Assignment 1: Web Catalog Server

In this assignment, you will make a catalog of furniture, consisting of an index page and a details page. When clicking on one of the pictures on the index page, you will be transferred to the item's details page. The pages and its contents will be provided, and your task is to create a small Web server that will serve these pages upon request.

When you open one of the pages, the server has to set a cookie with the value of your student number in the http response message. Everytime you access the same server again, your browser reads in the cookie's value to be included in messages directed to the server. Your web server spits out relevant log messages in the console. (see screenshots below)

To start the server, just run the Java program as you normally would. (for Eclipse, this is the green start button)

Rules:

- You are to use Java for this assignment
- Interactions between the client and server is to be done using the HTTP protocol
- For network traffic, you are to use the "com.sun.net" packages
- For cookie handling, you are to use the "java.net.HttpCookie" packages
- When handing in the assignment, you have to provide a design document that describes your work. (if this is missing, you receive a 50% penalty)

Notes:

- The HTML pages will be provided to you.
- Use localhost:8080 as your port for the Webserver to make it easier for us to check.
- For ease of checking your work, make a log statement in your Java code every time something happens with the cookies (see cookie screenshots) and when a web page is requested.
- The furniture.json file shows all the details you need to describe the furniture, you do not have to dynamically load this data but you may copy the detail pages for each furniture object with the correct data (ex: chairDetails.html, tableDetails.html)
- If you want to earn extra points, instead of copying the json data by hand, you may use a JSON package to insert the data in the JSON files in the HTML programmatically.
- We have provided the base64 version of the images to make it easier to send the image data through the HTTP requests. Note that this is not usually done this way. But to reduce the scope of the assignment, we opted for this solution.
- Part of the code made in this assignment will be reused in the next assignment.

Grading criteria:

Grading will be done by opening the index page in the **Chrome** web browser, and visiting the three detail pages, checking the cookies along the way. If this works correctly we will check the code to see if the given rules have been followed.

- The application works as described
- The correct packages were used
- Cookies are implemented as described
- The design document is comprehensive

Submission:

Submit your program code package(Assignment1_code_이름_학번) and design document (Assigment1_이름_학번) in LMS. (Korean/English)

Deadline: **3rd of November (11 월 3 일) 23:59**

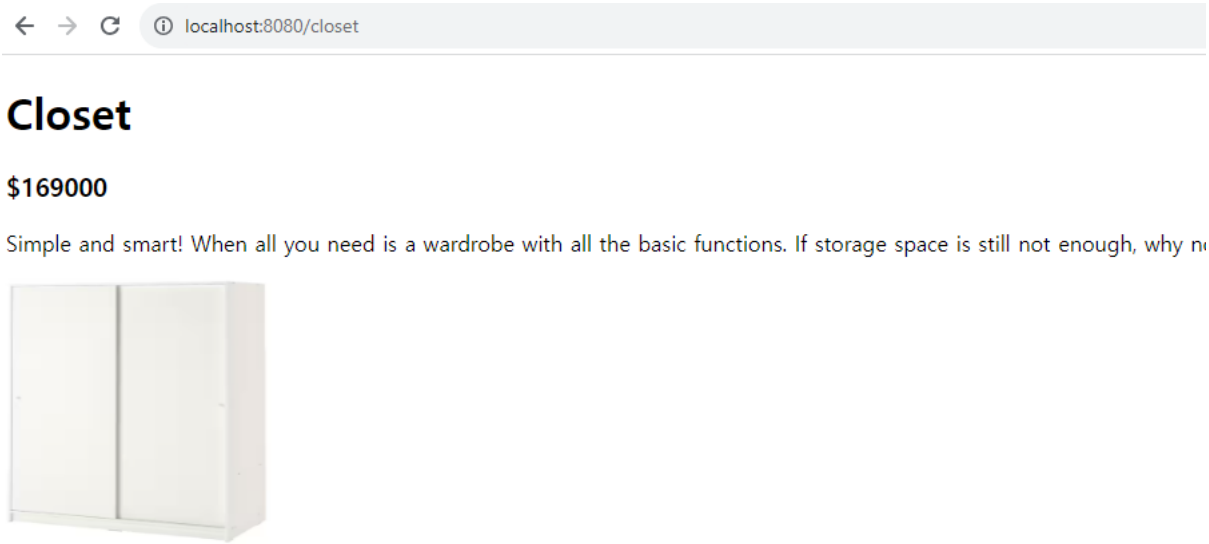
Late penalties:

Up to 24 hours = -25%,
24-48 hours = -50%,
48-72 hours = -75%
After 72 Hours you get an automatic 0.

Example screenshots:

Homepage:

Closet detail page:



Cookies:

Below are the results where your Server issues a cookie value “StudentNumber=20022222” to a newly arriving client.

Console, new user

```
Listening on port: 8080
Index page requested
New user requested page, cookie will be set.
```

Console, returning user

```
Listening on port: 8080
Index page requested
Returning user, welcome 20022222
```

Cookie set in chrome browser (f12->application->cookies)