

## REST

### Request

GET https://www.googleapis.com/books/v1/volumes?q=Turing HTTP/1.1  
Accept-Encoding: gzip,deflate  
Host: www.googleapis.com  
Connection: Keep-Alive  
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

Evaluating header:

### GET

The GET method means retrieve whatever information (in the form of an entity) is identified by the Request-URI.

**https://www.googleapis.com/books/v1/volumes?q=Turing**

The Request-URI is a Uniform Resource Identifier and identifies the resource upon which to apply the request.

### HTTP/1.1

Option implementation to use Http version 1.1

### **Accept-Encoding: gzip,deflate**

Compression scheme allowed

### **Host: www.googleapis.com**

The Host request-header field specifies the Internet host and port number of the resource being requested, as obtained from the original URI given by the user or referring resource

### **Connection: Keep-Alive**

The "keep-alive" keyword in a Connection header field allows the sender to indicate its desire for a persistent connection (i.e., a connection that lasts beyond the current request/response transaction). Persistent connections allow the client to perform multiple requests without the overhead of connection tear-down and set-up between each request.

### **User-Agent: Apache-HttpClient/4.1.1 (java 1.5)**

Client software originating the request

### Response

HTTP/1.1 200 OK  
Expires: Fri, 06 Feb 2015 00:38:38 GMT  
Date: Fri, 06 Feb 2015 00:38:38 GMT  
Cache-Control: private, max-age=0, must-revalidate, no-transform  
ETag: "\_rmWcTkH-s1QFjg9mC3Xel0FZSQ/l7pmQjJrvs9hJ0kv4HvN4RVPhAM"  
Vary: Origin

Vary: X-Origin  
Content-Type: application/json; charset=UTF-8  
X-Content-Type-Options: nosniff  
X-Frame-Options: SAMEORIGIN  
X-XSS-Protection: 1; mode=block  
Content-Length: 28656  
Server: GSE  
Alternate-Protocol: 443:quic,p=0.02

Evaluating header:

**HTTP/1.1 200 OK**

The request has succeeded.

**Expires: Fri, 06 Feb 2015 00:38:38 GMT**

The Expires entity-header field gives the date/time after which the entity should be considered stale. This allows information providers to suggest the volatility of the resource, or a date after which the information may no longer be valid.

**Date: Fri, 06 Feb 2015 00:38:38 GMT**

The Date general-header field represents the date and time at which the message was originated

**Cache-Control: private, max-age=0, must-revalidate, no-transform**

The Cache-Control general-header field is used to specify directives that **MUST** be obeyed by all caching mechanisms along the request/response chain

**Private**

Indicates that all or part of the response message is intended for a single user and **MUST NOT** be cached by a shared cache. This allows an origin server to state that the specified parts of the response are intended for only one user and are not a valid response for requests by other users. A private (non-shared) cache **MAY** cache the response.

**Max-age=0**

Indicates that the client is willing to accept a response whose age is no greater than the specified time in seconds

**Must-revalidate**

When the must-revalidate directive is present in a response received by a cache, that cache **MUST NOT** use the entry after it becomes stale to respond to a subsequent request without first revalidating it with the origin server

**No-transform**

Implementors of intermediate caches (proxies) have found it useful to convert the media type of certain entity bodies

**ETag: "\_rmWcTkH-s1QFjg9mC3XeI0FZSQ/I7pmQjJrvs9hJ0kv4HvN4RVPhAM"**

The ETag response-header field provides the current value of the entity tag for the requested variant

**Vary: Origin**

**Vary: X-Origin**

The Vary field value indicates the set of request-header fields that fully determines, while the response is fresh, whether a cache is permitted to use the response to reply to a subsequent request without revalidation

**Content-Type: application/json; charset=UTF-8**

The purpose of the Content-Type field is to describe the data contained in the body fully enough that the receiving user agent can pick an appropriate agent or mechanism to present the data to the user, or otherwise deal with the data in an appropriate manner

Data is json using UTF-8

**X-Content-Type-Options: nosniff**

It prevents the browser from doing MIME-type sniffing

**X-Frame-Options: SAMEORIGIN**

This header can take the values DENY, SAMEORIGIN, or ALLOW-FROM *origin*, which will prevent any framing, prevent framing by external sites, or allow framing only by the specified site, respectively. In addition to that, some advertising sites return a non-standard ALLOWALL value with the intention to allow framing their content on any page

**X-XSS-Protection: 1; mode=block**

Scross-site scripting filter

**Content-Length: 28656**

Message length

**Server: GSE**

Google server

**Alternate-Protocol: 443:quic,p=0.02**

Next-generation multiplex transport over UDP

```
{
  "kind": "books#volumes",
  "totalItems": 937,
  "items": [
    {
      "kind": "books#volume",
      "id": "6sEIRNGXWFIC",
      "etag": "y2ojUggPYg8",
      "selfLink": "https://www.googleapis.com/books/v1/volumes/6sEIRNGXWFIC",
      "volumeInfo": {
        "title": "Turing's Cathedral",
        "subtitle": "The Origins of the Digital Universe",
        "authors": [
          "George Dyson"
        ],
        "publisher": "Pantheon",

```

```

"publishedDate": "2012",
"description": "Documents the innovations of a group of eccentric geniuses who developed
computer code in the mid-20th century as part of mathematician Alan Turin's theoretical
universal machine idea, exploring how their ideas led to such developments as digital television,
modern genetics and the hydrogen bomb.",
"industryIdentifiers": [
  {
    "type": "ISBN_13",
    "identifier": "9780375422775"
  },
  {
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    "identifier": "0375422773"
  }
],
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  "image": false
},
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  "thumbnail":
"http://books.google.com/books/content?id=6sEIRNGXWFIC&printsec=frontcover&img=1&zoom=1&edge=curl&source=gbp_api"
},
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"http://books.google.com/books?id=6sEIRNGXWFIC&printsec=frontcover&dq=Turing&hl=&cd=1&source=gbp_api",
"infoLink":
"http://books.google.com/books?id=6sEIRNGXWFIC&dq=Turing&hl=&source=gbp_api",
"canonicalVolumeLink":
"http://books.google.com/books/about/Turing_s_Cathedral.html?hl=&id=6sEIRNGXWFIC"
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"saleInfo": {
  "country": "US",
  "saleability": "NOT_FOR_SALE",
  "isEbook": false
},

```

```

"accessInfo": {
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  "viewability": "PARTIAL",
  "embeddable": true,
  "publicDomain": false,
  "textToSpeechPermission": "ALLOWED_FOR_ACCESSIBILITY",
  "epub": {
    "isAvailable": false
  },
  "pdf": {
    "isAvailable": false
  },
  "webReaderLink":
"http://books.google.com/books/reader?id=6sEIRNGXWFIC&hl=&printsec=frontcover&output=reader&source=gbs_api",
  "accessViewStatus": "SAMPLE",
  "quoteSharingAllowed": false
},
"searchInfo": {
  "textSnippet": "Documents the innovations of a group of eccentric geniuses who developed
computer code in the mid-20th century as part of mathematician Alan Turing's theoretical
universal machine idea, exploring how their ideas led to such developments as ..."
}
},
{
  "kind": "books#volume",
  "id": "DjcTkgAACAAJ",
  "etag": "ghlAJdgc8cM",
  "selfLink": "https://www.googleapis.com/books/v1/volumes/DjcTkgAACAAJ",
  "volumeInfo": {
    "title": "Alan Turing",
    "authors": [
      "Andrew Hodges",
      "Alan Turing"
    ],
    "publishedDate": "2002",
    "description": "Alan Turing Home Page. Gateway to a large website maintained by Andrew
Hodges, biographer of Alan Turing (1912-1954).",
    "industryIdentifiers": [
      {
        "type": "OTHER",
        "identifier": "OCLC:49947687"
      }
    ],
    "readingModes": {
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      "image": false
    },
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```

```

"averageRating": 4.0,
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"infoLink":
"http://books.google.com/books?id=DjcTkgAACAAJ&dq=Turing&hl=&source=gbs_api",
"canonicalVolumeLink":
"http://books.google.com/books/about/Alan_Turing.html?hl=&id=DjcTkgAACAAJ"
},
"saleInfo": {
  "country": "US",
  "saleability": "NOT_FOR_SALE",
  "isEbook": false
},
"accessInfo": {
  "country": "US",
  "viewability": "NO_PAGES",
  "embeddable": false,
  "publicDomain": false,
  "textToSpeechPermission": "ALLOWED",
  "epub": {
    "isAvailable": false
  },
  "pdf": {
    "isAvailable": false
  },
  "webReaderLink":
"http://books.google.com/books/reader?id=DjcTkgAACAAJ&hl=&printsec=frontcover&output=reader&source=gbs_api",
  "accessViewStatus": "NONE",
  "quoteSharingAllowed": false
},
"searchInfo": {
  "textSnippet": "Alan Turing Home Page. Gateway to a large website maintained by Andrew
Hodges, biographer of Alan Turing (1912-1954)."
}
},
{
  "kind": "books#volume",
  "id": "WyaH47b_KE0C",
  "etag": "IUAPFPiH/VU",
  "selfLink": "https://www.googleapis.com/books/v1/volumes/WyaH47b_KE0C",
  "volumeInfo": {
    "title": "Turing",
    "subtitle": "Pioneer of the Information Age",
    "authors": [
      "B. Jack Copeland"
    ]
  }
}

```

```
],
  "publisher": "Oxford University Press",
  "publishedDate": "2012-11-29",
  "description": "Describes the life and work of the British mathematician who played a major
role in unraveling German codes during World War II and helped to establish the fields of
computer science and artificial intelligence.",
  "industryIdentifiers": [
    {
      "type": "ISBN_13",
      "identifier": "9780199639793"
    },
    {
      "type": "ISBN_10",
      "identifier": "0199639795"
    }
  ],
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    "image": true
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  "printType": "BOOK",
  "categories": [
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  ],
  "averageRating": 3.5,
  "ratingsCount": 6,
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    "thumbnail":
"http://books.google.com/books/content?id=WyaH47b_KE0C&printsec=frontcover&img=1&zoo
m=1&edge=curl&source=gbp_api"
  },
  "language": "en",
  "previewLink":
"http://books.google.com/books?id=WyaH47b_KE0C&printsec=frontcover&dq=Turing&hl=&cd=
3&source=gbp_api",
  "infoLink":
"http://books.google.com/books?id=WyaH47b_KE0C&dq=Turing&hl=&source=gbp_api",
  "canonicalVolumeLink":
"http://books.google.com/books/about/Turing.html?hl=&id=WyaH47b_KE0C"
},
  "saleInfo": {
    "country": "US",
    "saleability": "NOT_FOR_SALE",
    "isEbook": false
  }
}
```

```

},
"accessInfo": {
  "country": "US",
  "viewability": "PARTIAL",
  "embeddable": true,
  "publicDomain": false,
  "textToSpeechPermission": "ALLOWED",
  "epub": {
    "isAvailable": false
  },
  "pdf": {
    "isAvailable": false
  },
  "webReaderLink":
"http://books.google.com/books/reader?id=WyaH47b_KE0C&hl=&printsec=frontcover&output=r
eader&source=gbs_api",
  "accessViewStatus": "SAMPLE",
  "quoteSharingAllowed": false
},
"searchInfo": {
  "textSnippet": "Describes the life and work of the British mathematician who played a major
role in unraveling German codes during World War II and helped to establish the fields of
computer science and artificial intelligence."
}
},
{
  "kind": "books#volume",
  "id": "07_ckaHY-2QC",
  "etag": "1t9j6ZlpvNM",
  "selfLink": "https://www.googleapis.com/books/v1/volumes/07_ckaHY-2QC",
  "volumeInfo": {
    "title": "Alan M. Turing",
    "subtitle": "Centenary Edition",
    "publisher": "Cambridge University Press",
    "publishedDate": "2012-03-22",
    "description": "Containing never-before-published material, this fascinating account sheds
new light on one of the greatest figures of the twentieth century.",
    "industryIdentifiers": [
      {
        "type": "ISBN_13",
        "identifier": "9781107020580"
      },
      {
        "type": "ISBN_10",
        "identifier": "1107020581"
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    ]
  },
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    "text": false,

```



```

    "image": true
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  "pageCount": 169,
  "printType": "BOOK",
  "categories": [
    "Biography & Autobiography"
  ],
  "averageRating": 3.0,
  "ratingsCount": 5,
  "contentVersion": "preview-1.0.0",
  "imageLinks": {
    "smallThumbnail": "http://books.google.com/books/content?id=07_ckaHY-2QC&printsec=frontcover&img=1&zoom=5&edge=curl&source=gb_s_api",
    "thumbnail": "http://books.google.com/books/content?id=07_ckaHY-2QC&printsec=frontcover&img=1&zoom=1&edge=curl&source=gb_s_api"
  },
  "language": "en",
  "previewLink": "http://books.google.com/books?id=07_ckaHY-2QC&printsec=frontcover&dq=Turing&hl=&cd=4&source=gb_s_api",
  "infoLink": "http://books.google.com/books?id=07_ckaHY-2QC&dq=Turing&hl=&source=gb_s_api",
  "canonicalVolumeLink":
    "http://books.google.com/books/about/Alan_M_Turing.html?hl=&id=07_ckaHY-2QC"
  },
  "saleInfo": {
    "country": "US",
    "saleability": "NOT_FOR_SALE",
    "isEbook": false
  },
  "accessInfo": {
    "country": "US",
    "viewability": "PARTIAL",
    "embeddable": true,
    "publicDomain": false,
    "textToSpeechPermission": "ALLOWED",
    "epub": {
      "isAvailable": false
    },
    "pdf": {
      "isAvailable": false
    }
  },
  "webReaderLink": "http://books.google.com/books/reader?id=07_ckaHY-2QC&hl=&printsec=frontcover&output=reader&source=gb_s_api",
  "accessViewStatus": "SAMPLE",
  "quoteSharingAllowed": false
},
"searchInfo": {
  "textSnippet": "Containing never-before-published material, this fascinating account sheds new light on one of the greatest figures of the twentieth century."
}

```

```
}  
},  
{  
  "kind": "books#volume",  
  "id": "QJyX175VCj8C",  
  "etag": "7ZCzy1iS7c8",  
  "selfLink": "https://www.googleapis.com/books/v1/volumes/QJyX175VCj8C",  
  "volumeInfo": {  
    "title": "
```

## SOAP

### Request

POST http://www.websvcex.net/geopservice.asmx HTTP/1.1  
Accept-Encoding: gzip,deflate  
Content-Type: text/xml; charset=UTF-8  
SOAPAction: "http://www.websvcex.net/GetGeolP"  
Content-Length: 317  
Host: www.websvcex.net  
Connection: Keep-Alive  
User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

Evaluating header:

### POST

The POST method is used to request that the origin server accept the entity enclosed in the request as a new subordinate of the resource identified by the Request-URI in the Request-Line

http://www.websvcex.net/geopservice.asmx

The Request-URI is a Uniform Resource Identifier and identifies the resource upon which to apply the request.

### HTTP/1.1

Option implementation to use Http version 1.1

**SOAPAction: "http://www.websvcex.net/GetGeolP"**

The SOAPAction field of the HTTP-Header identifies the purpose of the SOAP-HTTP request. The value of this field is a URI without special requirements due to presence or format. A HTTP client which sends a SOAP request has to use this header field

**Content-Length: 317**

Message length

**Host: www.websvcex.net**

The Host request-header field specifies the Internet host and port number of the resource being requested, as obtained from the original URI given by the user or referring resource

### Connection: Keep-Alive

The "keep-alive" keyword in a Connection header field allows the sender to indicate its desire for a persistent connection (i.e., a connection that lasts beyond the current request/response transaction). Persistent connections allow the client to perform multiple requests without the overhead of connection tear-down and set-up between each request.

### User-Agent: Apache-HttpClient/4.1.1 (java 1.5)

Client software originating the request

### Response

HTTP/1.1 200 OK

Cache-Control: private, max-age=0

Content-Type: text/xml; charset=utf-8

Content-Encoding: gzip

Vary: Accept-Encoding

Server: Microsoft-IIS/7.0

X-AspNet-Version: 4.0.30319

X-Powered-By: ASP.NET

Date: Fri, 06 Feb 2015 00:40:52 GMT

Content-Length: 403

```
<?xml version="1.0" encoding="utf-8"?><soap:Envelope
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"><soap:Body><GetGeolPResponse
xmlns="http://www.webservicex.net/"><GetGeolPResult><ReturnCode>1</ReturnCode><IP>21
2.58.246.95</IP><ReturnCodeDetails>Success</ReturnCodeDetails><CountryName>United
Kingdom</CountryName><CountryCode>GBR</CountryCode></GetGeolPResult></GetGeolP
Response></soap:Body></soap:Envelope>
```

Evaluating header:

**HTTP/1.1 200 OK**

The request has succeeded.

### Cache-Control: private, max-age=0

The Cache-Control general-header field is used to specify directives that MUST be obeyed by all caching mechanisms along the request/response chain

#### Private

Indicates that all or part of the response message is intended for a single user and MUST NOT be cached by a shared cache. This allows an origin server to state that the specified parts of the response are intended for only one user and

are not a valid response for requests by other users. A private (non-shared) cache MAY cache the response.

**Max-age=0**

Indicates that the client is willing to accept a response whose age is no greater than the specified time in seconds

**Content-Type: text/xml; charset=utf-8**

The purpose of the Content-Type field is to describe the data contained in the body fully enough that the receiving user agent can pick an appropriate agent or mechanism to present the data to the user, or otherwise deal with the data in an appropriate manner

**Vary: Accept-Encoding**

The Vary field value indicates the set of request-header fields that fully determines, while the response is fresh, whether a cache is permitted to use the response to reply to a subsequent request without revalidation

The Accept-Encoding request-header field is similar to Accept, but restricts the content-codings that are acceptable in the response.

**Server: Microsoft-IIS/7.0**

Microsoft Internet Information Services server

**X-AspNet-Version: 4.0.30319**

**X-Powered-By: ASP.NET**

Server-side Web application framework

**Date: Fri, 06 Feb 2015 00:40:52 GMT**

The Date general-header field represents the date and time at which the message was originated

**Content-Length: 403**

Message length

**Server: GSE**

Google server

**Alternate-Protocol: 443:quic,p=0.02**

Next-generation multiplex transport over UDP