4.3 Display the contents of home page with date, content type, and Expiration date. Last modified and length of the home page.

AIM:

To write a servlet program to Display the contents of home page with date, content type, and Expiration date. Last modified and length of the home page.

ALGORITHM:

1. Start

2. Define the target URL for which homepage content and metadata are to be fetched. Example: "http://www.gmail.com"

3. Create a URL object to connect to the target URL.

4. Open a URL connection (URLConnection) to access HTTP headers and content.

5. Retrieve metadata from the connection:

   - Date of the page (getDate())

   - Expiration date (getExpiration())

   - Last Modified date (getLastModified())

   - Content Length (getContentLength())

   - Content Type (getContentType())

6. Format the retrieved dates to a readable string format using SimpleDateFormat.

7. Set the servlet response content type to "text/html".

8. Write HTML output to the response to display metadata:

   - Display Date, or "Not available" if missing.

   - Display Content Type.

   - Display Expiration Date, or "Not available" if missing.

   - Display Last Modified Date, or "Not available" if missing.

   - Display Content Length in bytes.

9. Read the homepage content line by line from the connection input stream using BufferedReader.

10. Write each line of homepage content to the servlet response output.

11. Close the input stream (BufferedReader) after reading all content.

12. Close HTML tags in the response.

13. End

Downloaddata.java

```java
import java.io.BufferedReader;

import java.io.IOException;

import java.io.InputStreamReader;

import java.net.URL;

import java.net.URLConnection;

import java.text.SimpleDateFormat;

import java.util.Date;

import jakarta.servlet.ServletException;

import jakarta.servlet.http.HttpServlet;

import jakarta.servlet.http.HttpServletRequest;

import jakarta.servlet.http.HttpServletResponse;


public class Downloaddata extends HttpServlet {
    protected void doGet(HttpServletRequest request, HttpServletResponse response)
            throws ServletException, IOException {
        String targetUrl = "http://www.gmail.com";

        URL url = new URL(targetUrl);
        URLConnection connection = url.openConnection();

        // Get metadata
        long dateMillis = connection.getDate();
        long expirationMillis = connection.getExpiration();
        long lastModifiedMillis = connection.getLastModified();
        int contentLength = connection.getContentLength();
        String contentType = connection.getContentType();

        SimpleDateFormat sdf = new SimpleDateFormat("EEE, d MMM yyyy HH:mm:ss Z");
```

```java
response.setContentType("text/html");
var out = response.getWriter();

// Print metadata
out.println("<html><head><title>Homepage with Metadata</title></head><body>");
out.println("<h2>Metadata of homepage: " + targetUrl + "</h2>");
if (dateMillis != 0)
    out.println("<b>Date:</b> " + sdf.format(new Date(dateMillis)) + "<br>");
else
    out.println("<b>Date:</b> Not available<br>");


out.println("<b>Content Type:</b> " + contentType + "<br>");
if (expirationMillis != 0)
    out.println("<b>Expiration Date:</b> " + sdf.format(new Date(expirationMillis)) + "<br>");
else
    out.println("<b>Expiration Date:</b> Not available<br>");


if (lastModifiedMillis != 0)
    out.println("<b>Last Modified:</b> " + sdf.format(new Date(lastModifiedMillis)) + "<br>");
else
    out.println("<b>Last Modified:</b> Not available<br>");


out.println("<b>Content Length:</b> " + contentLength + " bytes<br><hr>");


// Print homepage content
BufferedReader reader = new BufferedReader(new InputStreamReader(connection.getInputStream()));
String line;
```

```java
      while ((line = reader.readLine()) != null) {

         out.println(line);

      }

      reader.close();


      out.println("</body></html>");

   }

}
```

Web.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
                  http://xmlns.jcp.org/xml/ns/javaee/web-app_4_0.xsd"
      version="4.0">
  <servlet>
   <servlet-name>Downloaddata</servlet-name>
   <servlet-class>Downloaddata</servlet-class>
  </servlet>
  <servlet-mapping>
   <servlet-name>Downloaddata</servlet-name>
   <url-pattern>/Downloaddata</url-pattern>
  </servlet-mapping>
</web-app>
```
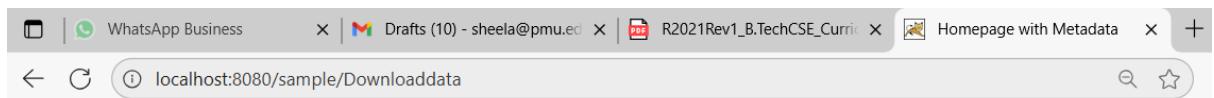
OUTPUT

Metadata of homepage: http://www.gmail.com

Date: Wed, 22 Oct 2025 16:05:08 +0530
Content Type: text/html; charset=UTF-8
Expiration Date: Wed, 22 Oct 2025 16:35:08 +0530
Last Modified: Not available
Content Length: 230 bytes

301 Moved

The document has moved here.