

How to send HTTP request GET/POST in Java

By [mkyong](#) | May 25, 2013 | Viewed : 2,154,805 | +6,947 pv/w



In this article, we will show you two examples to make HTTP GET/POST request via following APIs

1. Standard HttpURLConnection.
2. Apache HttpClient library.

1. Java HttpURLConnection example

This example uses HttpURLConnection (http) and HttpsURLConnection (https) to

1. Send an HTTP GET request to Google.com to get the search result.
2. Send an HTTP POST request to Apple.com search form to check the product detail.

HttpURLConnectionExample.java

```
package com.mkyong;

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

import javax.net.ssl.HttpsURLConnection;

public class HttpURLConnectionExample {

    private final String USER_AGENT = "Mozilla/5.0";

    public static void main(String[] args) throws Exception {

        HttpURLConnectionExample http = new HttpURLConnectionExample();

        System.out.println("Testing 1 - Send Http GET request");
        http.sendGet();

        System.out.println("\nTesting 2 - Send Http POST request");
        http.sendPost();

    }

    // HTTP GET request
    private void sendGet() throws Exception {

        String url = "http://www.google.com/search?q=mkyong";

        URL obj = new URL(url);
        HttpURLConnection con = (HttpURLConnection) obj.openConnection();

        // optional default is GET
        con.setRequestMethod("GET");

        //add request header
        con.setRequestProperty("User-Agent", USER_AGENT);

        int responseCode = con.getResponseCode();
        System.out.println("\nSending 'GET' request to URL : " + url);
        System.out.println("Response Code : " + responseCode);

        BufferedReader in = new BufferedReader(
            new InputStreamReader(con.getInputStream()));
        String inputLine;
        StringBuffer response = new StringBuffer();

        while ((inputLine = in.readLine()) != null) {
            response.append(inputLine);
        }
        in.close();

        //print result
        System.out.println(response.toString());

    }

    // HTTP POST request
    private void sendPost() throws Exception {

        String url = "https://selfsolve.apple.com/wcResults.do";
        URL obj = new URL(url);
        HttpsURLConnection con = (HttpsURLConnection) obj.openConnection();

        //add request header
        con.setRequestMethod("POST");
        con.setRequestProperty("User-Agent", USER_AGENT);
        con.setRequestProperty("Accept-Language", "en-US,en;q=0.5");
```

```
String urlParameters = "sn=C02G8416DRJM&cn=&locale=&caller=&num=12345";

// Send post request
con.setDoOutput(true);
DataOutputStream wr = new DataOutputStream(con.getOutputStream());
wr.writeBytes(urlParameters);
wr.flush();
wr.close();

int responseCode = con.getResponseCode();
System.out.println("\nSending 'POST' request to URL : " + url);
System.out.println("Post parameters : " + urlParameters);
System.out.println("Response Code : " + responseCode);

BufferedReader in = new BufferedReader(
    new InputStreamReader(con.getInputStream()));
String inputLine;
StringBuffer response = new StringBuffer();

while ((inputLine = in.readLine()) != null) {
    response.append(inputLine);
}
in.close();

//print result
System.out.println(response.toString());

}

}
```

Output

```
Sending 'GET' request to URL : http://www.google.com/search?q=mkyong
Response Code : 200
Google search result...

Testing 2 - Send Http POST request

Sending 'POST' request to URL : https://selfsolve.apple.com/wcResults.do
Post parameters : sn=C02G8416DRJM&cn=&locale=&caller=&num=12345
Response Code : 200
Apple product detail...
```

2. Apache HttpClient

This is the equivalent example, but using Apache `HttpClient` to make HTTP GET/POST request.

```
HttpClientExample.java
```

```
package com.mkyong;

import java.io.BufferedReader;
import java.io.InputStreamReader;
import java.util.ArrayList;
import java.util.List;

import org.apache.http.HttpResponse;
import org.apache.http.NameValuePair;
import org.apache.http.client.HttpClient;
import org.apache.http.client.entity.UrlEncodedFormEntity;
import org.apache.http.client.methods.HttpGet;
import org.apache.http.client.methods.HttpPost;
import org.apache.http.impl.client.DefaultHttpClient;
import org.apache.http.message.BasicNameValuePair;

public class HttpClientExample {

    private final String USER_AGENT = "Mozilla/5.0";

    public static void main(String[] args) throws Exception {

        HttpClientExample http = new HttpClientExample();

        System.out.println("Testing 1 - Send Http GET request");
        http.sendGet();

        System.out.println("\nTesting 2 - Send Http POST request");
        http.sendPost();

    }

    // HTTP GET request
    private void sendGet() throws Exception {

        String url = "http://www.google.com/search?q=developer";

        HttpClient client = new DefaultHttpClient();
        HttpGet request = new HttpGet(url);

        // add request header
        request.addHeader("User-Agent", USER_AGENT);

        HttpResponse response = client.execute(request);

        System.out.println("\nSending 'GET' request to URL : " + url);
        System.out.println("Response Code : " +
            response.getStatusLine().getStatusCode());

        BufferedReader rd = new BufferedReader(
            new InputStreamReader(response.getEntity().getContent()));

        StringBuffer result = new StringBuffer();
        String line = "";
        while ((line = rd.readLine()) != null) {
            result.append(line);
        }

        System.out.println(result.toString());

    }

    // HTTP POST request
    private void sendPost() throws Exception {

        String url = "https://selfsolve.apple.com/wcResults.do";

        HttpClient client = new DefaultHttpClient();
        HttpPost post = new HttpPost(url);

        // add header
```

```
post.setHeader("User-Agent", USER_AGENT);

List<NameValuePair> urlParameters = new ArrayList<NameValuePair>();
urlParameters.add(new BasicNameValuePair("sn", "C02G8416DRJM"));
urlParameters.add(new BasicNameValuePair("cn", ""));
urlParameters.add(new BasicNameValuePair("locale", ""));
urlParameters.add(new BasicNameValuePair("caller", ""));
urlParameters.add(new BasicNameValuePair("num", "12345"));

post.setEntity(new UrlEncodedFormEntity(urlParameters));

HttpResponse response = client.execute(post);
System.out.println("\nSending 'POST' request to URL : " + url);
System.out.println("Post parameters : " + post.getEntity());
System.out.println("Response Code : " +
    response.getStatusLine().getStatusCode());

BufferedReader rd = new BufferedReader(
    new InputStreamReader(response.getEntity().getContent()));

StringBuffer result = new StringBuffer();
String line = "";
while ((line = rd.readLine()) != null) {
    result.append(line);
}

System.out.println(result.toString());
}
}
```

References

1. [Apache HttpClient](#)
2. [Apache HttpClient examples](#)
3. [Automate login a website with Java HttpURLConnection](#)

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mkyong

Founder of [Mkyong.com](#), love Java and open source stuff. Follow him on [Twitter](#). If you like my tutorials, consider make a donation to [these charities](#).

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IchHabsDrauf


I just copied the post method u’ve created and wanted to use it somewhere the same way as you did. It is just like your class but without the get() thing

when I run it on one site of mine i get:

java.lang.ClassCastException: sun.net.www.protocol.http.HttpURLConnection cannot be cast to javax.net.ssl.HttpsURLConnection
at tests.web.POSTRequestTest.sendPost(POSTRequestTest.java:32)
at tests.web.POSTRequestTest.main(POSTRequestTest.java:18)

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sweli

you have change the HttpsURLConnection to HttpURLConnection

+ 0 –

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could you also tell how to sen request body for a port call

+ 10 –

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Samir


Hi ,
After implementation i got below security related bug.

The call to HttpHost() (in my class on line 113)uses an unencrypted protocol instead of an encrypted protocol to communicate with the server.

code:
private HttpHost getHttpProxy(String proxyHost,int proxyPort) {
return new HttpHost(proxyHost, proxyPort);
}
so how can i encrypt it?

+ 6 –

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- 

Daniel

Maybe consider using a StringBuilder instead of the StringBuffer?

+ 5 –

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ahemad

how to post a JSON data to server(tomcat7) using POSTmethod

+ 5 –

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leonskb4

replace the next lines

List urlParameters = new ArrayList();
urlParameters.add(new BasicNameValuePair("sn", "C02G8416DRJM"));
urlParameters.add(new BasicNameValuePair("cn", ""));
urlParameters.add(new BasicNameValuePair("locale", ""));
urlParameters.add(new BasicNameValuePair("caller", ""));
urlParameters.add(new BasicNameValuePair("num", "12345"));

post.setEntity(new UrlEncodedFormEntity(urlParameters));


with

post.setEntity(new StringEntity("{\"sn\":\"C02G8416DRJM\"}",ContentType.create("application/json")));

+ 8 -

Reply

🕒 1 year ago



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Martin

Thank for Sharing this post with us. Very Helpfull and usefull Information. Hope you keep it up in future also by providing informative post.This Post is very much handy.Best of Luck & Cheers.
Thank You

+ 2 -

Reply

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Guest

RahulS

very helpfull Thanks !!

+ 1 -

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Nicolas Caballero

Hi, i am getting this exception when i try to open connection

Info: javax.net.ssl.SSLHandshakeException: sun.security.validator.ValidatorException: PKIX path building failed:
sun.security.provider.certpath.SunCertPathBuilderException: unable to find valid certification path to requested target

I can not understand why open this connection requires a certificate. This is related with the agent used (mozilla)?

+ 0 -

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sandeep

If you are using https instead of http you will get this type of validation error

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🕒 27 days ago



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kevin

nice website

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Yanko

how about 3. Using Java Socket?

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Sandeep Shukla

Hi,
I have a java standalone server which listen the request and then I open a socket connection. My requirement is, how can I know weather java client is using http or https protocol in my server programe.

+ 0 -

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Guest

Luc

What means this line of code?
String urlParameters = "sn=C02G8416DRJM&cn=&locale=&caller=&num=12345";

+ 0 -

Reply

🕒 2 years ago



Guest

David

Thank You for giving us idea about how to send HTTP request GET/POST in Java.
Thank You Very Much For Sharing Your Knowledge with US.Now a Day No Body Do what you did.We are really blessed with this types of informatic Posting. Hope you continue this in Future.Keep us updated with this this types of blogs.Best of Luck & Cheers.
Thanks David

+ 0 -

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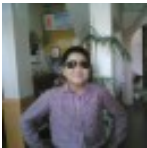
Robert Lecomte

very helpfull Thanks !!

+ 0 -

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John

Thank you very very much <3

+ 0 -

Reply

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Guest

Yonko

I dont understand the method for the http connection example could someone please explain it using an example . you know one with an actual url and parameters and api call

+ 0 -

Reply

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Guest

Paul

Hi,
Thank you for these useful examples!

When I used the Java Post example, I've encountered some issues when sending content than contains non English characters.

Investigating it showed that the cause is the usage of `DataOutputStream.writeBytes()`. From this class documentation: "Each character in the string is written out, in sequence, by discarding its high eight bits."

The solution is to use:

```
Writer out = new BufferedWriter(new OutputStreamWriter(con.getOutputStream()));  
out.write(urlParameters);
```

+ 0 -

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Guest

Jesus David Sanchez Suarez

Hi all
The example with `HttpURLConnection` does not work, I have been looking for a solution but I have not found my error is this:
`java.net.ConnectException: Connection refused: connect...`
The server is active, port 8000 is active, it is in a local environment

+ 0 -

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Guest

Nilupul Nuwan

this perfectly working. but when i use java Swing i can't pass the parameters to urlParameters from `textField`.

CODE:

```
String urlParameters = "NAME="+textField_name.getText()+"&address="+textField_add.getText();
```


Post parameters :NAME=&address=

so can you solved this problem

🕒 2 years ago



"unable to find valid certification path to requested target"

🕒 2 years ago



This error is not a problem with the code sample given above but it means that the server that you are attempting to connect to is secured with a certificate. You will need to add that servers certificate to your local keystore.

🕒 2 years ago



Really Awesome! Thank you so much Really helped!

🕒 2 years ago



yeah thanks mkyong can already
for those cannot just change this line
`HttpClientExample http = new HttpClientExample();`

🕒 3 years ago



```

HI mkyong why i have this error ?
////////////////////////////////////
Exception in thread "main" java.lang.RuntimeException: Uncompilable source code – cannot find symbol
symbol: class HttpURLConnectionExample
location: class lab1.Lab1
at lab1.Lab1.main(Lab1.java:27)
Java Result: 1
BUILD SUCCESSFUL (total time: 2 seconds)
////////////////////////////////////

```

🕒 3 years ago



learn how to write java programs first maybe

⌚ 2 years ago



Can you describe not how to send but how to receive POST or GET request? I would like to receive POST for example, but without using servlets. I would rather use JQuery and send POST to .jar file. Can it be done?

⌚ 3 years ago



publishing the article is ok. how come the same work for you and not for others.



Dave

Does mkyong ever respond to questions or posts..?

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🕒 3 years ago



Madhuri Kalshetty

URLConnection is synchronous or asynchronous

Guest

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🕒 3 years ago



SVK PETO

You have forgotten to write version of Apache HttpClient. Your code is @deprecated for version 4.5.1.

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keshav

i am getting connection time out error.....and javax.net.ssl.SSLHandshakeException: sun.security.validator.ValidatorException

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keshav

provide the solution

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