Objective
- Learn distributed Web Services Programming
- Learn to apply the Proxy pattern

PROBLEM DESCRIPTION & TASK

Many web sites such as Google, Yahoo!, del.icio.us and flickr.com provide APIs for developers to write programs that can interact directly with the backend web servers. In this tutorial, we will learn to build a client side proxy to communicate with flickr web server and request services from flickr.com

All Flickr web services APIs are given in this URL: http://www.flickr.com/services/api/

In this tutorial we will design a remote proxy for the flickr.photos.search service. Check http://www.flickr.com/services/api/flickr.photos.search.html for details on this API.

Excerpt of service request info:

### flickr.photos.search

Return a list of photos matching some criteria. Only photos visible to the calling user will be returned. To return private or semi-private photos, the caller must be authenticated with 'read' permissions, and have permission to view the photos. Unauthenticated calls will only return public photos.

**Arguments**

- **api_key** (Required)
  - Your API application key. [See here](#) for more details.

- **tags** (Optional)
  - A comma-delimited list of tags. Photos with one or more of the tags listed will be returned.
Flickr supports three types of request/response format. We will use the SOAP format in this tutorial. SOAP Request format: [http://www.flickr.com/services/api/request.soap.html](http://www.flickr.com/services/api/request.soap.html); SOAP Response format: [http://www.flickr.com/services/api/response.soap.html](http://www.flickr.com/services/api/response.soap.html)

**ACTIVITIES**

A. Understand the basic web services distributed program structure

B. Design the proxy and write pseudo code to illustrate the communication.