

GNU Python3

HTTP, GET, "Simple Webserver", JSON, SERIALIZATION,
DESERIALIZATION, POST, GET, DELETE, oAuth 2.0, "Login with
Instagram", "New comment/ Get comments/ Delete Comment"

A collage of various digital and physical media icons. At the top center is a blue and green folder. To its right is a blue globe with a red location pin, a blue owl, and a grey envelope with a pink 'm' logo. Below these are two yellow books. On the left is a bar chart with five colored bars (red, orange, yellow, green, blue) and three musical notes (red, yellow, blue) floating above it. In the center is a black vinyl record, a blue 'e' logo with a yellow swoosh, and a clapperboard. To the right of the record is a grey notepad with a pencil. Below the record is a black microphone. To the left of the microphone is a blue wireless signal tower. To the right of the microphone is a blue wireless signal tower. Below the microphone is a magnifying glass. At the bottom center is a large open box containing a pink guitar, a CD, and a smartphone. To the left of the box is a blue glass of water and a small blue globe.

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There's no place like

127.0.0.1

A diagram illustrating the components of a URL. The URL is `http://www.domain.com:1234/path/to/resource?a=b&x=y`. Red horizontal lines segment the URL, and red vertical lines connect these segments to their respective labels: `http` is labeled "protocol", `www.domain.com` is labeled "host", `:1234` is labeled "port", `/path/to/resource` is labeled "resource path", and `?a=b&x=y` is labeled "query".

port

query

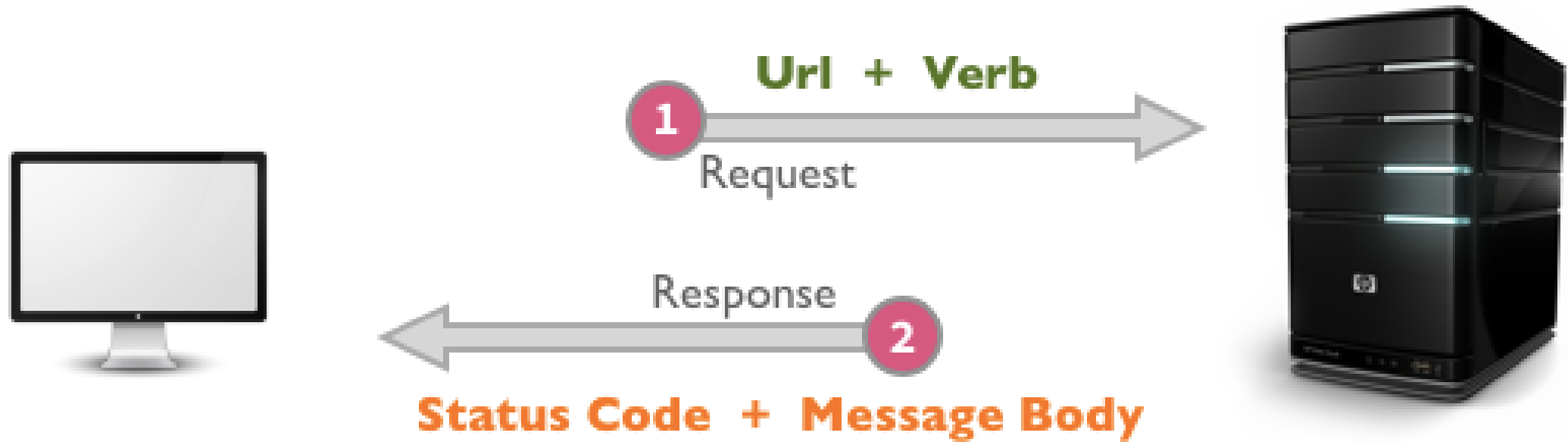
protocol

host

resource path

`http://www.domain.com:1234/path/to/resource?a=b&x=y`

HTTP Methods (Verbs)



GET

- Most common http method
- Should be used to read data
- Can be seen on browser history
- Data can be sent through **resource path** or **query**
- but url length limit is 2048
- <http://www.bilkentgnu.com/animals/dogs?color=red&height=tall>
- **Safe**
- **Idempotent**

JSON

- **JavaScript Object Notation**
- Lightweight syntax for storing and exchanging data
- Language independent
- Easy to serializable / deserializable
- JSON is a format that encodes objects in a string. **Serialization** means to convert an object into that string, and **deserialization** is its inverse operation.
-

```
{  
  "Title": "The Cuckoo's Calling",  
  "Author": "Robert Galbraith",  
  "Genre": "classic crime novel",  
  "Detail": {  
    "Publisher": "Little Brown",  
    "Publication_Year": 2013,  
    "ISBN-13": 9781408704004,  
    "Language": "English",  
    "Pages": 494  
  },  
  "Price": [  
    {  
      "type": "Hardcover",  
      "price": 16.65  
    },  
    {  
      "type": "Kidle Edition",  
      "price": 7.03  
    }  
  ]  
}
```

Diagram illustrating the structure of a JSON object and its nested elements:

- Object Starts**: Indicated by a red arrow pointing to the opening curly brace `{`.
- Object Starts**: Indicated by a red arrow pointing to the opening curly brace `{` of the `Detail` object.
- Value: string**: Indicated by a blue arrow pointing to the string value `"Little Brown"`.
- Value: number**: Indicated by a yellow arrow pointing to the number value `2013`.
- Object ends**: Indicated by a red arrow pointing to the closing curly brace `}` of the `Detail` object.
- Array starts**: Indicated by a green arrow pointing to the opening square bracket `[` of the `Price` array.
- Object Starts**: Indicated by a red arrow pointing to the opening curly brace `{` of the first object in the `Price` array.
- Object ends**: Indicated by a red arrow pointing to the closing curly brace `}` of the first object in the `Price` array.
- Object Starts**: Indicated by a red arrow pointing to the opening curly brace `{` of the second object in the `Price` array.
- Object ends**: Indicated by a red arrow pointing to the closing curly brace `}` of the second object in the `Price` array.
- Array ends**: Indicated by a green arrow pointing to the closing square bracket `]` of the `Price` array.
- Object ends**: Indicated by a red arrow pointing to the closing curly brace `}` of the main object.

- <https://www.instagram.com/developer/endpoints/comments/>

POST

- Another common http method
- Should be used to create resource
- Data can be send through its **body - (No length limit)**
- JSON can be sent through POST
- Form data can be sent through POST. That's why when you refresh a page after sent form, browser asks: It can be dangerous.
- **Non-idempotent**
- **Non-safe**

PUT

- Should be used to update current resource.
- Data can be send through its **body - (No length limit)**
- JSON can be sent through PUT
- **Non-safe**
- **Idempotent**

DELETE

- Should be used to remove current resource
- Non-safe
- Non-idempotent

OAuth 2.0

Server-side (explicit)
Login flow

(Through authorization code)

