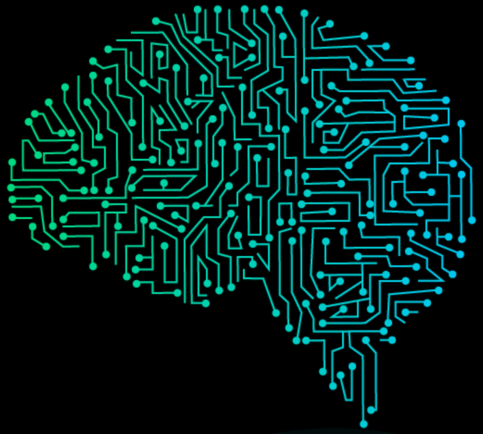
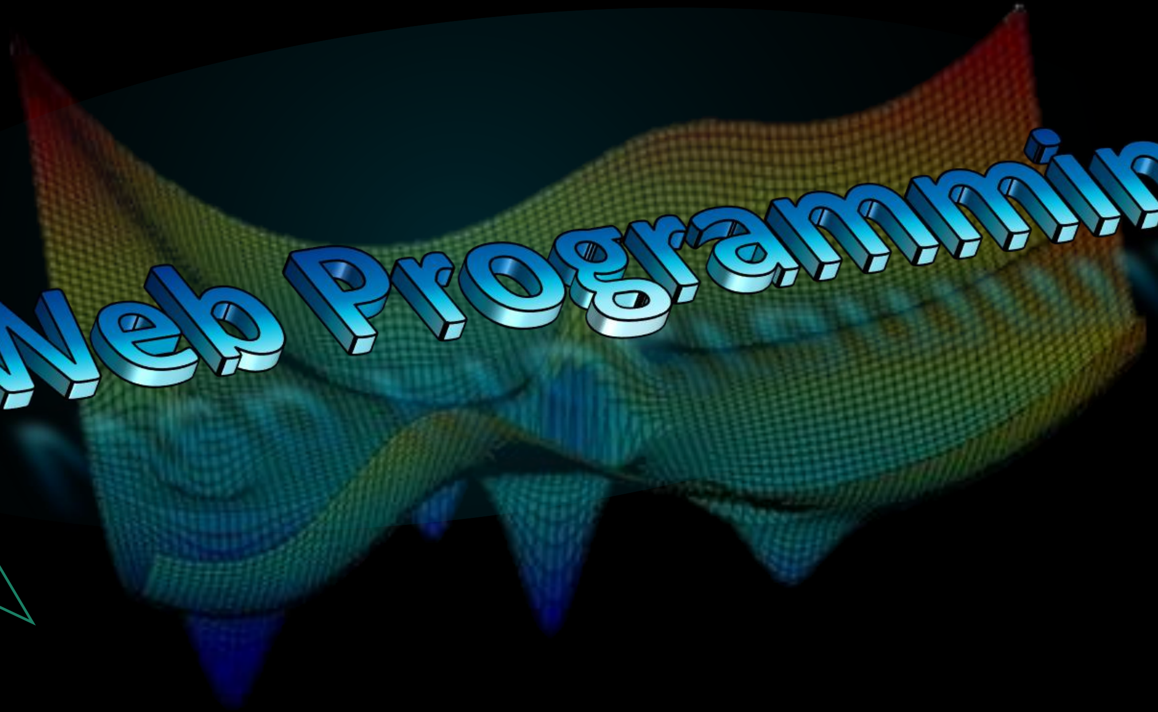
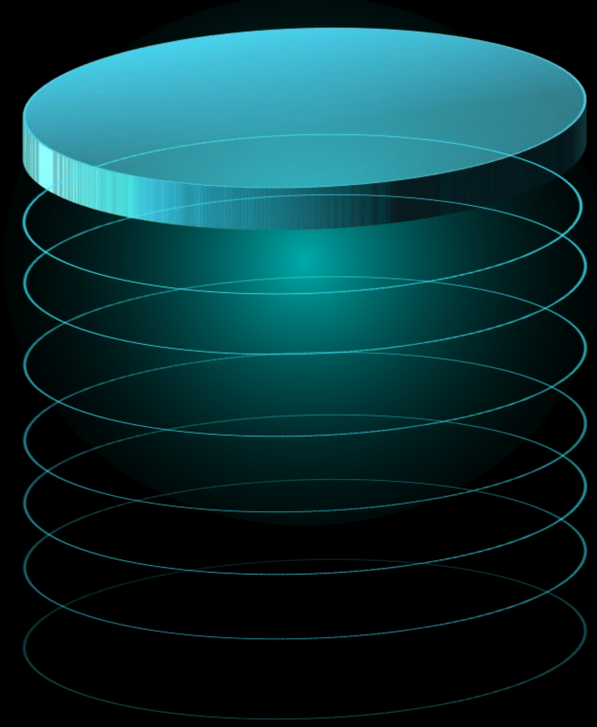
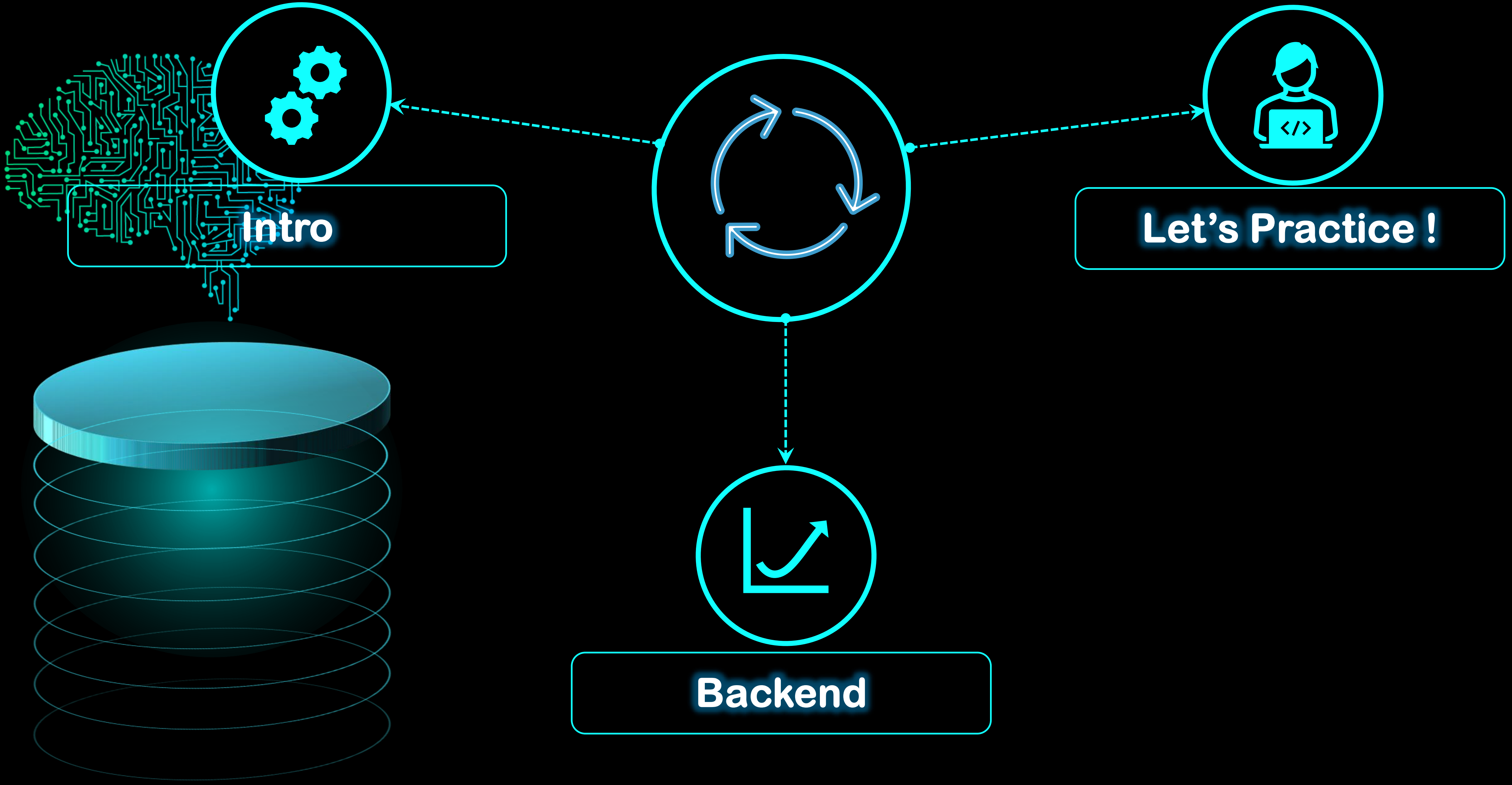




Web Programming



Backend

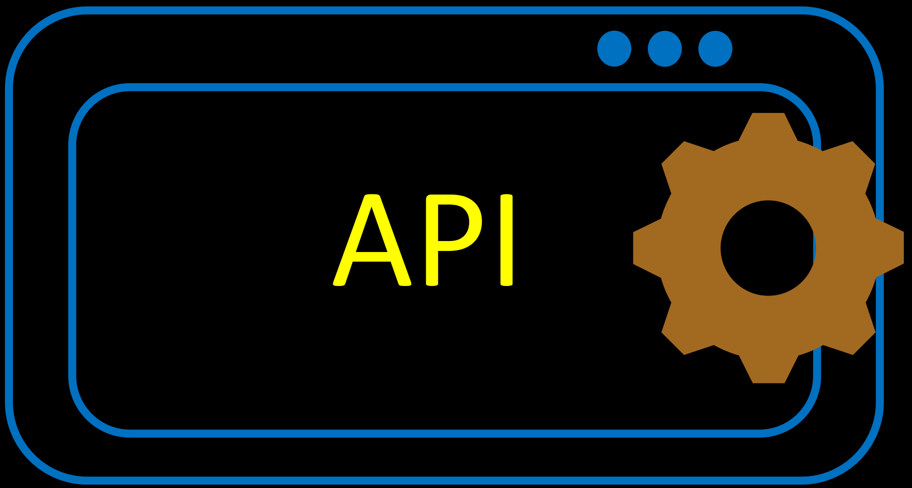


Intro

Let’s Practice !

Backend

API?



Application Programming Interface

API?

Application Programming Interface

Any software that has a specific purpose and function

API?

Application Programming Interface

Contract between two applications that dictates how they talk to each other using requests and responses

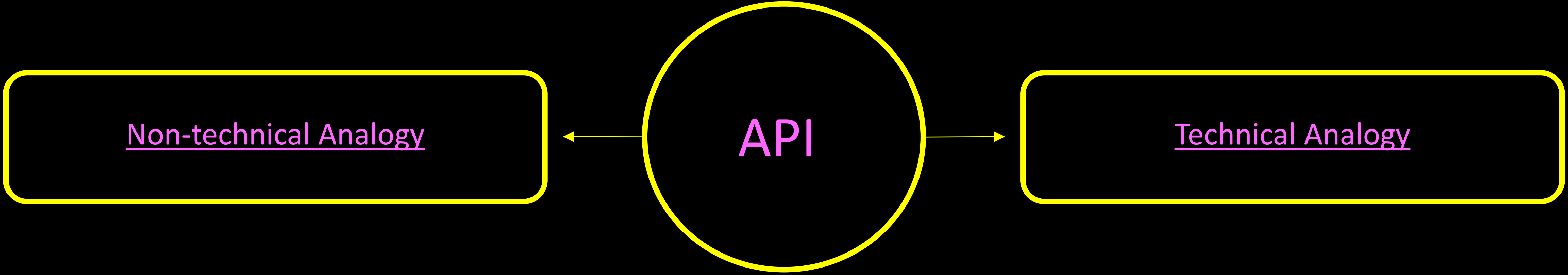
API ?

Application Programming Interface

A way for different applications to communicate with each other

API

API?



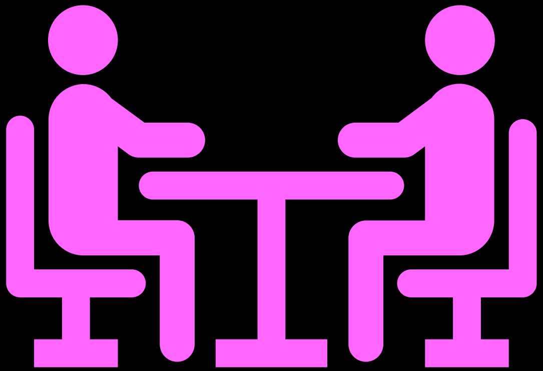
API

Non-technical Analogy

Technical Analogy

API?

Non-technical Analogy



Call

Request

Response

API?

Technical Analogy

API?

Apple Weather App

Apple decided to set up weather monitoring stations.

These weather monitoring stations are very expensive.

Apple weather app store all data coming from stations.

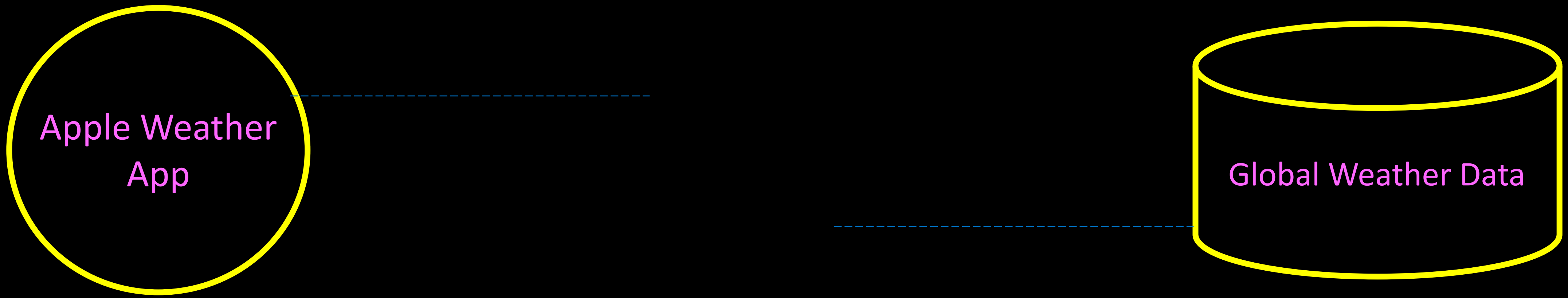
No one can access Apple weather’s data directly.

Apple created Weather.com API to share the data with people.

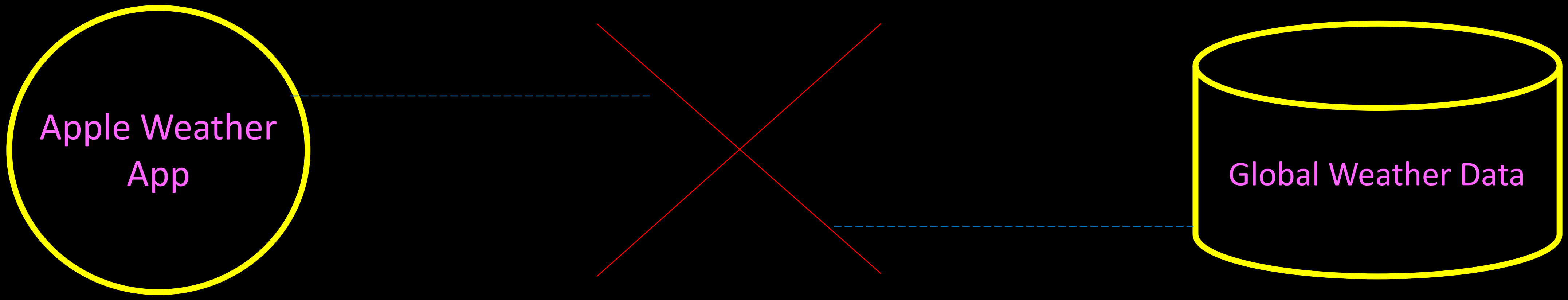
Anyone can access Apple weather’s data through this API but in specific way that weather.com allows.

Apple can populate its weather data through this API.

API?



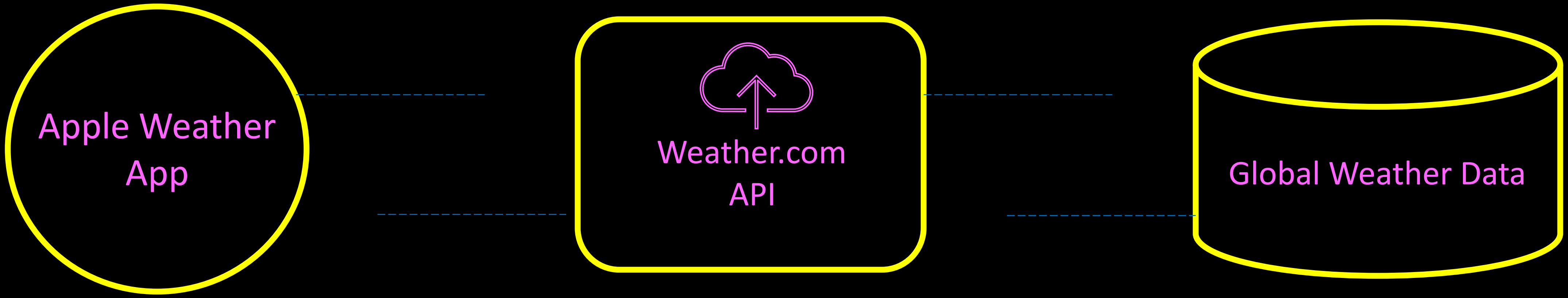
API ?



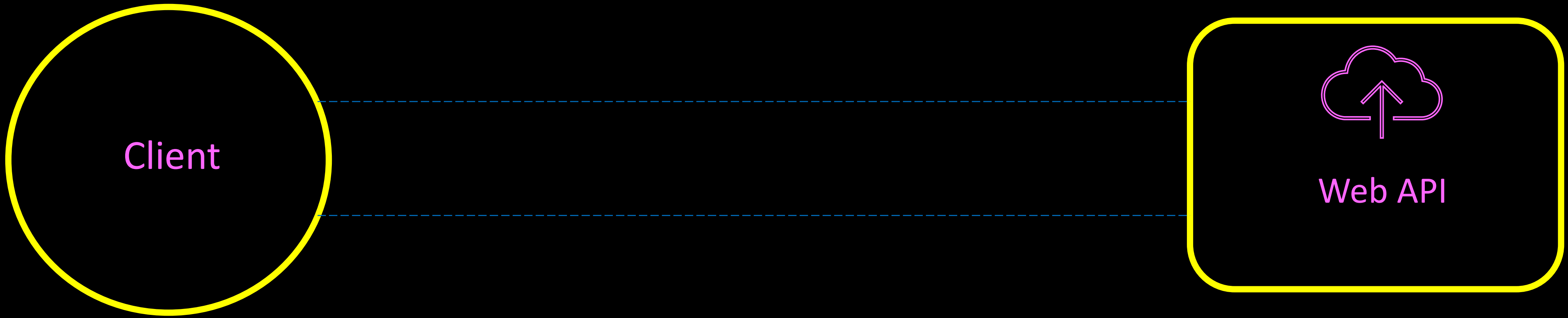
Apple Weather App

Global Weather Data

API?



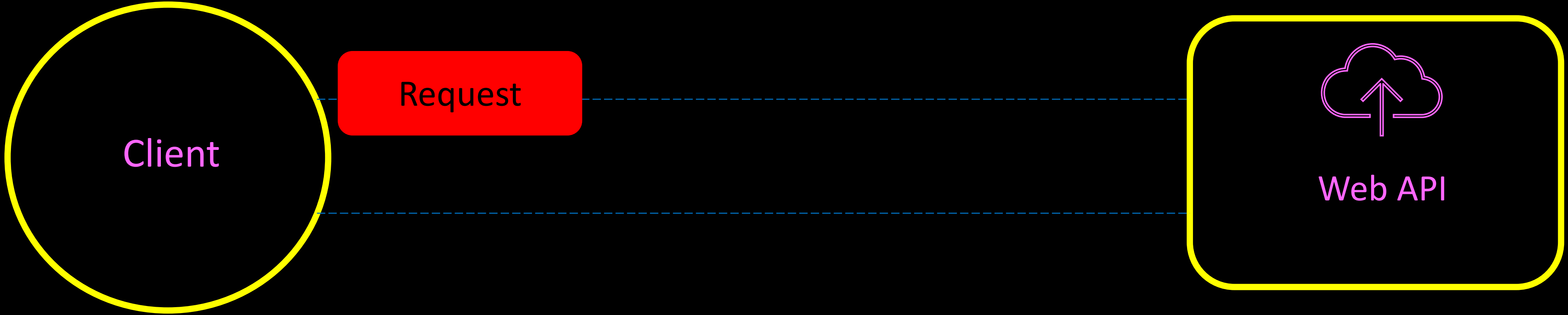
API ?



Client

Web API

API ?

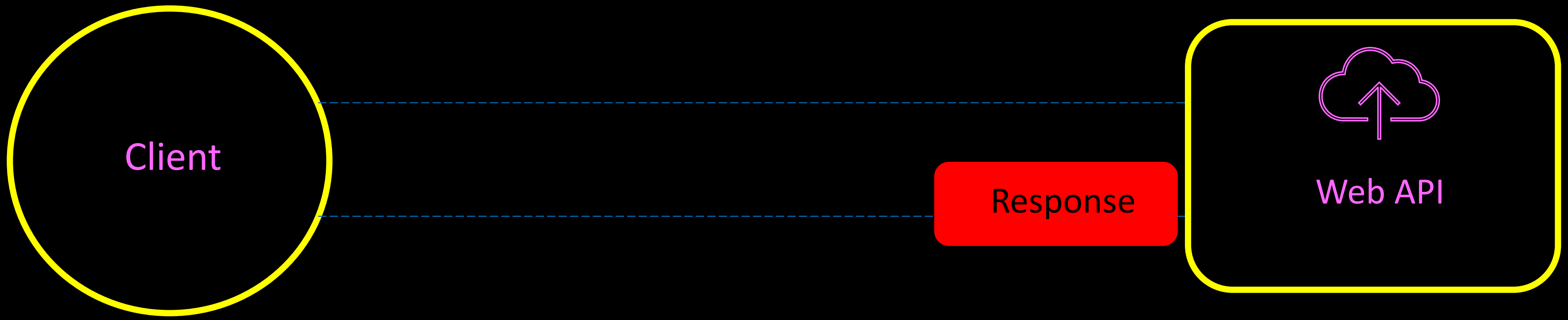


Client

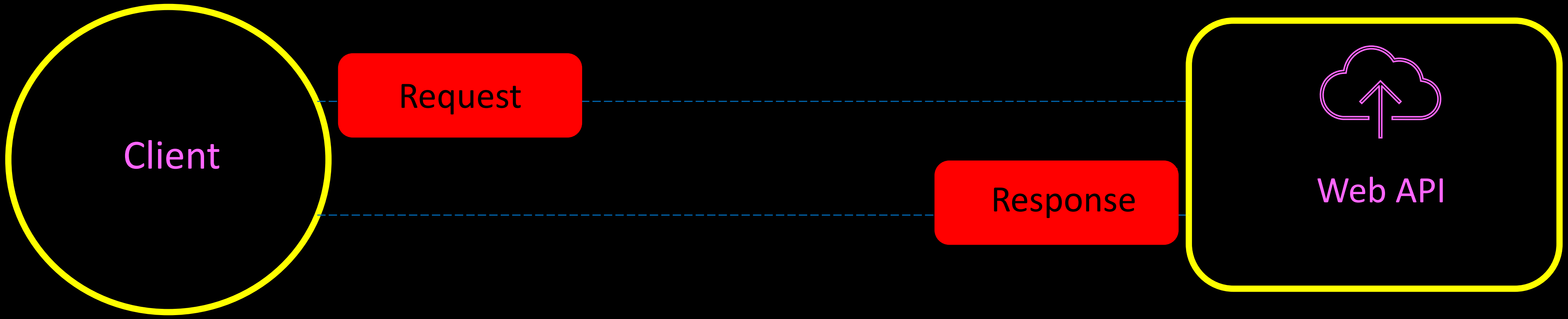
Request

Web API

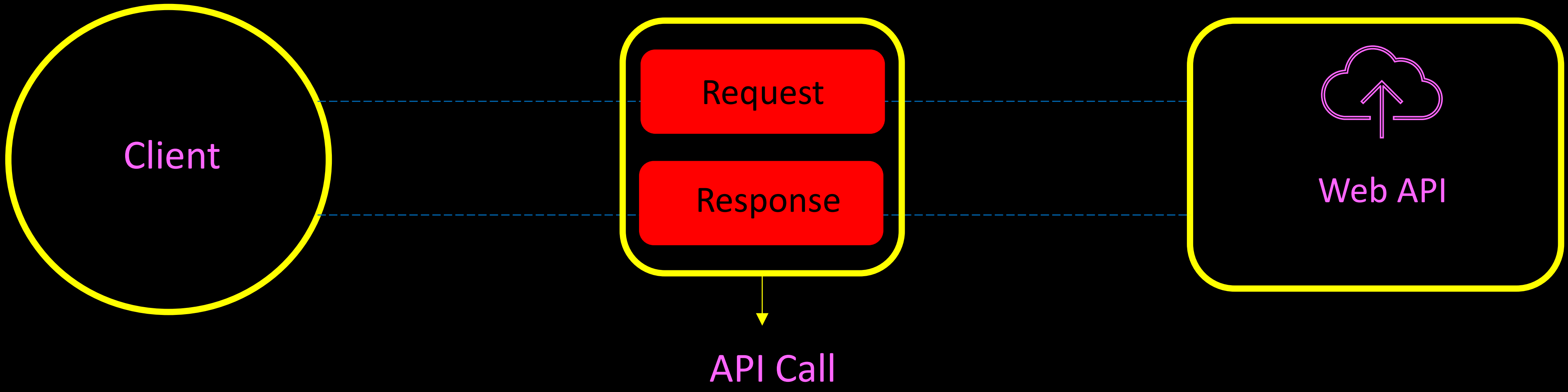
API?



API?

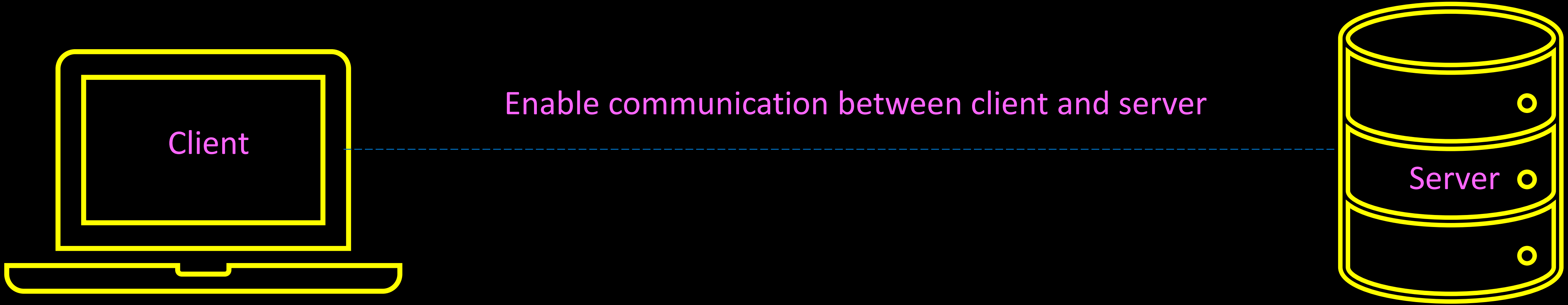


API?



HTTP?

Hyper Text Transfer Protocol



Enable communication between client and server

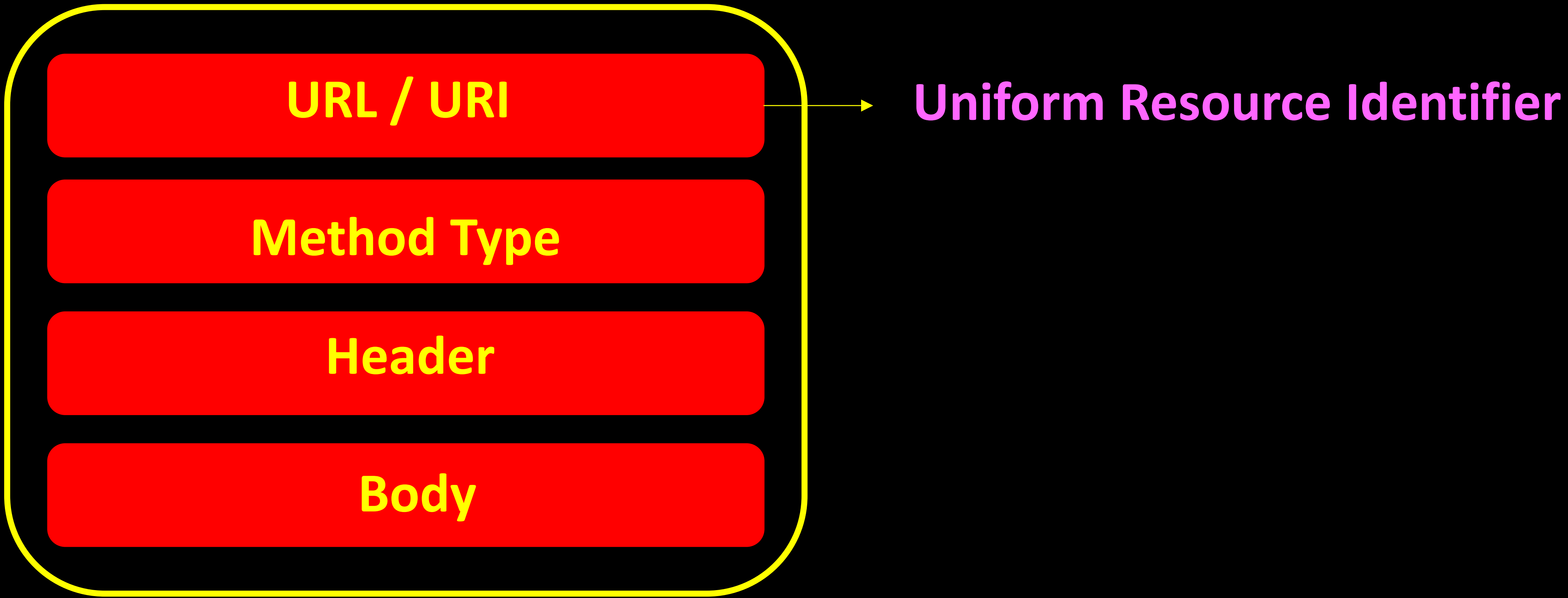
Request?

Anatomy

- URL / URI
- Method Type
- Header
- Body

Request ?

Anatomy



URL / URI

Method Type

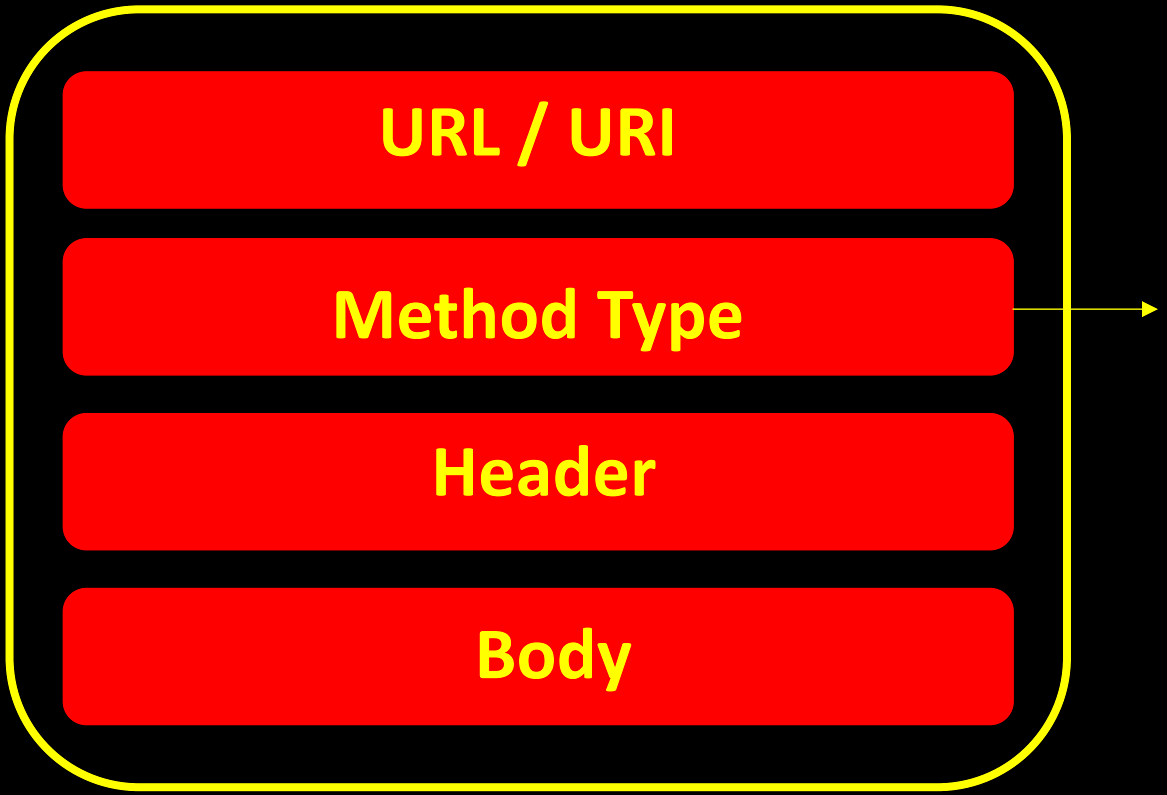
Header

Body

Uniform Resource Identifier

Request?

Anatomy



URL / URI

Method Type

Header

Body

Many types :

GET

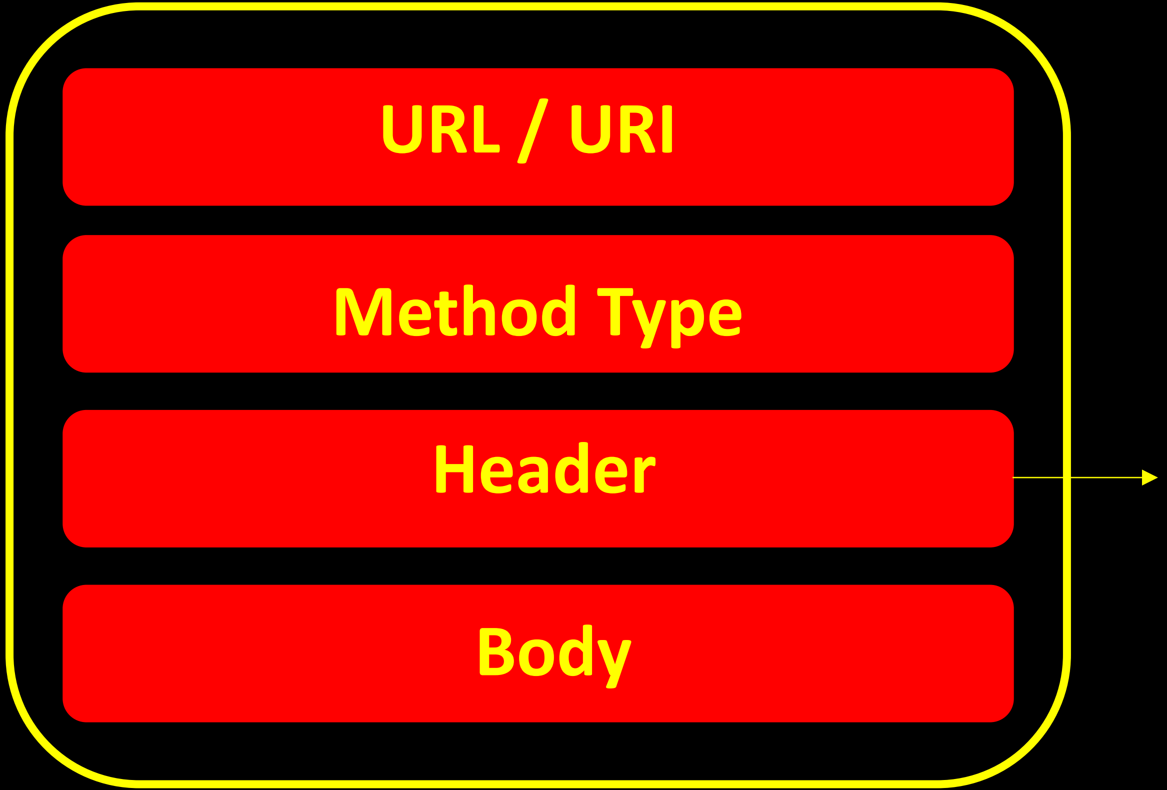
POST

PUT

DELETE

Request?

Anatomy



URL / URI

Method Type

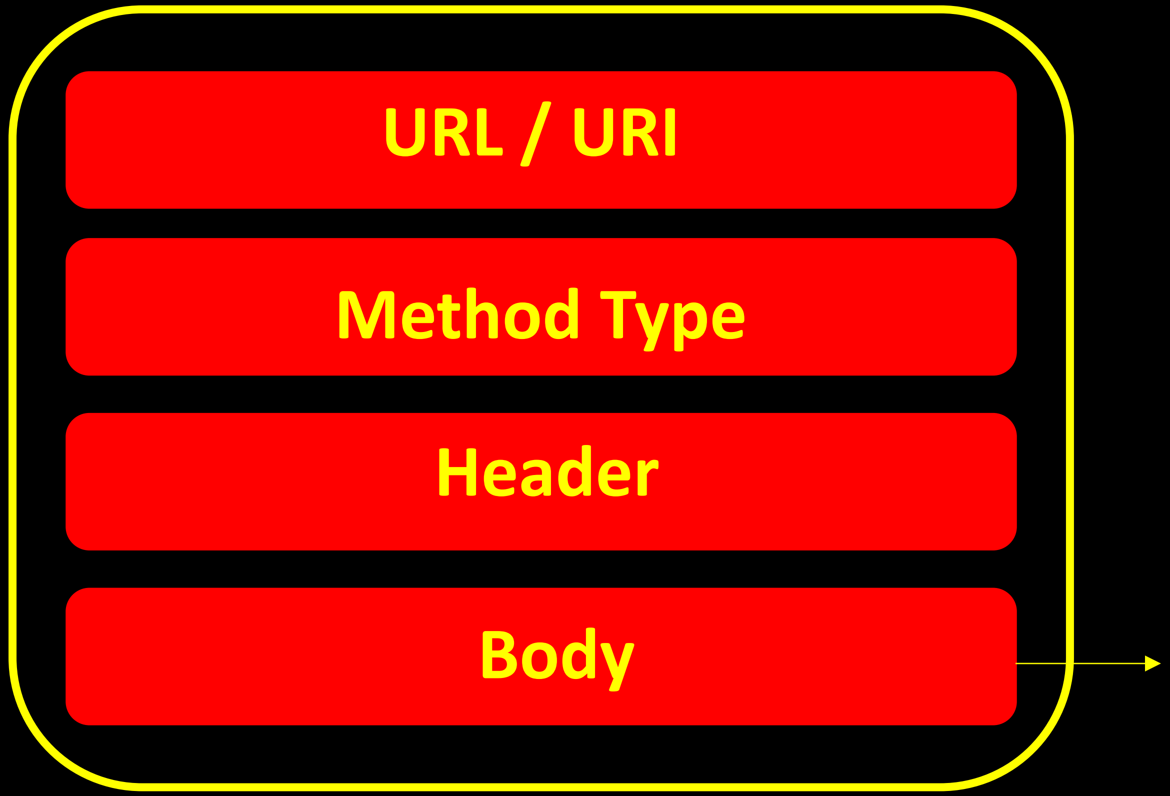
Header

Body

Content type:
What kind of content are you sending through this request

Request?

Anatomy



URL / URI

Method Type

Header

Body

It is where the content lie. Some methods have body and other don’t.

Request Method ?

HTTP Verbs

Can have one of handful of predefined values.

GET POST PUT DELETE HEAD

PATCH OPTIONS

TRACE

CONNECT

Request Method ?

HTTP Request is referred to by the value of its request method

POST	GET	UPDATE	DELETE
C	**R**	**U**	**D**

GET Request?

GET requests are only used to request data (not modify)

GET request can be bookmarked

GET request can be cached

GET request is used to request data from a specified resource

GET request should never be used when dealing with sensitive data

GET request have length restrictions

GET request remain in the browser history

The data sent to the server with GET is stored in the request header

POST Request ?

POST request is used to send data to a server to create/update a resource

POST request is never cached

POST request cannot be bookmarked

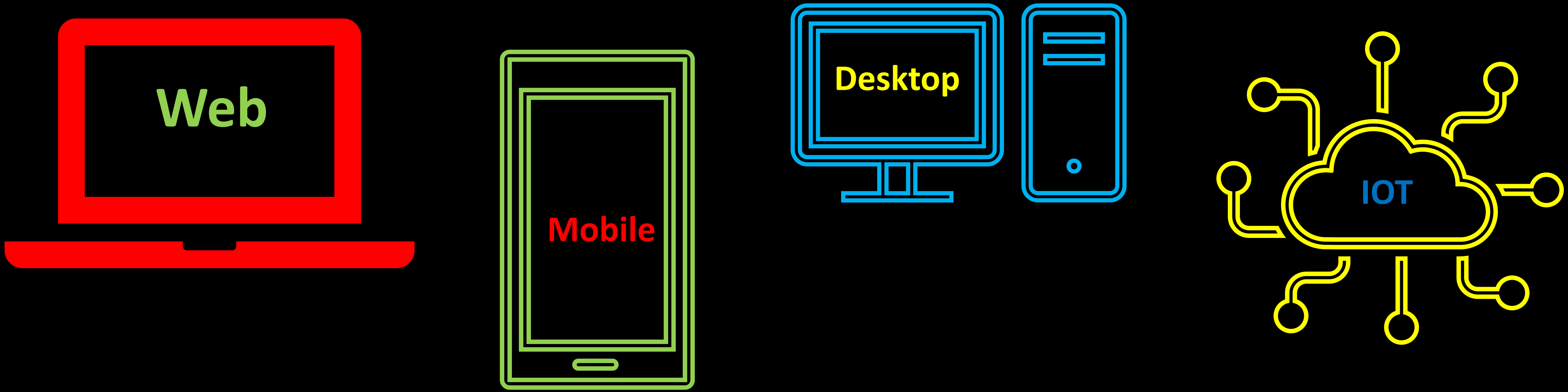
POST requests have no restrictions on data length

POST request does not remain in the browser history

The data sent to the server with POST is stored in the request body

Backend?

It isn't restricted to only one platform



Backend?

Backend Service

Backend?

Server

Backend Service

DB

PHP?

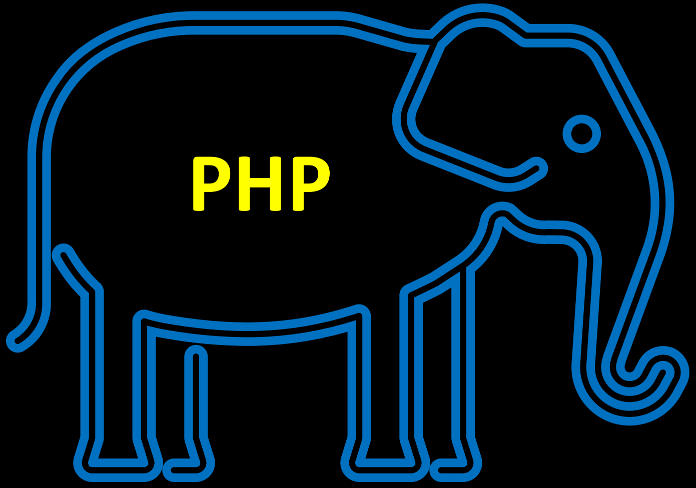
Variables

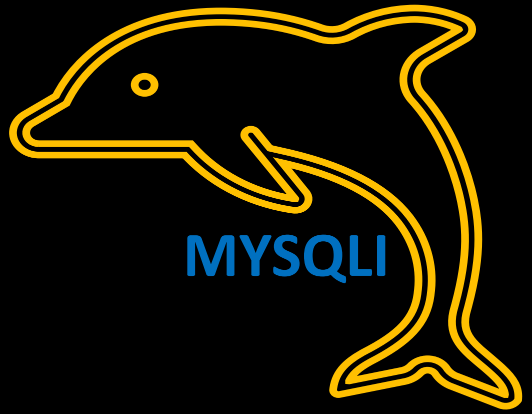
Arrays

Superglobals

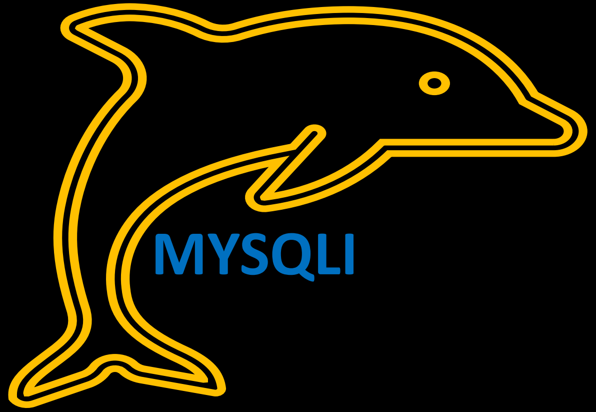
PHP?

MYSQLI vs PDO





PHP?



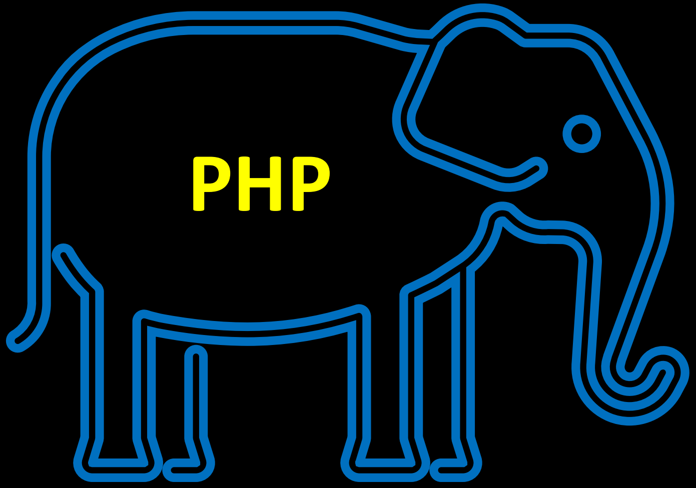
using built-in functions

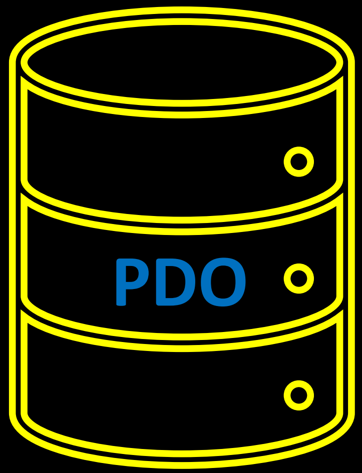
using OOP

Support MYSQL

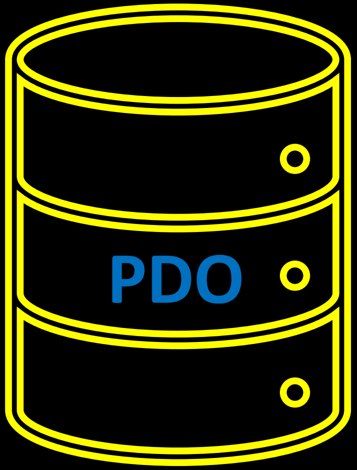
PHP?

MYSQLI vs PDO





PHP?



using OOP

Support most databases (12 DBs)

Framework connection uses PDO

PHP?

Database?

mysqli_connect()

PHP method for creating a connection to a MySQL database.

Enable PHP apps to interact with MySQL databases through executing queries, retrieving data and performing different database operations.

Initiates a connection with MySQL server and returns a connection object if connected or FALSE if not.

Database?

mysqli_connect()

```
mysqli_connect( "host", "username", "password", "database_name" );
```

host: The hostname or IP address of the MySQL server.
username: The username of MySQL database server.
password: The password of the mentioned username.
database (optional): Database name you to perform operations on.
port (optional): The port number of the MySQL server (Default is 3306).

Database?

mysqli_query()

Performs a query on a selected database.

mysqli_query(connection, query)

connection: Connection object created using mysqli_connect().
query: SQL query you want to execute on database.

Database?

mysqli_multi_query()

Performs one or more queries on a selected database.

mysqli_multi_query(connection, query)

connection: Connection object created using mysqli_connect().

query: SQL one or more queries (separated by ;) you want to execute on database.

Database?

mysqli_affected_rows()

Return the total number of affected rows from the database query.

mysqli_multi_query(connection)

Number greater than 0: Total number of affected rows.
Number less than 0: There is an error.
Number equal to 0: There is no effect.

Database?

mysqli_fetch_all()

Fetches all rows as an associative array or a numeric array (Multidimensional Array).

mysqli_fetch_all(query, mode)

If mode is 1 or MYSQLI_ASSOC: Associative array.
If mode is 2 or MYSQLI_NUM (default): indexed or numeric array.

Database?

mysqli_fetch_assoc()

Fetch a result row as an associative array (One Dimensional Array).

mysqli_fetch_assoc(query)

Database?

isset()

Check whether a variable is empty or if it is already declared.

```
isset(variable)
```

If variable exists and not NULL: True.
If variable doesn’t exist or not NULL: False.

Database?

strlen()

Returns the length of a given string.

```
strlen(string)
```

Database?

Str_replace()

Replace all the occurrences of the search string or array of search strings by replacement string or array of replacement strings in the given string or array respectively.

strlen(searchVal, replaceVal, subjectVal)

searchVal: String or array.
replaceVal: String or array.
subjectVal: String or array.

Database?

explode()

Split a string into different strings based on a string delimiter.

```
explode(separator, OriginalString)
```

Any Questions

TA. Andew Adel Labib