Web Services

Introduction

- The android SDK is shipped with the Apache HttpClient.
- More info about the Apache HttpClient can be found at http://hc.apache.org/httpclient-3.x/.
- The Apache HttpClient is commonly used within Java EE applications. The Apache HttpClient the android SDK includes has been slightly modified.

The Classes

- The `HttpClient` interface describes the Apache HttpClient, the android platform includes.
- The `HttpGet` class describes an HTTP request using the GET method.
- The `HttpPost` class describes an HTTP request using the POST method.
- The `HttpResponse` class describes the response we get when initiating an HTTP request.

HTTP GET Request

```
...
HttpClient client = new DefaultHttpClient();

HttpGet request = new HttpGet();

request.setURI(new URI("http://www.lifemichael.com/en/"));

HttpResponse response = client.execute(request);

BufferedReader in = new BufferedReader(
    new InputStreamReader(response.getEntity().getContent()));
...
```

HTTP POST Request

```
...
HttpClient client = new DefaultHttpClient();

HttpPost request = new HttpPost("http://mysite.com/upload.php");

List<NameValuePair> parameters =
    new ArrayList<NameValuePair>();

parameters.add(
    new BasicNameValuePair("param_name", "param_value"));

UrlEncodedFormEntity encodedEntity =
    new UrlEncodedFormEntity(parameters);

request.setEntity(encodedEntity);

HttpResponse response = client.execute(request);

in = new BufferedReader(
    new InputStreamReader(response.getEntity().getContent()));
...
```

Timeout Exceptions

- Dealing with networking the possibility to get timeout exceptions is significantly high.
- There is a need to implement a special algorithm that in the case of a timeout exception it will try to reconnect a predefined number of times.

Threading Issues

- When having more than one thread performing HTTP requests, we can overcome threading issues by using the `ThreadSafeClientConnManager` class.

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