

## Intro

# Survey on Code Examples

Dear participant,

Our research group is investigating the usefulness of code examples in understanding the usage of APIs.

We would be grateful if you could spend a few minutes of your time to answer the following survey, which consist of two parts:

1. A questionnaire about your background.
2. A short evaluation of ten code examples showing the usage of ten methods of an API (i.e., one code example per method).

The survey will take less than 10 minutes to complete, and your participation is anonymous and voluntary. If you have any question, do not hesitate to contact Laura Moreno via email at [lmorenoc@utdallas.edu](mailto:lmorenoc@utdallas.edu).

Thanks for your help.

## Background Information

### Background Information

Please, answer the following questions according to your experience in software development.

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1. For how many years have you developed software?

1 ▼

2. Do you have any industrial experience as software developer?

- ☐ Yes
- ☐ No

For how many years?

 ▼

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3. How often do you make use of third party libraries in your software projects?

- ☐ Never
- ☐ Rarely - I use third party libraries in less than 33% of my projects
- ☐ Occasionally - I use third party libraries in more than 33% but less than 66% of my projects
- ☐ Frequently - I use third party libraries in more than 66% of my projects

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4. How often do you use code examples found on the Internet to check how to use the API of a library?

- ☐ Never
- ☐ Rarely - I use code examples for less than 33% of the APIs I use
- ☐ Occasionally - I use code examples for more than 33% but less than 66% of the APIs I use
- ☐ Frequently - I use code examples for more than 66% of the APIs I use

## Code Examples for Apache Xerces

## Code Examples for Apache HttpClient

The next questions refer to code examples showing the usage of some methods of the [Apache HttpClient](#) API.

1. Have you contributed to the implementation of the [Apache HttpClient](#) project?

- ☐ Yes
- ☐ No

## Code Examples for Apache HttpClient

2. The next code snippet exemplifies the usage of the method:

```
org.apache.http.impl.auth.AuthSchemeBase.authenticate(  
    org.apache.http.auth.Credentials,org.apache.http.HttpRequest,  
    org.apache.http.protocol.HttpContext)
```

### Example

```
1 private String user;  
2 private String password;  
3 private String url="https://rest.interfax.net/outbound/faxes?faxNumber=  
4 private String to;  
5 private HttpContext localContext;  
6 UsernamePasswordCredentials creds=new UsernamePasswordCredentials(this.  
7 HttpPost post=new HttpPost(url + to);  
8 new BasicScheme().authenticate(creds,post,localContext);
```

Considering this code example, answer the following questions:

	Not useful at all	Slightly useful	Useful	Very useful
How useful is the code example (including the comments) in understanding the usage of the aforementioned method?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How useful are the comments describing the arguments of the aforementioned method in understanding its usage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please, justify your answers.

# Code Examples for Apache HttpClient

3. The next code snippet exemplifies the usage of the method:

```
org.apache.http.client.utils.URIUtils.createURI(java.lang.String,
        java.lang.String,int,java.lang.String,java.lang.String,
        java.lang.String)
```

Example

```
01 private final String method;
02 private final List<NameValuePair> parameters;
03 private final URI uri;
04 if ("GET".equalsIgnoreCase(method))
05 {
06     final String query=URLEncodedUtils.format(parameters,"UTF-8");
07     // this.uri.getScheme() -> Scheme name
08     // this.uri.getHost() -> Host name
09     // this.uri.getPort() -> Port number
10     // this.uri.getPath() -> Path
11     // query -> Query
12     // null -> Fragment
13     URIUtils.createURI(this.uri.getScheme(),this.uri.getHost(),this.uri.ge
14                       query,null);
15 }
```

Considering this code example, answer the following questions:

	Not useful at all	Slightly useful	Useful	Very useful
How useful is the code example (including the comments) in understanding the usage of the aforementioned method?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How useful are the comments describing the arguments of the aforementioned method in understanding its usage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please, justify your answers.

# Code Examples for Apache HttpClient

4. The next code snippet exemplifies the usage of the method:

```
org.apache.http.client.HttpClient.execute(org.apache.http.HttpHost,  
org.apache.http.HttpRequest)
```

Example

```
1 private final org.apache.http.client.HttpClient client;  
2 HttpRequestBase request;  
3 // (HttpHost)client.getParams().getParameter(ClientPNames.DEFAULT_HOST)  
4 // request. Implementations may accept <code>null</code> if the  
5 // for example to a default target or by inspecting the request  
6 // request -> the request to execute  
7 client.execute((HttpHost)client.getParams().getParameter(ClientPNames.D
```

Considering this code example, answer the following questions:

	Not useful at all	Slightly useful	Useful	Very useful
How useful is the code example (including the comments) in understanding the usage of the aforementioned method?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How useful are the comments describing the arguments of the aforementioned method in understanding its usage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please, justify your answers.

# Code Examples for Apache HttpClient

5. The next code snippet exemplifies the usage of the method:

```
org.apache.http.client.HttpClient.execute(org.apache.http.client.method
```

Example

```
1 private HttpClient client;  
2 private HttpPost post;
```

```
3 // post -> the request to execute
4 client.execute(post);
```

Considering this code example, answer the following questions:

	Not useful at all	Slightly useful	Useful	Very useful
How useful is the code example (including the comments) in understanding the usage of the aforementioned method?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How useful are the comments describing the arguments of the aforementioned method in understanding its usage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please, justify your answers.

## Code Examples for Apache HttpClient

6. The next code snippet exemplifies the usage of the method:

```
org.apache.http.client.CredentialsProvider.getCredentials(org.apache.ht
```

### Example

```
01 final HttpContext context;
02 AuthState authState=(AuthState)context.getAttribute(ClientContext.TARG
03 CredentialsProvider credsProvider=(CredentialsProvider)context.getAttr
04 HttpHost targetHost=(HttpHost)context.getAttribute(ExecutionContext.HT
05 if(authState.getAuthScheme() == null)
06 {
07 AuthScope authScope=new AuthScope(targetHost.getHostName(),targetHost.
08 // authScope -> the AuthScope authentication scope
09 Credentials creds=credsProvider.getCredentials(authScope);
10 }
```

Considering this code example, answer the following questions:

	Not useful at all	Slightly useful	Useful	Very useful
How useful is the code example (including the comments) in understanding the usage of the aforementioned method?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How useful are the comments describing the arguments of the aforementioned method in understanding its usage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please, justify your answers.

## Code Examples for Apache HttpClient

7. The next code snippet exemplifies the usage of the method:

```
org.apache.http.client.utils.URLEncodedUtils.parse(java.net.URI, java.la
```

### Example

```
1 Event e;  
2 if(e.getAttrs().containsKey(attributeName))  
3 {  
4 String uriString=new String(e.get(attributeName));  
5 URI uri=URI.create(uriString);  
6 // uri -> uri to parse  
7 // defaultCharset().name() -> encoding to use while parsing the query  
8 URLEncodedUtils.parse(uri,defaultCharset().name());  
9 }
```

Considering this code example, answer the following questions:

	Not useful at all	Slightly useful	Useful	Very useful
How useful is the code example (including the comments) in understanding the usage of the aforementioned method?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How useful are the comments describing the arguments of the aforementioned method in understanding its usage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please, justify your answers.

## Code Examples for Apache HttpClient

8. The next code snippet exemplifies the usage of the method:

```
org.apache.http.conn.scheme.SchemeRegistry.register(org.apache.http.con
```

### Example

```
1 ClientConnectionManager conman;  
2 if(conman == null)  
3 {  
4 SchemeRegistry schemeRegistry=new SchemeRegistry();  
5 // configureScheme() -> the scheme to register  
6 schemeRegistry.register(configureScheme());  
7 }
```

Considering this code example, answer the following questions:

	Not useful at all	Slightly useful	Useful	Very useful
How useful is the code example (including the comments) in understanding the usage of the aforementioned method?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How useful are the comments describing the arguments of the aforementioned method in understanding its usage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please, justify your answers.



## Code Examples for Apache HttpClient

9. The next code snippet exemplifies the usage of the method:

```
org.apache.http.conn.scheme.Scheme.Scheme(java.lang.String,  
int,org.apache.http.conn.scheme.SchemeSocketFactory)
```

### Example

```
01 boolean enableSSL=false;  
02 SSLSocketFactory sslSocketFactory;  
03 boolean relaxedSSLSettings=false;  
04 int port=5984;  
05 if(enableSSL)  
06 {  
07     try  
08     {  
09         if(sslSocketFactory == null)  
10         {  
11             SSLContext context=SSLContext.getInstance("TLS");  
12             sslSocketFactory=relaxedSSLSettings ? new SSLSocketFactory(context,  
13                 SSLSocketFactory.ALLOW_ALL_HOSTNAME_VERIFIER) : new SSLSocketF  
14         }  
15         // "https" -> the scheme name, for example "http". The name will be co  
16         // port -> the default port for this scheme  
17         // sslSocketFactory -> the factory for creating sockets for communicat  
18         new Scheme("https",port,sslSocketFactory);  
19     }  
20 }
```

Considering this code example, answer the following questions:

	Not useful at all	Slightly useful	Useful	Very useful
How useful is the code example (including the comments) in understanding the usage of the aforementioned method?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How useful are the comments describing the arguments of the aforementioned method in understanding its usage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please, justify your answers.

# Code Examples for Apache HttpClient

10. The next code snippet exemplifies the usage of the method:

```
org.apache.http.auth.AuthState.setCredentials(org.apache.http.auth.Cred
```

Example

```
01 final HttpContext context;
02 AuthState authState=(AuthState)context.getAttribute(ClientContext.TARG
03 CredentialsProvider credsProvider=(CredentialsProvider)context.getAttr
04 HttpHost targetHost=(HttpHost)context.getAttribute(ExecutionContext.HT
05 if(authState.getAuthScheme() == null)
06 {
07 AuthScope authScope=new AuthScope(targetHost.getHostName(),targetHost.
08 Credentials creds=credsProvider.getCredentials(authScope);
09 if(creds != null)
10 {
11 authState.setAuthScheme(new BasicScheme());
12 // creds -> User credentials
13 authState.setCredentials(creds);
14 }
15 }
```

Considering this code example, answer the following questions:

	Not useful at all	Slightly useful	Useful	Very useful
How useful is the code example (including the comments) in understanding the usage of the aforementioned method?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How useful are the comments describing the arguments of the aforementioned method in understanding its usage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please, justify your answers.

11. The next code snippet exemplifies the usage of the method:

```
org.apache.http.client.CredentialsProvider.setCredentials(org.apache.ht
org.apache.http.auth.Credentials)
```

Example

```
01 String host="localhost";
02 int port=5984;
03 String username;
04 String password;
05 HttpParams params=new BasicHttpParams();
06 DefaultHttpClient client=new DefaultHttpClient(configureConnectionMana
07 // newAuthScope(host,port,AuthScope.ANY_REALM) -> the AuthScope authen
08 // newUsernamePasswordCredentials(username,password) -> the authentica
09 // the given scope.
10 client.getCredentialsProvider().setCredentials(new AuthScope(host,port
11 new UsernamePasswordCredentials(username,password));
```

Considering this code example, answer the following questions:

	Not useful at all	Slightly useful	Useful	Very useful
How useful is the code example (including the comments) in understanding the usage of the aforementioned method?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How useful are the comments describing the arguments of the aforementioned method in understanding its usage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please, justify your answers.

Comments

Comments

1. Do you have any further comments on the code examples presented in this survey?

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2. Your opinion is important to us. Please, share your email address if we can contact you to follow up on any of your responses.