

Task 4: Java Networking

Write a simple HTTP client that connects to a URL, sends a request, and displays the response headers and body.

```
package test;

import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;
import java.net.HttpURLConnection;
import java.net.URL;

public class SimpleHTTPClient {

    public static void main(String[] args) {

        String urlString="https://jsonplaceholder.typicode.com/posts/1";

        try {

            URL url=new URL(urlString);

            HttpURLConnection connection=(HttpURLConnection) url.openConnection();

            connection.setRequestMethod("GET");

            int responseCode=connection.getResponseCode();

            System.out.println("Response Code: "+responseCode);

            System.out.println("Response Headers:");

            connection.getHeaderFields().forEach((key, value)->{

                if (key != null) {

                    System.out.println(key+": "+value);

                }

            });

            System.out.println("Response Body:");

            BufferedReader reader=new BufferedReader(new
            InputStreamReader(connection.getInputStream()));

            String line;

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

                System.out.println(line);

            }

        } catch (IOException e) {

            e.printStackTrace();

        }

    }

}
```

```
    }  
    reader.close();  
    connection.disconnect();  
} catch (IOException e) {  
    e.printStackTrace();  
}  
}  
}
```