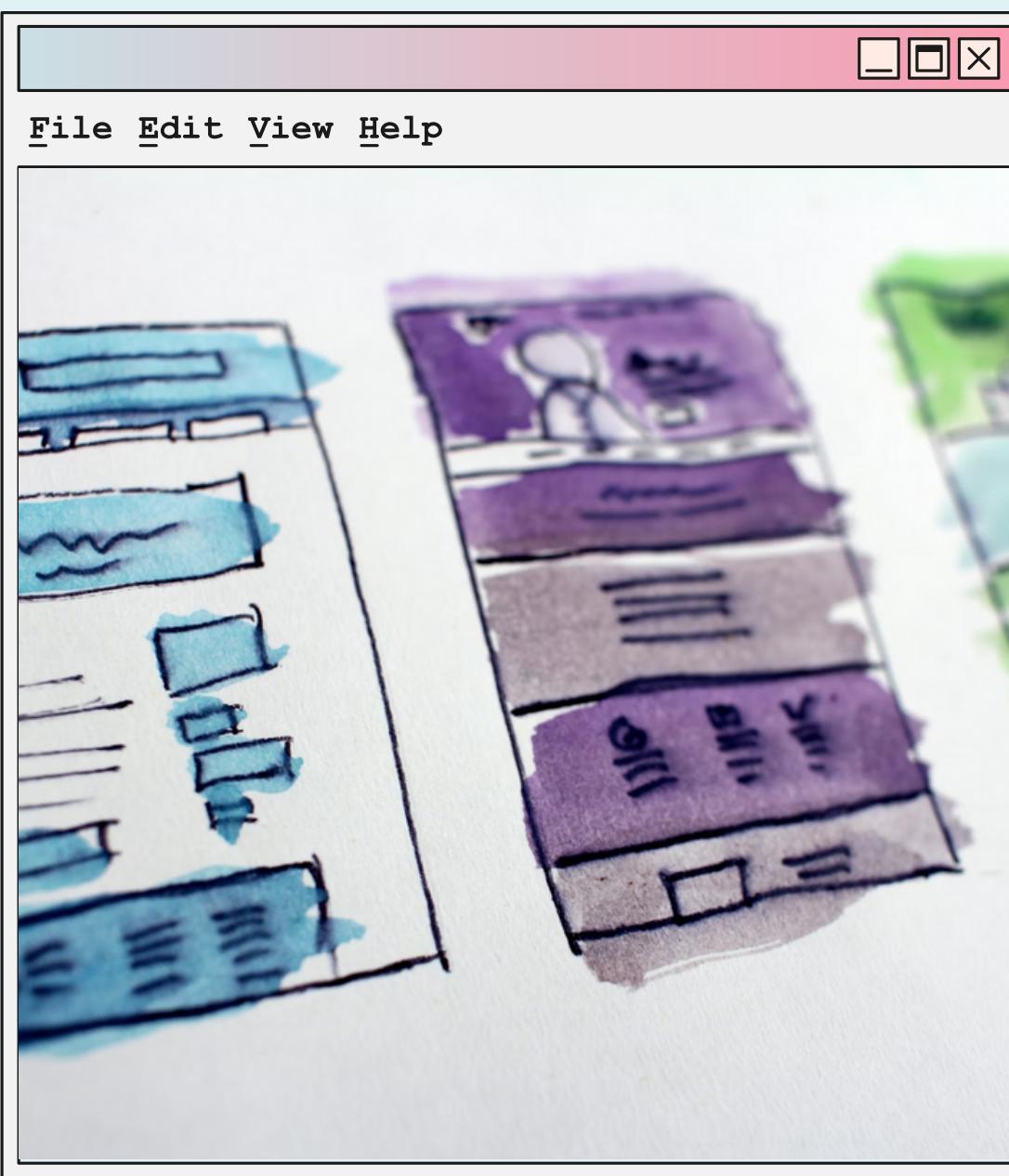




**IT Club
Pulchowk Campus**



File Edit Format View Help

Cool New Font ▾ 12 ▾ **B I U** ⌂ ⌂ ⌂

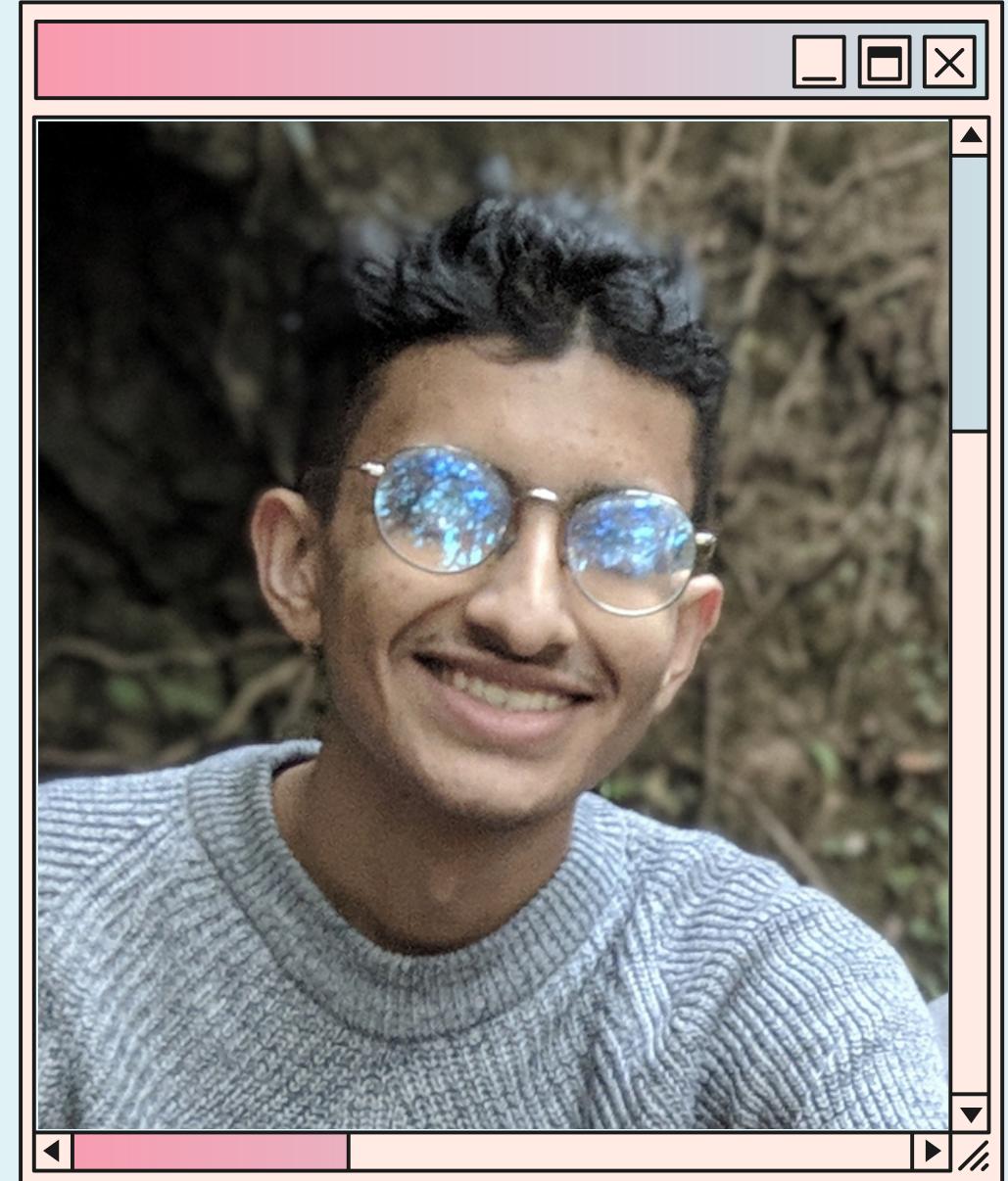
Who am I?

Saurav Adhikari
BCT 076 CD
Pulchowk Campus

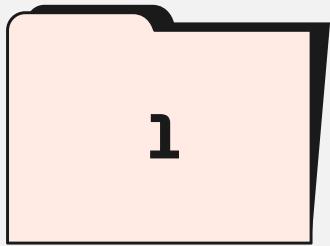
Likes:

- Programming
- Mangas, Manhwas and Animes
- Fictional Books

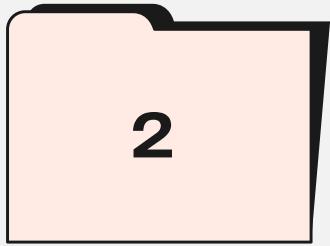
Page 1 Words: 88



Saurav Adhikari
@Saurav Adhikari#2745



How the web
works



Different
Components of
Web

1



Learning: How,
Where, and What?

2



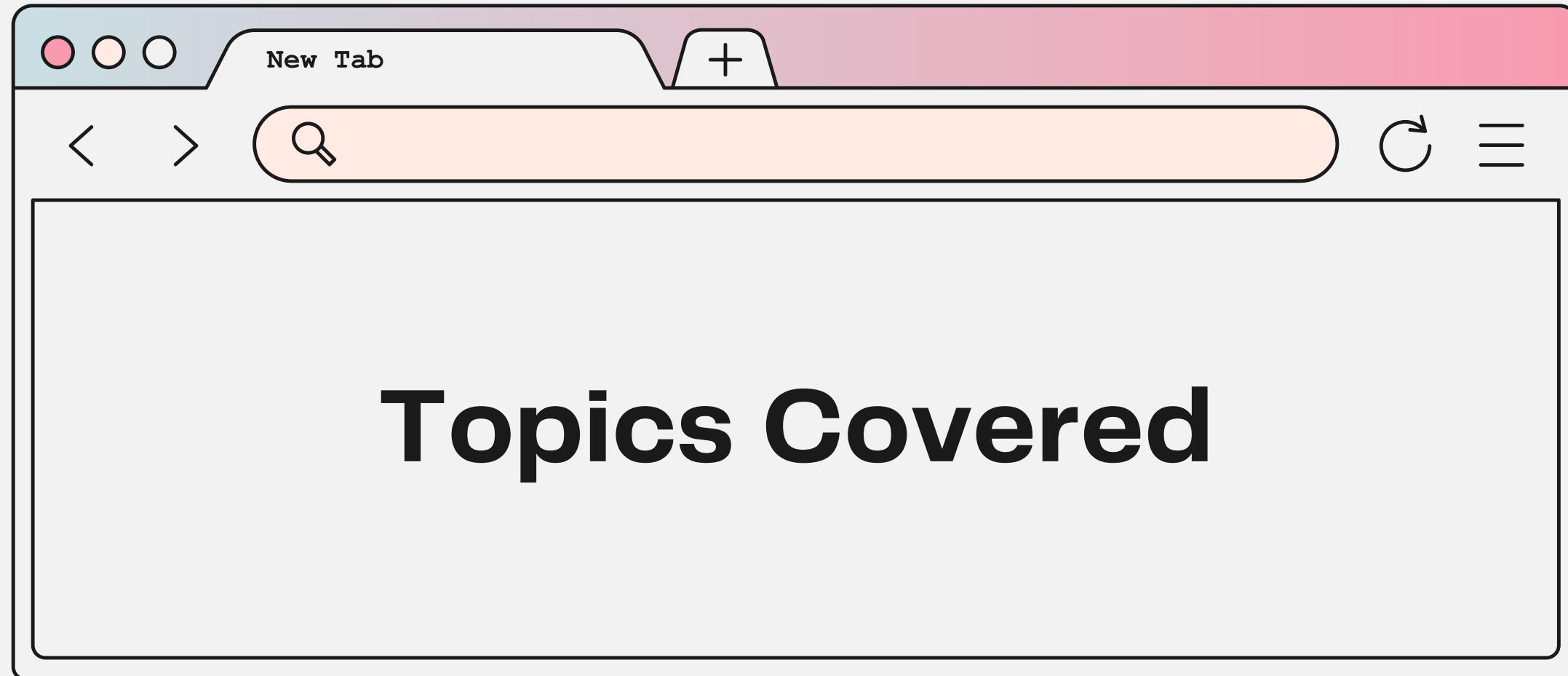
The
Cloud

3

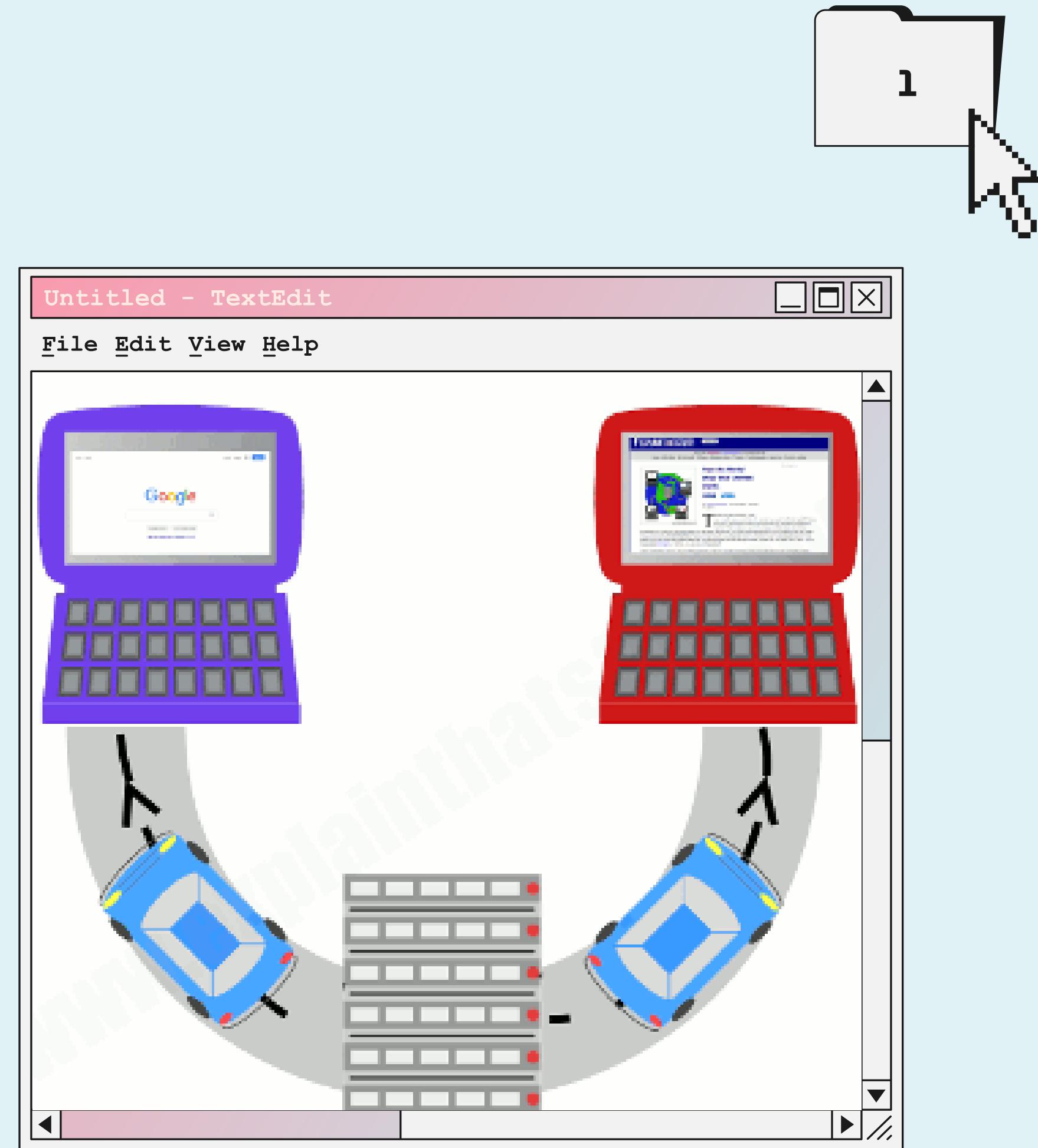


DevOps

4

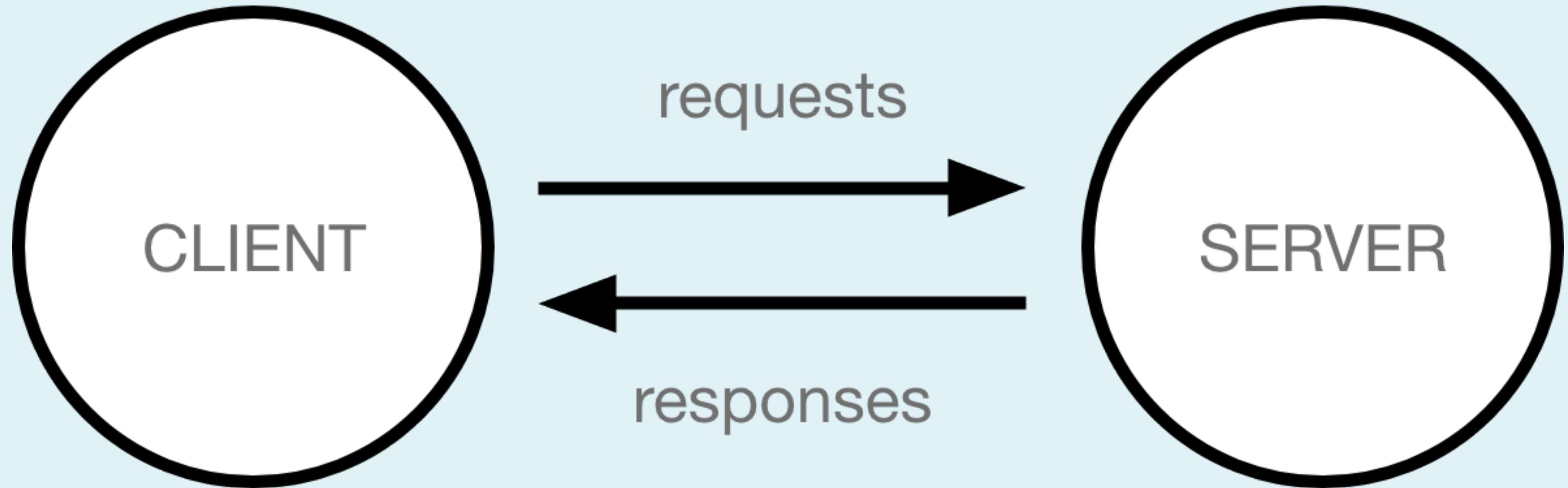


5



How does the Web Work?

- Client and Servers
- DNS
- The HTTP Protocol
- Web 1.0
- Web 2.0
- Web 3.0??



Let's Make an Analogy

Internet Connection

TCP/IP

DNS

HTTP

Component Files

Server



BhatBhateni

Client



Mr. Lamish

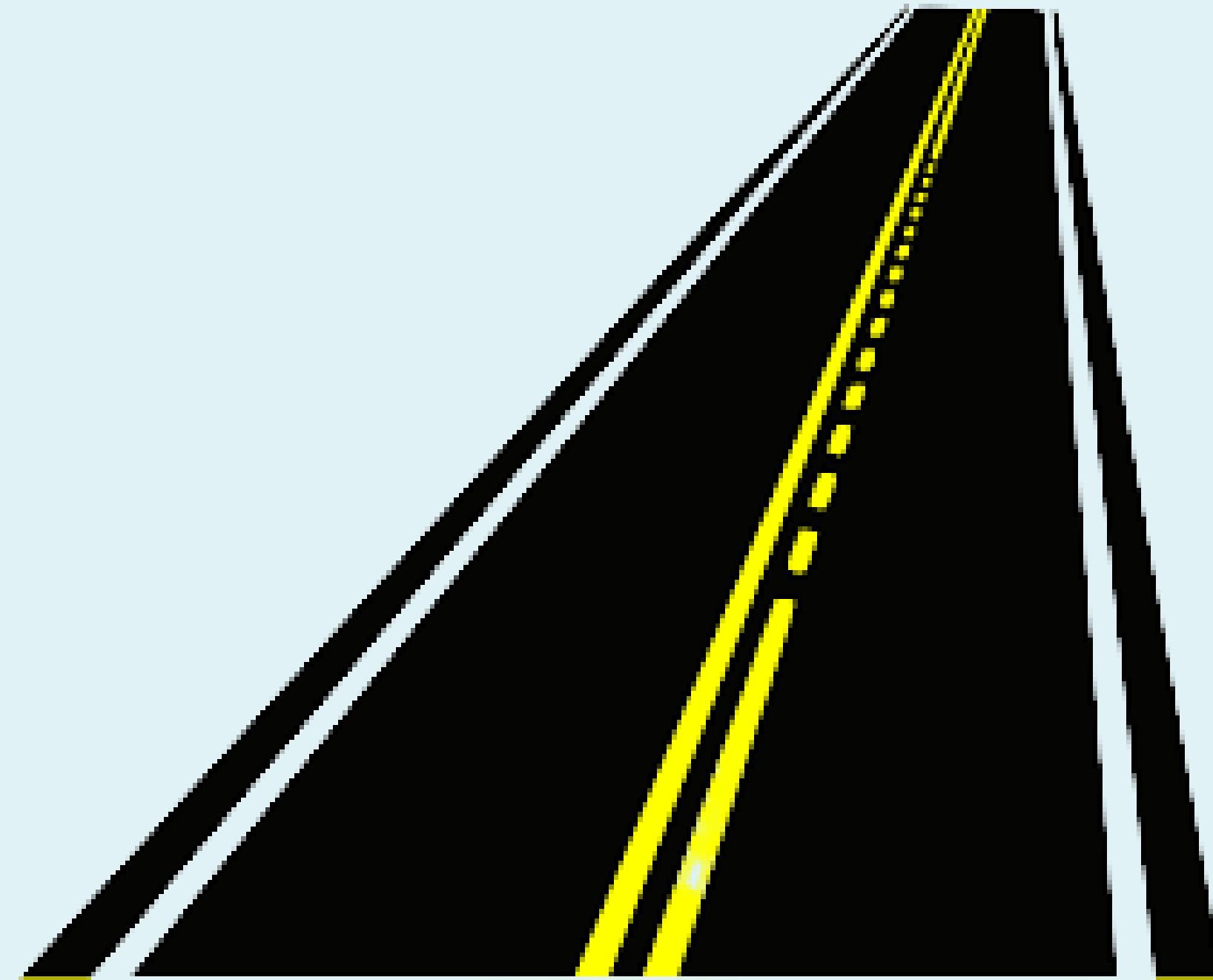
THE CHARACTERS AND EVENTS DEPICTED IN THIS PHOToplay
ARE FICTIONAL. ANY SIMILARITY TO ACTUAL PERSONS,
LIVING OR DEAD, IS PURELY COINCIDENTAL.

Why?

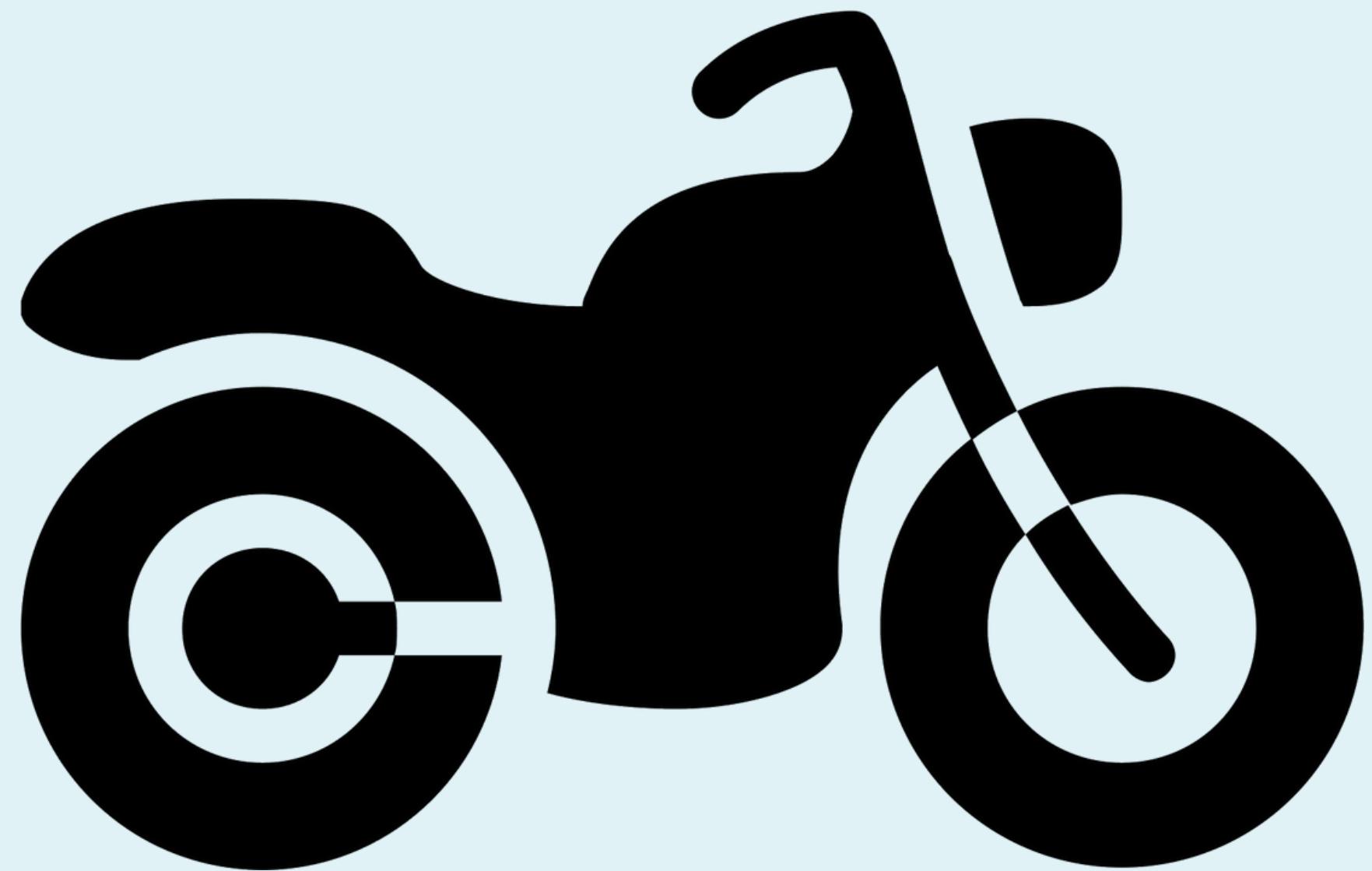


HORLICKS

Internet Connection



TCP/IP



DNS Server

Local wala Sathi

HTTP

Nepali Language

Component Files



How it binds together

Gaau bata
bharkhari aako

Lissan ko ghar
GPS Co-ordinate

Bhat Bhateni

Farak Bhatbhateni

Bidesi le ni chalauna milney gari
banako

PORTS = FLOORS

Lamesh = Pakhey

Where in the floor?

Path

Query String

Format:

nepali://bhatbhateni:80/left/right/left/2?row=5&column=2

Format:

nepali://bhatbhateni:80/left/right/left/2?row=5&column=2

[https://asaurav.com.np\(:80\)/getting-started-with-web?page=19](https://asaurav.com.np(:80)/getting-started-with-web?page=19)

SUBDOMAIN SLD TLD

<https://www.digitalgasm.com/blog/seo?source=google&medium=search>

SCHEME

HOST NAME

PATH

QUERY STRING

File is Copied,
Not Moved

Shadow Clone Jutsu

PACKETS

Why a bike?

Why not a truck?



Web 1.0/2.0/3.0



Web 1.0, Web 2.0 and Web 3.0 with their difference
A Computer Science portal for geeks. It contains well written, well thought and well explained computer scienc...
GeeksforGeeks / May 30



SCAN ME

Web 1.0



The GET Request

Web 2.0

Interactive ...



Post Request

Back to the example:

Lamish is now a seller as well.

Horlicks, Nepal Distributor

POST Request = Giving to the Bhat Bhateni

Patch Request



Patch Request



DELETE Request



More?

GET

POST

PUT

DELETE

CONNECT

OPTIONS

TRACE

PATCH



SCAN ME

WEB 3.0?

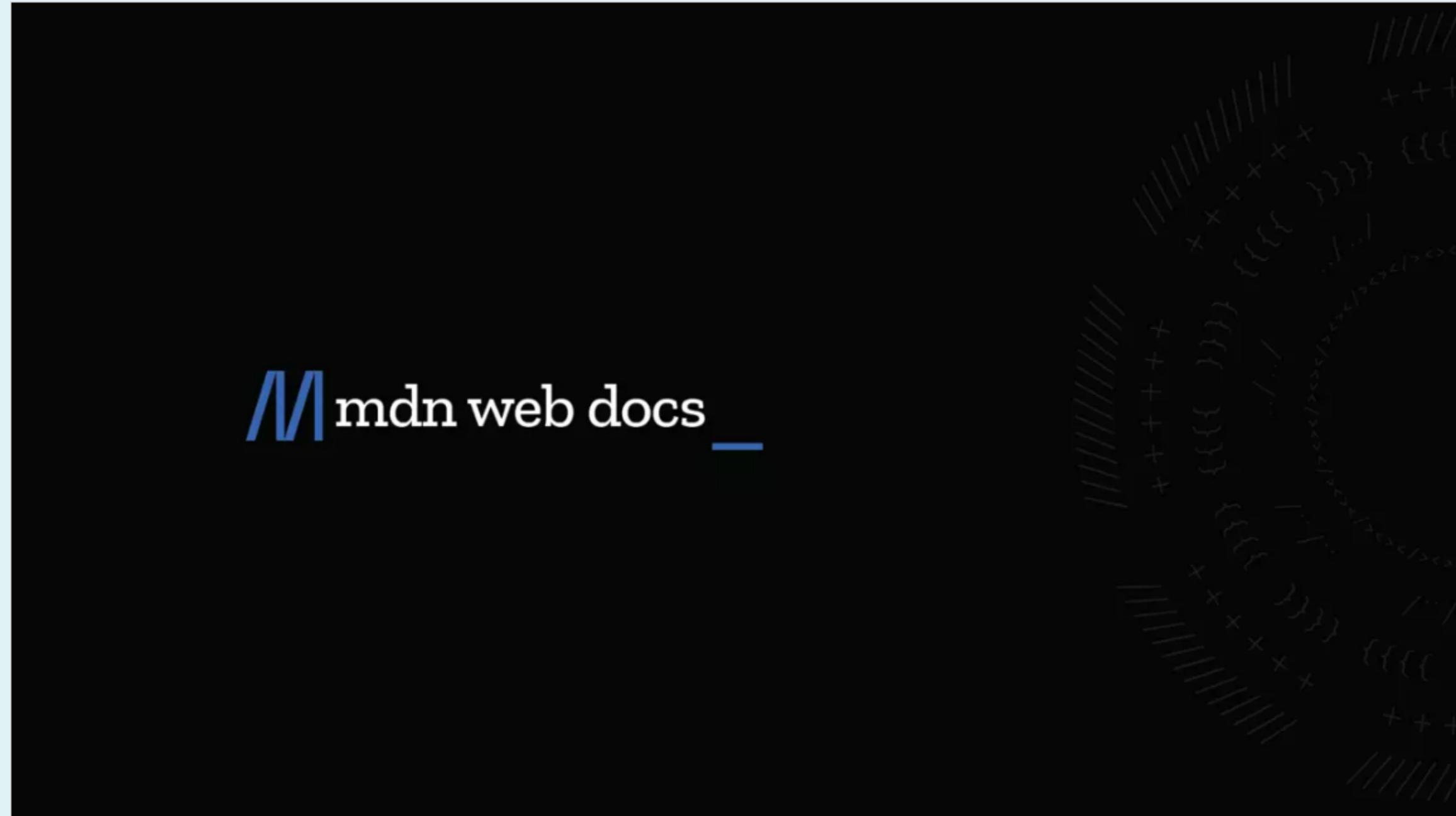
An Event Happening Soon...
From a Pulchowk Campus Organization

HTTP

Headers

```
curl -v google.com
```

```
curl -v https://filestore.metis.pp.ua/get_file/282?  
auth=b4b681709ebe6e248f49f41bce5e0755852958470f89c1b7252e9d1b64d379  
a2
```



HTTP headers - HTTP | MDN

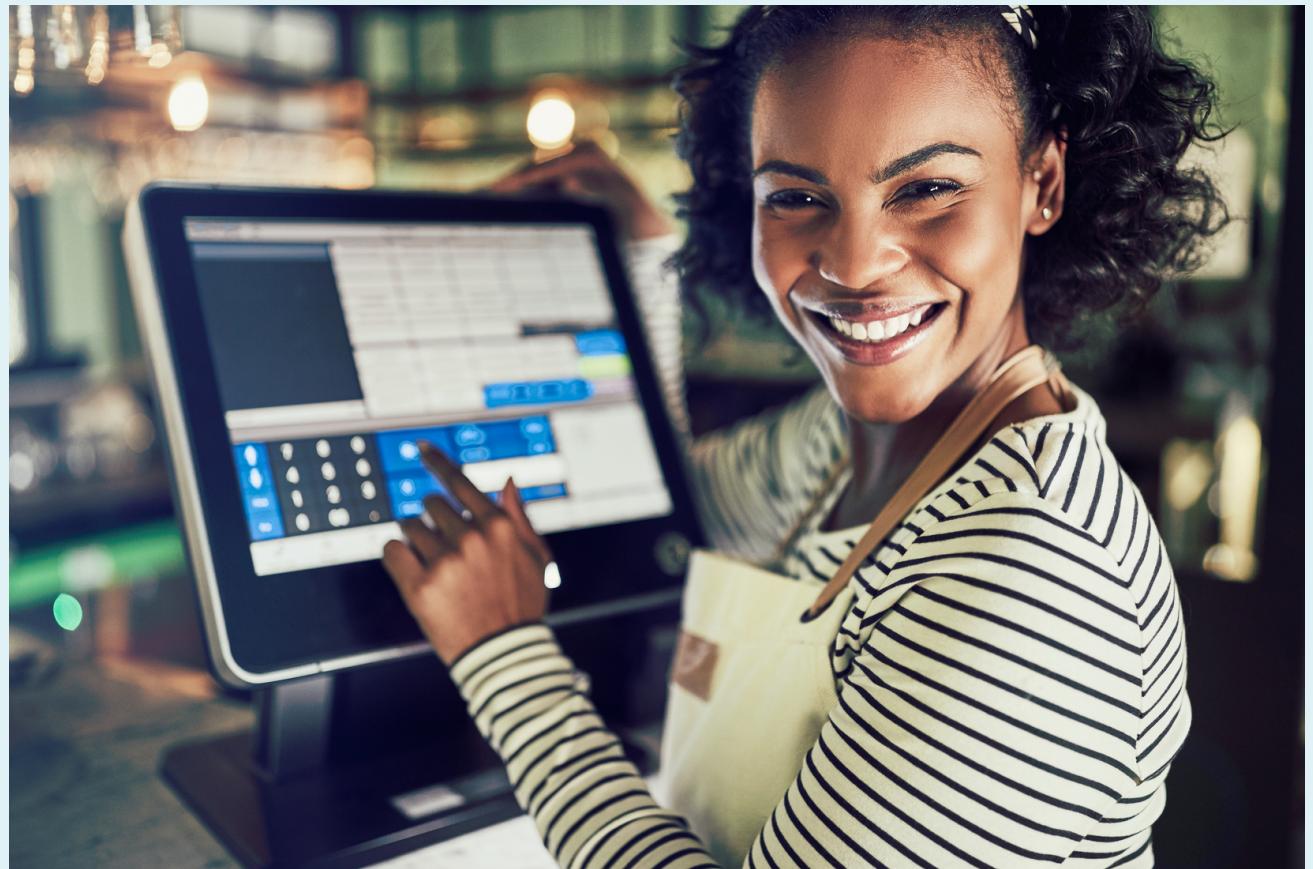
HTTP headers let the client and the server pass additional information with an HTTP request or response. An HTTP header consists of its case-insensitive name followed by a colon (:), then by its value. Whitespace before the value is ignored.

 mozilla.org

STATUS CODE

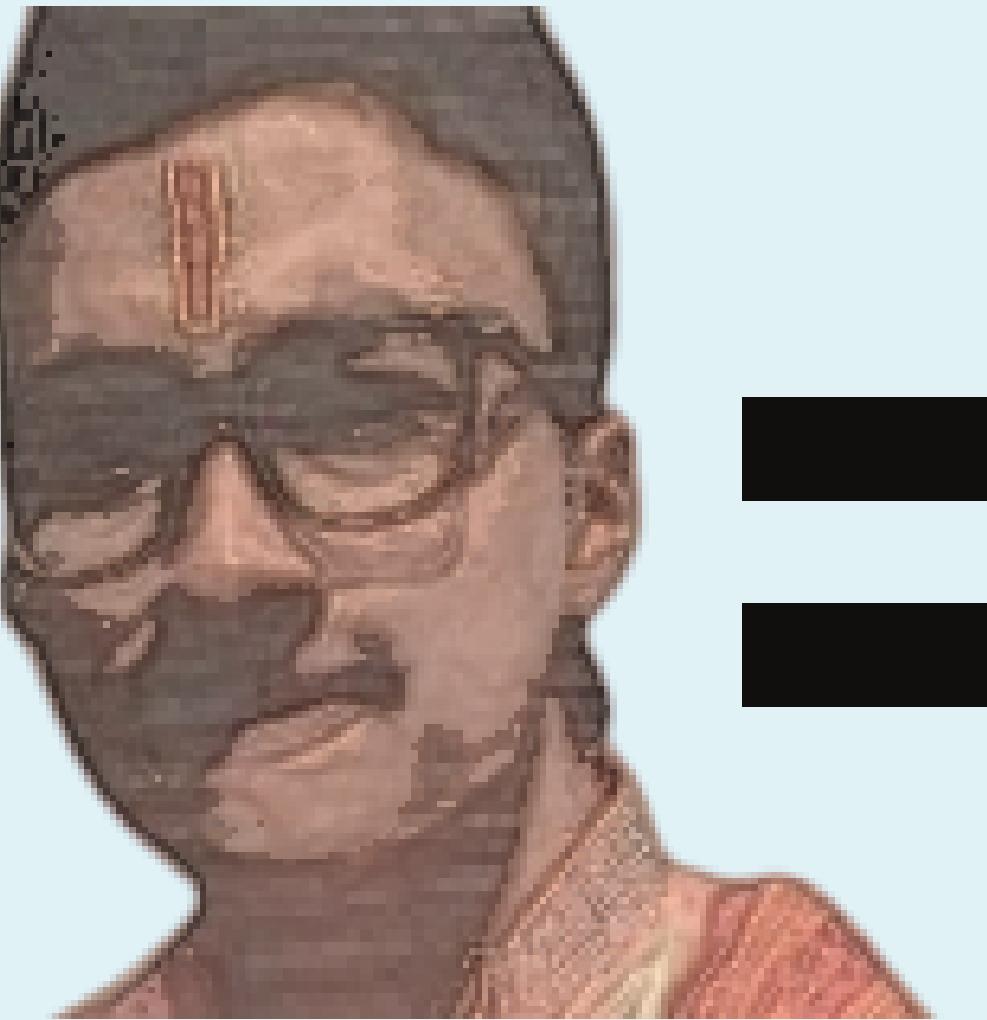
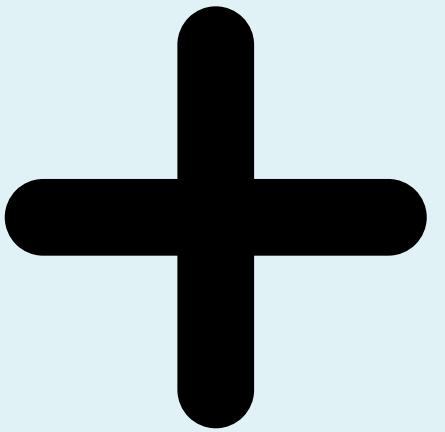
100s

Hold On



200s

Here you go



300s

I am elsewhere



307- Temporary Redirect



301- Moved Permanently



400s

Your fault

404



500s

My Fault



HTTP response status codes - HTTP | MDN

HTTP response status codes indicate whether a specific HTTP request has been successfully completed. Responses are grouped in five classes

 mozilla.org

Components

FRONT END

BACK END

Front End

Horlicks once it's home.

Lamish Brings Horlicks Home and Mixes with milk



Back End

Horlicks in the factory.

The process in the factory that produces the horlicks



Body

HTML

JS

CSS

HTML

Gives contents for a
given page

CSS

Makeup

Beauty Parlour

JavaScript

Interactivity within the page

Server Side Rendering

Full content provided by the server

Provide so that they all form a complete set of resources that can fully form a page.

Client-Side Rendering



```
GET /articles?include=author HTTP/1.1
```

HTTP/1.1 200 OK

Content-Type: application/vnd.api+json

```
{
  "data": [
    {
      "type": "articles",
      "id": "1",
      "attributes": {
        "title": "JSON:API paints my bikeshed!",
        "body": "The shortest article. Ever.",
        "created": "2015-05-22T14:56:29.000Z",
        "updated": "2015-05-22T14:56:28.000Z"
      },
      "relationships": {
        "author": {
          "data": {"id": "42", "type": "people"}
        }
      }
    ],
    "included": [
      {
        "type": "people",
        "id": "42",
        "attributes": {
          "name": "John",
          "age": 80,
          "gender": "male"
        }
      }
    ]
  }
}
```



JS Hard at Work

SPAs

Single Page Applications



REST API

The basic idea of REST is that a resource, e.g. a document, is transferred via well-recognized, language-agnostic, and reliably standardized client/server interactions. Services are deemed RESTful when they adhere to these constraints.

Beginners Defination

REST API means an HTTP service that can be called using standard web libraries and tools

GraphQL??

Web Assembly

Run languages other than JS in client side

RUST

Golang

C/C++

Python

Learning Resouce

Too much to list



Courses ▾ Programs & Degrees ▾ Schools & Partners

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Catalog > Computer Science Courses > HarvardX's Computer Science for Web Programming



CS50's Web Programming with Python and JavaScript

This course picks up where [CS50](#) leaves off, diving more deeply into the design and implementation of web apps with Python, JavaScript, and SQL using frameworks like Django, React, and Bootstrap.



Estimated 12 weeks

6–9 hours per week



Self-paced

Progress at your own speed



Free

Optional upgrade available

There is one session available:

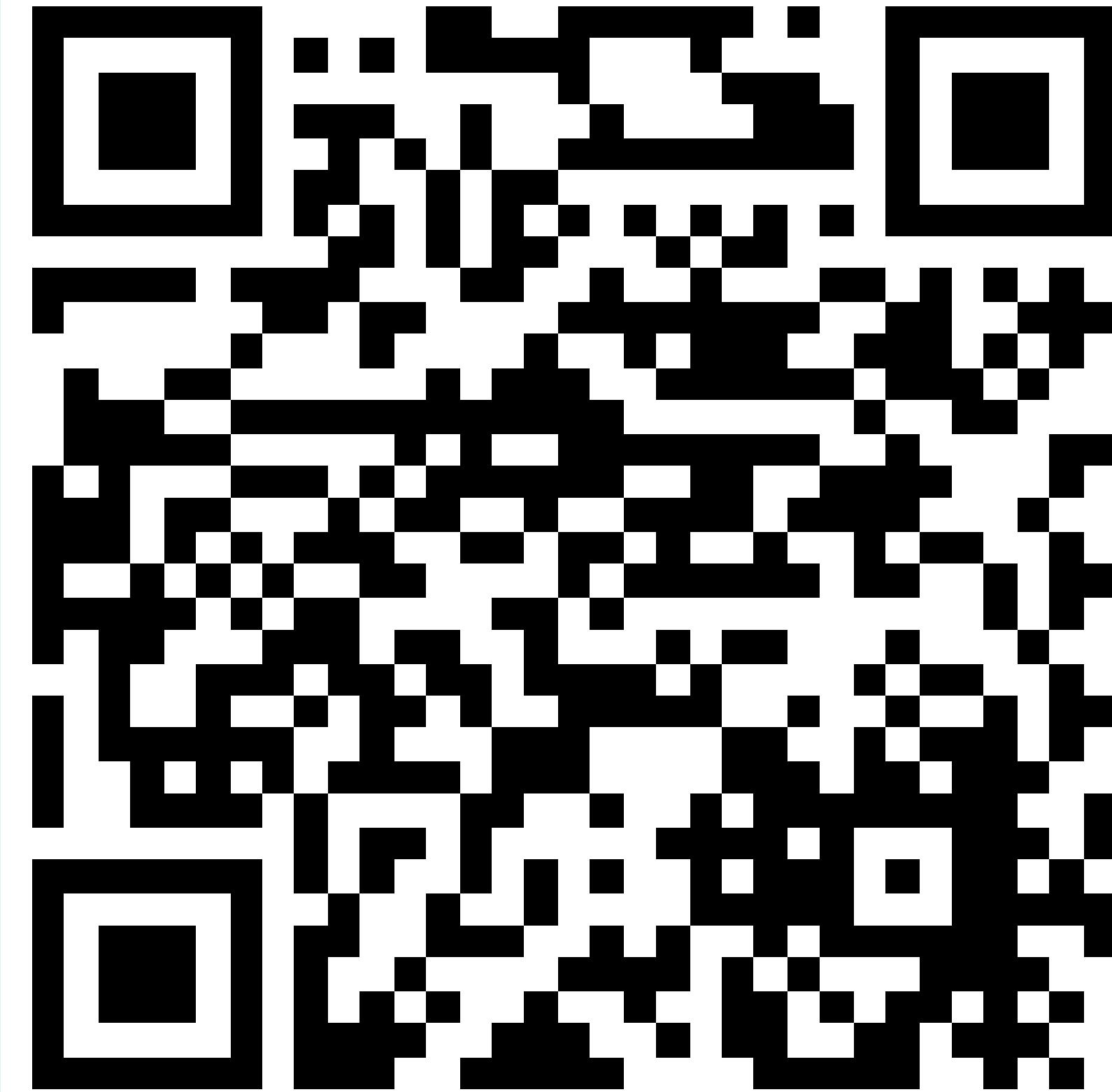
1,094,281 already enrolled! After a course session ends, it will be [archived](#) .

Starts Jun 14

Ends Dec 31

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Instructor rating  4.67/5 (775 Ratings) [\(i\)](#)



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Youtube Channels

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Derek Banas

Programming with Mosh

Academind

Traversy Media

TheNewBoston

FREE CODE CAMP

Search 8,000+ tutorials

freeCodeCamp(🔥)

Menu

Sign in

Learn to code – for free.

Build projects.

Earn certifications.

Since 2014, more than 40,000 freeCodeCamp.org graduates have gotten jobs at tech companies including:



Google



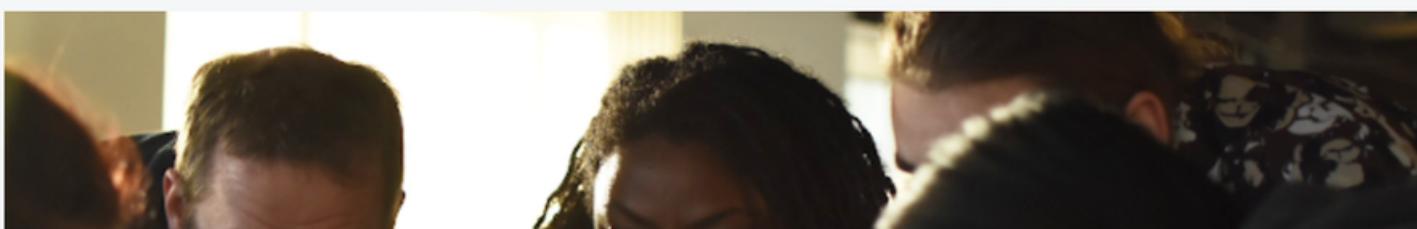
Microsoft



Spotify

amazon.com

Get started (it's free)



Transferring data from www.freecodecamp.org...

Frameworks

Best Backend Frameworks

RAILS



Express

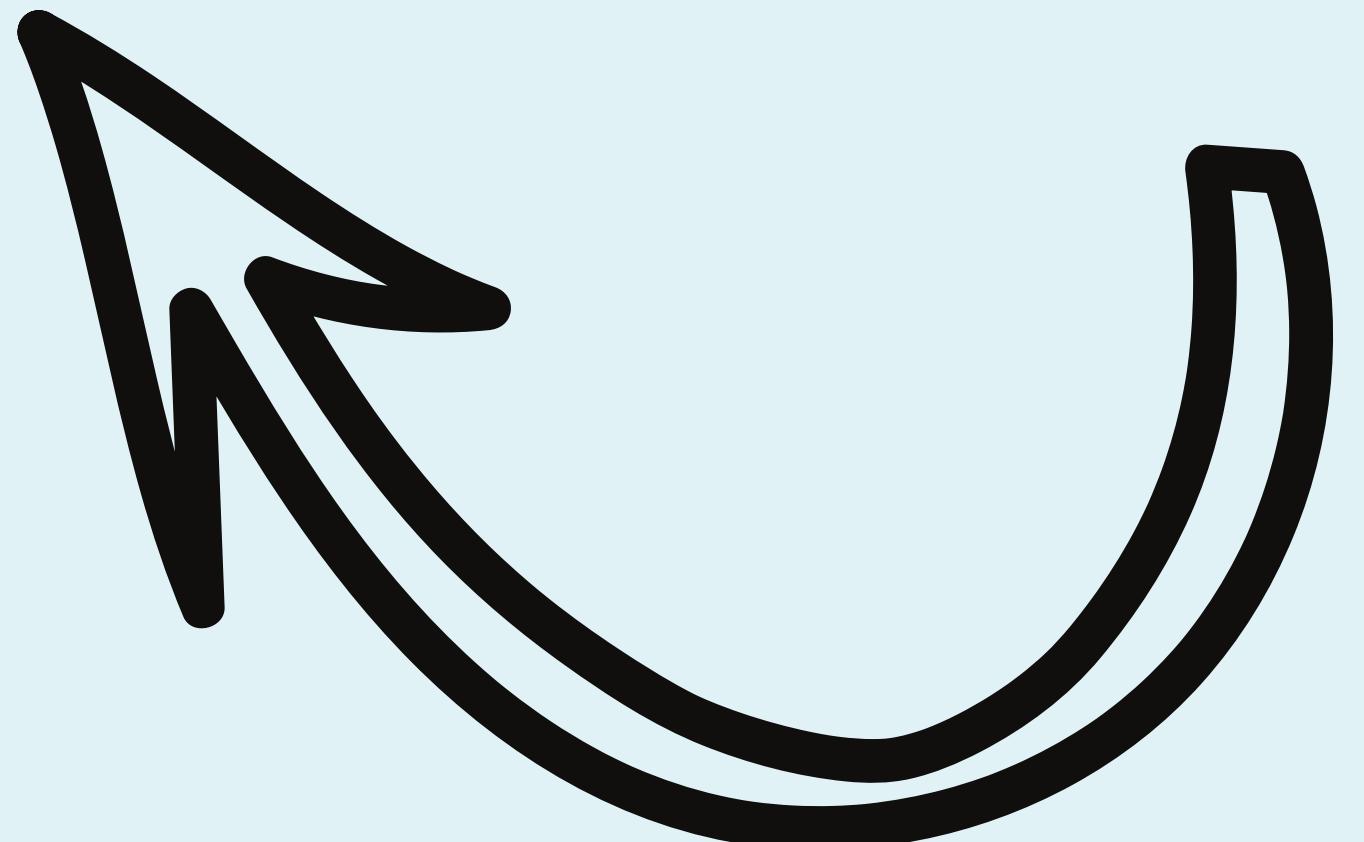
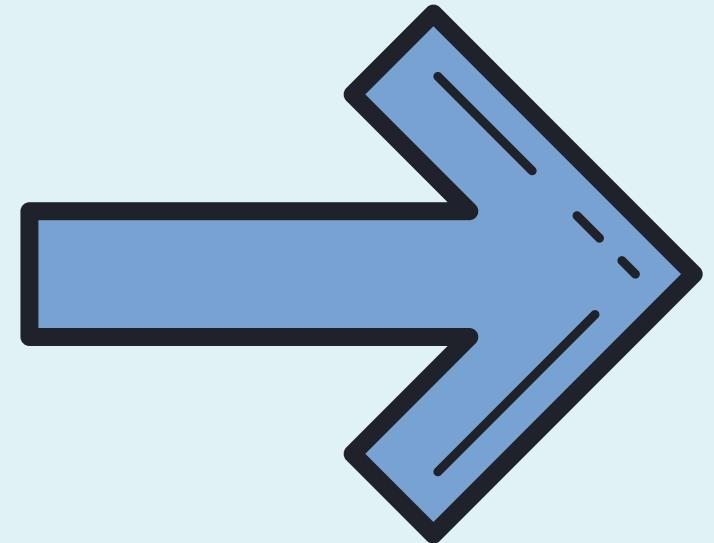
django





Deployment

Cloud





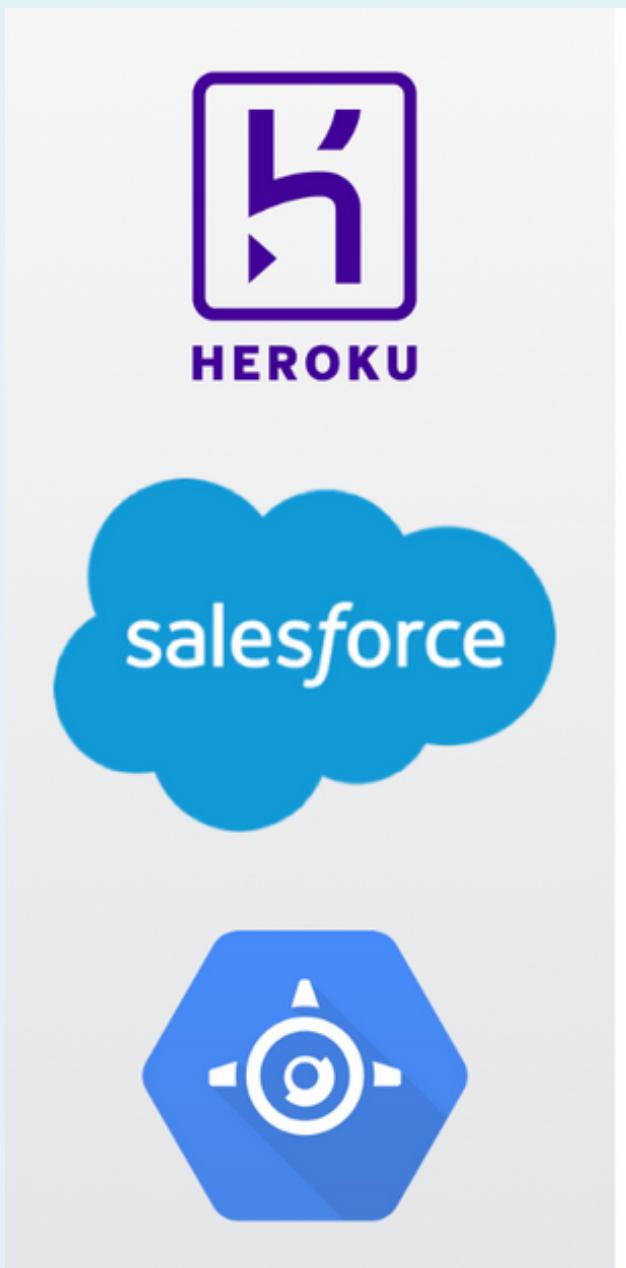
The Salesforce logo is a blue cloud icon with the word "salesforce" written in a lowercase, white, sans-serif font inside it.



IAAS



PAAS



BAAS

BaaS



Firebase



Skygear



Parse Server

SAAS

SaaS



SERVERLESS ...





Back4App



Parse



Kinvey



AWS Lambda



Azure Functions

Serverless Hosting Providers



Cloudflare Workers



Google Cloud
Functions



IBM Cloud
Functions

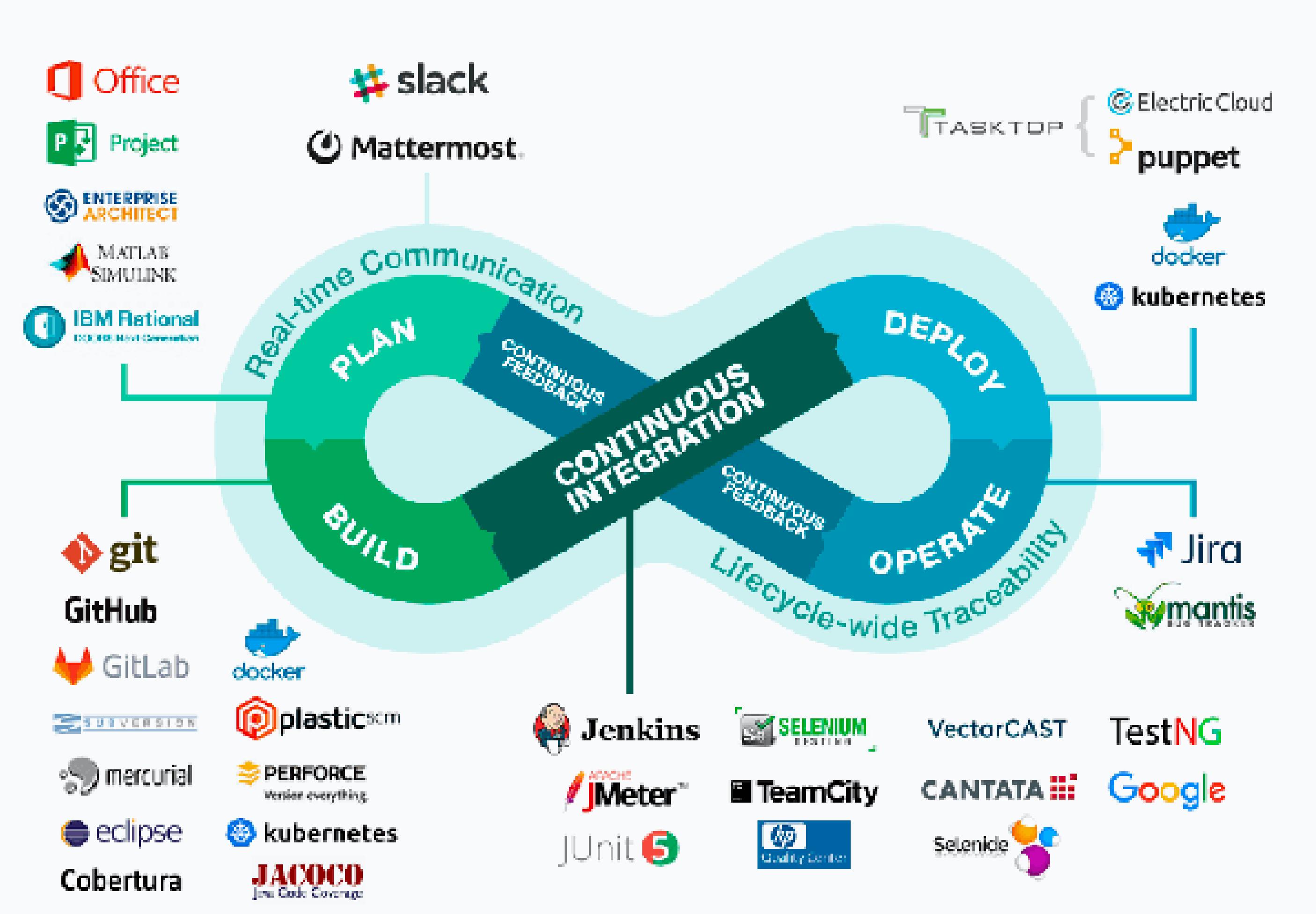


Oracle Functions

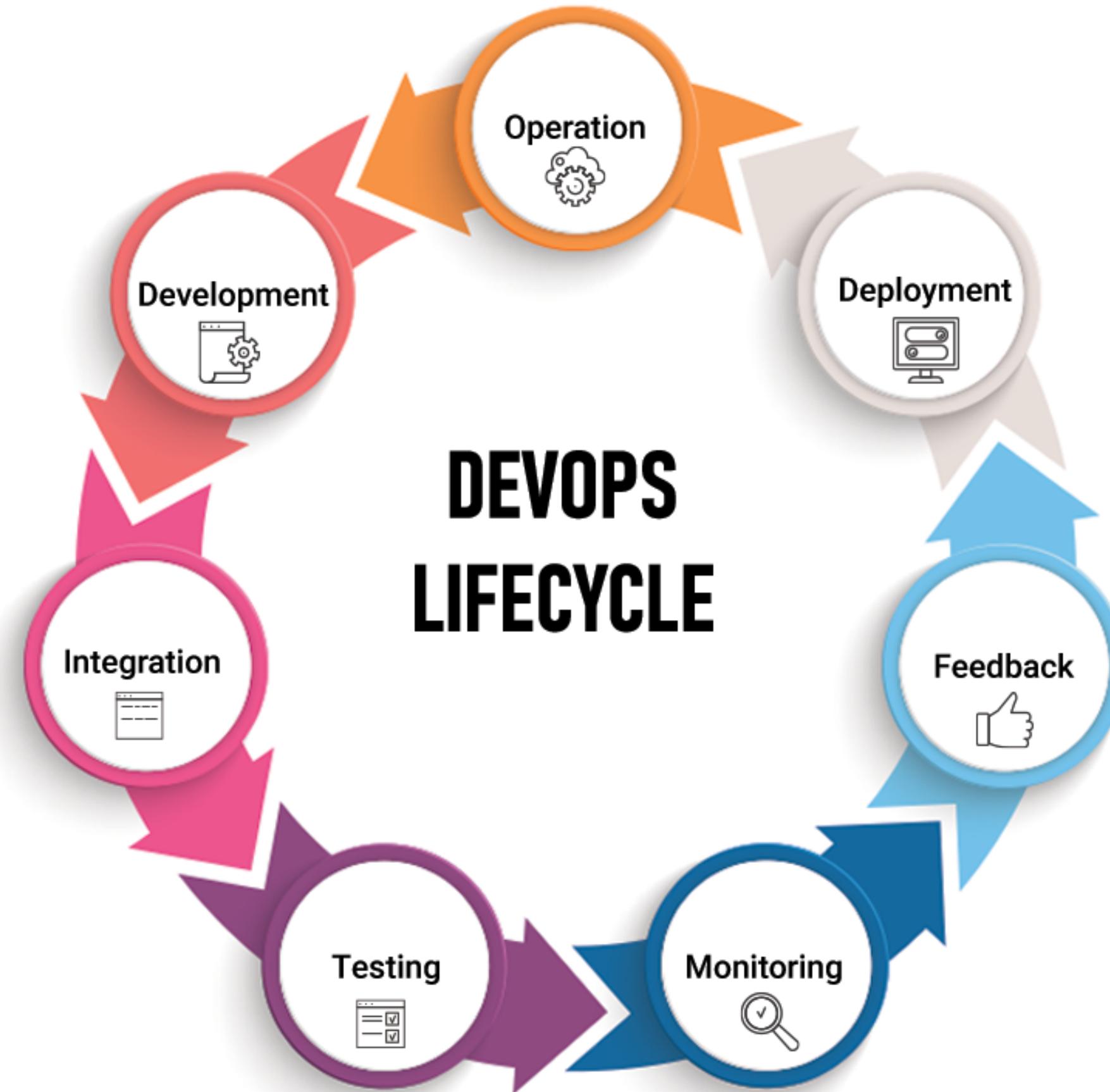


Knative

DevOPS



DEVOPS LIFECYCLE



<https://www.toolbox.com/tech/devops/articles/what-is-devops-lifecycle/>





Thank You



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Pulchowk
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