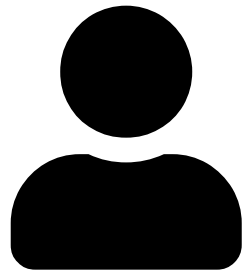


Web service

Prayoch Rujira
Clockup studio

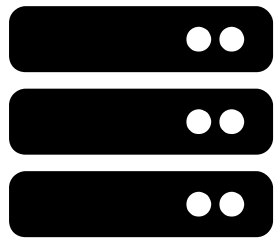
Web

www.google.com



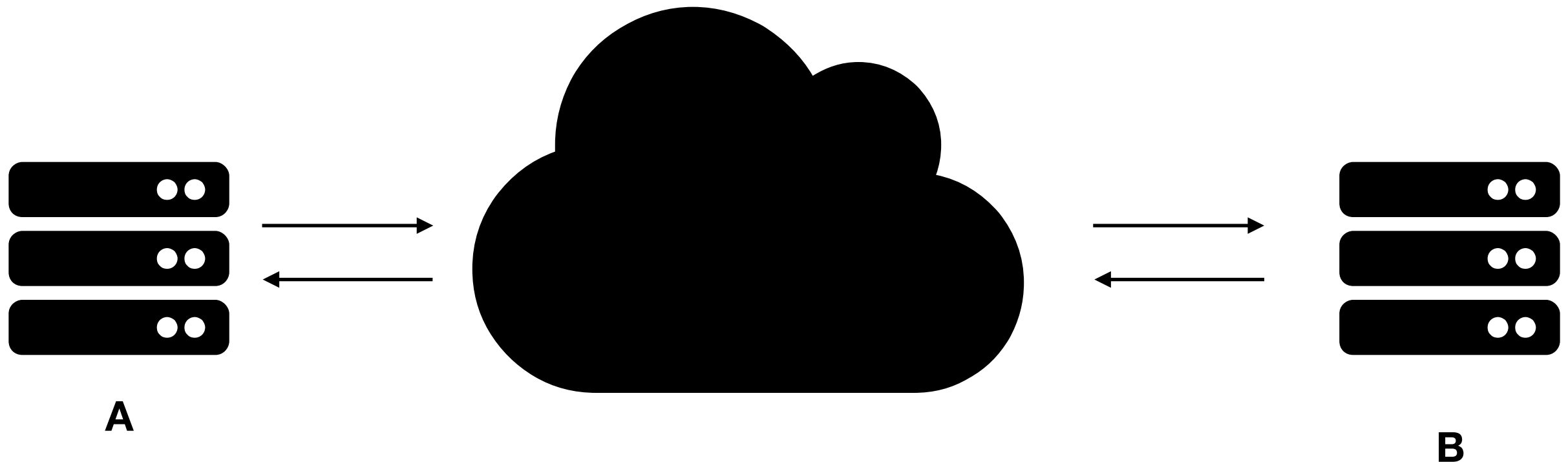
Web service

`https://www.googleapis.com/customsearch/v1?parameters`



```
{
  "kind": "customsearch#result",
  "title": "Lectures",
  "htmlTitle": "<b>Lectures</b>",
  "link": "https://www.cis.upenn.edu/~cis160/current/lectures.html",
  "displayLink": "www.cis.upenn.edu",
  "snippet": "Lectures are held in CHEM102 every Tuesday and Thursday from 1:30-3:00 PM. \nWhile lecture attendance is not mandatory, it is highly recommended that you...",
  "htmlSnippet": "<b>Lectures</b> are held in CHEM102 every Tuesday and Thursday from 1:30-3:00 PM. <br>\nWhile <b>lecture</b> attendance is not mandatory, it is highly recommended that you&nbsp;...</b>...",
  "cacheId": "k9487vOAo70J",
  "formattedUrl": "https://www.cis.upenn.edu/~cis160/current/lectures.html",
  "htmlFormattedUrl": "https://www.cis.upenn.edu/~cis160/current/<b>lectures</b>.html",
  "pagemap": {
    "metatags": [
      {
        "viewport": "width=device-width, initial-scale=1.0"
      }
    ]
  },
  "labels": [
    {
      "name": "lectures",
      "displayName": "Lectures",
      "label_with_op": "more:lectures"
    }
  ]
},
{
  "kind": "customsearch#result",
  "title": "Gibbons Lecture Series - The University of Auckland",
  "htmlTitle": "Gibbons <b>Lecture</b> Series - The University of Auckland",
  "link": "https://www.gibbonslectureseries.org.nz/lectures",
  "displayLink": "gibbonslectureseries.org.nz",
  "snippet": "Gibbons Lecture Series - The University of Auckland. The Gibbons Lecture Series is a series of lectures given by leading experts in their field. The series is named after Professor John Gibbons, a former Vice-Chancellor of the University of Auckland. The series is held in the Auckland Convention Centre and is open to the public. Tickets are available for purchase. For more information, please visit the Gibbons Lecture Series website.",
  "htmlSnippet": "Gibbons Lecture Series - The University of Auckland. The Gibbons Lecture Series is a series of lectures given by leading experts in their field. The series is named after Professor John Gibbons, a former Vice-Chancellor of the University of Auckland. The series is held in the Auckland Convention Centre and is open to the public. Tickets are available for purchase. For more information, please visit the Gibbons Lecture Series website.",
  "cacheId": "k9487vOAo70J",
  "formattedUrl": "https://www.gibbonslectureseries.org.nz/lectures",
  "htmlFormattedUrl": "https://www.gibbonslectureseries.org.nz/lectures",
  "pagemap": {
    "metatags": [
      {
        "viewport": "width=device-width, initial-scale=1.0"
      }
    ]
  },
  "labels": [
    {
      "name": "gibbons-lecture-series",
      "displayName": "Gibbons Lecture Series",
      "label_with_op": "more:gibbons-lecture-series"
    }
  ]
}
```

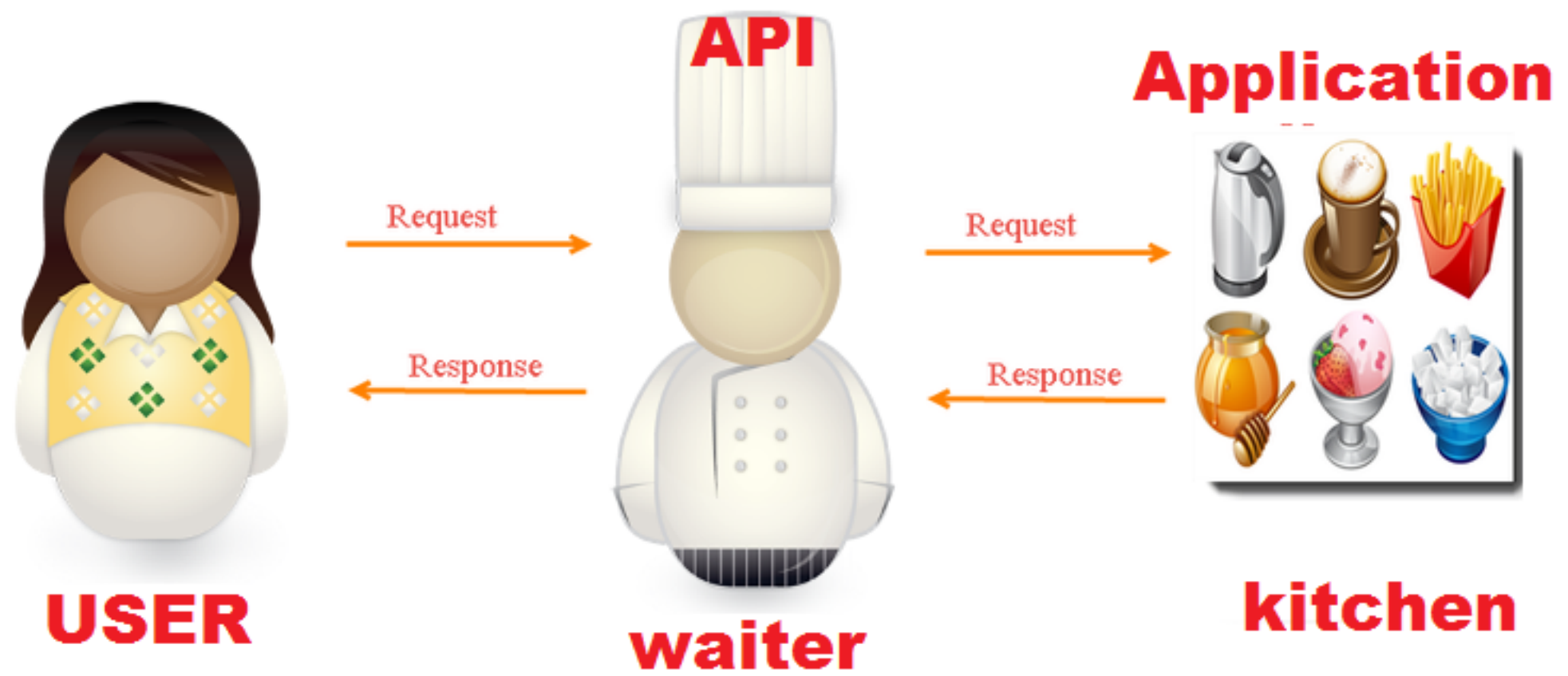
Why web service?



system A wants to connect to **API** of system B
via HTTP protocol

API

Application Programming Interface



Making request to Web service

Method

GET

Endpoint

**[https://www.googleapis.com/
customsearch/v1](https://www.googleapis.com/customsearch/v1)**

Headers

Content-type=Application/json

Making request to Web service

Method

POST

Endpoint

<https://mophconnect-ega.clockupstudio.com/test1/api/queue>

Headers

Content-type=Application/json

Body

```
{
  "userId": "Ub65b5fd5c6669e7710094c69a50469a6",
  "hospitalName": "โรงพยาบาลปทุมธานี",
  "origin": "กระทรวงสาธารณสุข",
  "queueNumber": "จุดคัดกรอง คิวที่ 2221",
  "patientName": "นาย ประโยชน์ รุจิรา",
  "appointmentDate": "2018-04-30",
  "appointmentTime": "เวลานัดหมาย 09:00-09:15 น. กรุณามาก่อนเวลา 10 นาที",
  "detailsLink": "http://pth.ddns.net/",
  "currentQueueLink": "http://pth.ddns.net/"
}
```


HTTP Methods

<http://www.restapitutorial.com/lessons/httpmethods.html>

Response from web service

Status code

200 OK

Headers

Content-type=Application/json

Body

```
"items": [  
  {  
    "kind": "customsearch#result",  
    "title": "Lectures",  
    "htmlTitle": "<b>Lectures</b>",  
    "link": "https://www.cis.upenn.edu/~cis160/current/lectures.html",  
    "displayLink": "www.cis.upenn.edu",  
    "snippet": "Lectures are held in CHEM102 every Tuesday and Thursday from 1:30-3:00 PM. \nWhile lecture attendance is not mandatory, it is highly recommended that  
you ...",  
    "htmlSnippet": "<b>Lectures</b> are held in CHEM102 every Tuesday and Thursday from 1:30-3:00 PM. <br>\nWhile <b>lecture</b> attendance is not mandatory, it is  
highly recommended that you&nbsp;...",  
    "cached": "k9487vOAo70J",  
    "formattedUrl": "https://www.cis.upenn.edu/~cis160/current/lectures.html",  
    "htmlFormattedUrl": "https://www.cis.upenn.edu/~cis160/current/<b>lectures</b>.html",  
    "pagemap": {  
      "metatags": [  
        {  
          "viewport": "width=device-width, initial-scale=1.0"  
        }  
      ]  
    },  
    .....  
  },  
  .....  
],  
.....
```

Status code

<http://www.restapitutorial.com/httpstatuscodes.html>

JSON

Javascript Object Notation

https://www.w3schools.com/js/js_json_intro.asp

