HTTP verbs

HTTP verbs (or methods) are actions that describe what you want to do with a resource on a server. Think of them as commands that tell the server what you want to do. Here's a simple breakdown:

1. GET: "Give me something"

- Used to **retrieve data** from the server.

- It's like reading information without changing anything.

- Example: Viewing a list of products on a website.

  Request Example:

  ```
  GET /products
  ```

  Response: A list of products.

2. POST: "Create something new"

- Used to **send data** to the server to create a new resource.

- It's like filling out a form to register or add a new item.

- Example: Adding a new product to the inventory.

  Request Example:

  ```
  POST /products
  Content-Type: application/json

  {
      "name": "Laptop",
      "price": 999.99
  }
  ```

  Response: Confirmation of the new product creation.

3. PUT: "Replace something"

- Used to **update or replace** an existing resource entirely.

- Example: Changing all details of a product.

  Request Example:

  ```
  PUT /products/1
  Content-Type: application/json

  {
      "name": "Gaming Laptop",
      "price": 1299.99
  }
  ```

  Response: Updated product details.

4. PATCH: "Update part of something"

- Used to **update only specific parts** of an existing resource.

- Example: Updating just the price of a product.

  Request Example:

  ```
  PATCH /products/1
  Content-Type: application/json

  {
      "price": 1199.99
  }
  ```

  Response: Updated product with the new price.

5. DELETE: "Remove something"

- Used to **delete a resource** on the server.

- Example: Removing a product from the inventory.

  Request Example:

```
DELETE /products/1
```

Response: Confirmation that the product was deleted.

Summary Table

HTTP Verb	Purpose	Example Action
GET	Retrieve data	View a list of items (read-only).
POST	Create a new resource	Add a new item to a database.
PUT	Replace a resource	Overwrite an item with new information.
PATCH	Update a resource	Modify specific details of an item.
DELETE	Remove a resource	Delete an item from the database.

Analogy: Library

- **GET**: Ask for a book to read.
- **POST**: Donate a new book to the library.
- **PUT**: Replace an old edition of a book with a new one.
- **PATCH**: Fix one page of a book without replacing the whole book.
- **DELETE**: Remove a book from the library permanently.

By understanding these verbs, you can effectively communicate with APIs or servers in a web application!