesheet	css	1,21 KB	2,49 KB
200	GET	www.ucam.edu	css_EhWVlPjme9311fOGwaptfGSAI.b3ggo5ro5FFk.css	stylesheet	css	1,63 KB	3,91 KB
200	GET	www.ucam.edu	css_Zh86CDCFOjpmenpmnWlBaDvJ_3iD2fDnq49z2GGA.css	stylesheet	css	10,73 KB	63,19 KB
200	GET	www.ucam.edu	css_uk_tgphIHJdUNh7v-DiEnY55X8uafdfteRkdmocCEa.css	stylesheet	css	22,50 KB	125,18 KB
200	GET	www.ucam.edu	bandera-es.svg	img	svg	961 B	588 B
200	GET	www.ucam.edu	bandera-en.svg	img	svg	1,36 KB	5,15 KB
200	GET	www.ucam.edu	bandera-zh.svg	img	svg	1,21 KB	2,65 KB
200	GET	www.ucam.edu	bandera-it.svg	img	svg	1,06 KB	2,45 KB
200	GET	www.ucam.edu	lidera-tu-futuro_desktop-ru.webp	imageset	webp	77,27 KB	76,90 KB
200	GET	www.ucam.edu	formacion-previa_desktop-ru.webp	webp	webp	78,37 KB	77,99 KB
200	GET	www.ucam.edu	visita-guida_desktop-ru.webp	imageset	webp	59,87 KB	59,49 KB
200	GET	www.ucam.edu	js_gRMBf8j3syW4QD4bR3hOmX9G45Wgynxk7pg8t4L.js	script	js	105,85 KB	355,65 KB
200	GET	www.ucam.edu	section-busador-estudios.js?2rq93	script	js	1,60 KB	4,32 KB
200	GET	www.ucam.edu	section-card-carousel.js?2rq93	script	js	853 B	1,29 KB
200	GET	www.ucam.edu	section-carousel.js?2rq93	script	js	1,38 KB	994 B
200	GET	www.ucam.edu	section-stories.js?2rq93	script	js	2,69 KB	7,77 KB
200	GET	www.ucam.edu	js_s0--0vazUau0jPHhQzDUNGNv8T7f-U9Q2C7Gc4hQ.js	script	js	1,25 KB	2,12 KB
200	GET	www.ucam.edu	section-carousel-feature.js?2rq93	script	js	1,26 KB	2,27 KB
200	GET	www.ucam.edu	section-our-number.js?2rq93	script	js	1,45 KB	1,07 KB
200	GET	www.ucam.edu	js_7JBDVfEdhdyZEmVZU0hTKOYpp_E_oFgRlZKw_RTE0M.js	script	js	719 B	599 B
200	GET	www.ucam.edu	di-modal.js?2rq93	script	js	1,28 KB	2,47 KB
200	GET	www.ucam.edu	js_0C8ZmRz3h09gTfHtITMBRIZh26u0nif0jagp9.js	script	js	1,30 KB	2,44 KB
200	GET	www.ucam.edu	ds-off-canvas.js?2rq93	script	js	1,47 KB	3,06 KB
200	GET	www.ucam.edu	ds-dropdown.js?2rq93	script	js	990 B	1,53 KB

The Headers panel for the selected request shows the following headers:

- Cache-control: no-cache
- Content-encoding: gzip
- Content-language: es
- Content-type: text/html; charset=UTF-8
- Date: Thu, 19 Oct 2023 09:19:38 GMT
- Expires: Thu, 01 Jan 1970 00:00:01 GMT
- Server: nginx
- Vary: Accept-Encoding
- X-content-type-options: nosniff
- X-frame-options: SAMEORIGIN
- X-micro-cache: HIT
- X-ua-compatible: IE=edge

The request headers section shows:

- Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
- Accept-Encoding: gzip, deflate, br
- Accept-Language: es-ES;q=0.8,en-US;q=0.5,en;q=0.3
- Connection: keep-alive
- Host: www.ucam.edu
- Sec-Fetch-Dest: document
- Sec-Fetch-Mode: navigate
- Sec-Fetch-Site: none

Tras eso le damos Sin Procesar y podremos ver el mensaje de petición:

1,63 KB	3,91 KB
10,73 KB	63,19 KB
22,50 KB	125,18 KB
961 B	588 B
1,36 KB	5,15 KB
1,21 KB	2,65 KB
1,06 KB	2,45 KB
77,27 KB	76,90 KB
78,37 KB	77,99 KB
59,87 KB	59,49 KB
105,85 KB	355,65 KB
1,60 KB	4,32 KB
853 B	29 KB
1,38 KB	95,73 KB
2,68 KB	7,77 KB
1,25 KB	2,12 KB
1,26 KB	2,27 KB
1,45 KB	1,07 KB
719 B	599 B
1,28 KB	2,47 KB
1,30 KB	2,44 KB
1,47 KB	3,06 KB
990 B	1,53 KB

Version: HTTP/2
Transferido: 38,95 KB (tamaño 186,52 KB)
Prioridad de la solicitud: Highest
Resolución DNS: Sistema

▼ Cabeceras de la respuesta (369 B) Sin procesar

- cache-control: no-cache
- content-encoding: gzip
- content-language: es
- content-type: text/html; charset=UTF-8
- date: Thu, 19 Oct 2023 09:19:38 GMT**
- expires: Thu, 01 Jan 1970 00:00:01 GMT
- server: nginx
- vary: Accept-Encoding
- x-content-type-options: nosniff
- X-Firefox-Spdy: h2
- x-frame-options: SAMEORIGIN
- x-micro-cache: HIT
- x-ua-compatible: IE=edge

▼ Cabeceras de la petición (465 B) Sin procesar

GET / HTTP/2
Host: www.ucam.edu
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:109.0) Gecko/20100101 Firefox/
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/
Accept-Language: es-ES,es;q=0.8,en-US;q=0.5,en;q=0.3
Accept-Encoding: gzip, deflate, br
Connection: keep-alive
Upgrade-Insecure-Requests: 1
Sec-Fetch-Dest: document
Sec-Fetch-Mode: navigate
Sec-Fetch-Site: none
Sec-Fetch-User: ?1

Implementación

PeticionUniversidad.java

```
package protocolos;

import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;
import java.io.OutputStreamWriter;
import java.io.PrintWriter;
import java.net.Socket;

public class PeticionUniversidad extends Thread{

    private BufferedReader br = null;

    public PeticionUniversidad(BufferedReader br) { //Constructor de
lcase
        this.br = br;
    }

    public void run() { //Acción a realizar por el thread
        String linea = "";
        try {
            while((linea = br.readLine())!=null) {
```

```
        System.out.println(linea);
    }
} catch (IOException e) {
    System.out.println("Error de salida");
    e.printStackTrace();
}
}

public static void main(String[] args) {

    try {
        Socket socket = new Socket("www.ucam.edu", 80
); //conectamos con un socket a la web
        System.out.println("[OK]");

        //Implementamos buffers:
        BufferedReader br = new BufferedReader(new
InputStreamReader(socket.getInputStream()));
        PrintWriter pw = new PrintWriter(new
OutputStreamWriter(socket.getOutputStream()));

        PeticionUniversidad cliente = new
PeticionUniversidad(br); //Instanciamos la clase
        cliente.start(); //Iniciamos el Thread

        //A continuación implementamos el mensaje de solicitud:
        pw.println("GET / HTTP/1.1"); pw.flush();
        pw.println("Host: www.ucam.edu"); pw.flush();
        pw.println("Connection: close"); pw.flush();
        pw.println(); pw.flush();

        //Nos va a devolver un Error 301

    } catch (IOException e) {
        System.out.println("Error en el Main");
        e.printStackTrace();
    }
}
}
```

Salida que Obtendremos

```
in
24
ai
Problems Javadoc Declaration Console Coverage
<terminated> PeticionUniversidad [Java Application] C:\Users\thejuanvisu\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.f
[OK]
HTTP/1.1 301 Moved Permanently
Server: nginx
Date: Thu, 19 Oct 2023 09:50:13 GMT
Content-Type: text/html
Content-Length: 162
Connection: close
Location: https://www.ucam.edu/
X-XSS-Protection: 1; mode=block
X-Content-Options: nosniff

<html>
<head><title>301 Moved Permanently</title></head>
<body>
<center><h1>301 Moved Permanently</h1></center>
<hr><center>nginx</center>
</body>
</html>
```

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