Homework File: Google APIs

The Discovery API provides a list of Google APIs for retrieving a machine-readable "Discovery document" metadata for each API.

This document is intended for developers who want to write client libraries, IDE plugins, and other tools for interacting with Google APIs.

**Discovery Service Background**

**Concepts**

The Google APIs Discovery Service is built upon two basic concepts:

* **APIs Directory**: A list of all APIs that are supported by the APIs Discovery Service. Each directory entry shows details about a supported API, including its *name*, a brief *description* of what it does, and a *documentation link*. An API can have multiple Directory entries, one for each of its supported versions.
* **Discovery document**: A machine-readable description of a particular API. The Discovery document describes the surface for a particular version of an API. The document provides details on how to access the various methods of each API via RESTful HTTP calls. A Discovery document includes descriptions of the data and methods associated with the API, as well as information about available OAuth scopes, and descriptions of schemas, methods, parameters and available parameter values.

**Data model**

A resource is an individual data entity with a unique identifier. The Google APIs Discovery Service operates on two types of resources, based on the above concepts.

**APIs Directory List: A list of APIs**

Each directory entry contains an API **name**/**version** pair with the following information:

* **Identification and description information,**: name, version, title, and description.
* **Documentation information**: icons and a documentation link.
* **Status information**, including status labels, and an indication as to whether or not this is the preferred version of the API.
* **Discovery document link**, the URI of the discovery document for this API (given as a full URL, e.g. https://servicemanagement.googleapis.com/$discovery/rest?version=v1).

**Discovery Document resource: A machine-readable description of a particular API**

In addition to the information provided in the APIs Directory, a Discovery document also includes:

* **Schemas**, which is a list of API resource schemas that describe the data you have access to in each API; the Google APIs Discovery Service schemas are based on [JSON Schema](http://json-schema.org/).
* **Methods**, including a list of API methods and available parameters for each method.
* **OAuth scopes**, which identifies the list of OAuth scopes available for this API.
* **Inline documentation**, which provides brief descriptions of schemas, methods, parameters and available parameter values.