# HTTP Methods

🧠 **HTTP Methods কী?**

👉 **HTTP Method বলে দেয়**
**Client server-কে কী করতে বলছে।**

🔷 **5টা সবচেয়ে Important HTTP Methods**

### 1. GET — Read

👉 Server থেকে data আনার জন্য

**Example**

GET /users/10

📌 Rules:

- Data change করবে না
- Body থাকে না
- Safe method

### 2. POST — Create

👉 নতুন data তৈরি করার জন্য

**Example**

POST /users

📌 Rules:

- Server-এ new resource create করে

- Body থাকে

- Idempotent না

## 3. PUT — Full Update

👉 পুরা resource replace করে

**Example**

PUT /users/10

📌 Rules:

- সব field পাঠাতে হয়

- Idempotent

## 4. PATCH — Partial Update

👉 কিছু field update করে

**Example**

PATCH /users/10

📌 Rules:

- Only changed field পাঠাও

- Efficient

## 5. DELETE — Remove

👉 Resource delete করার জন্য

**Example**

DELETE /users/10

📌 Rules:

- Idempotent

- Resource remove করে

🧠 **PUT vs PATCH (Interview Favorite ❗ )**

| PUT | PATCH |
|---|---|
| Full replace | Partial update |
| Missing field → delete | Missing field unchanged |
| Less flexible | More flexible |

📬 **HTTP Status Codes কী?**

👉 **Status Code বলে দেয়
Server request টা কীভাবে handle করলো।**

🔷 **Status Code Categories**

| Range | Meaning |
|---|---|
| 2xx | Success |
| 3xx | Redirect |
| 4xx | Client Error |
| 5xx | Server Error |

## ✅ Common & Important Status Codes

### 🟢 2xx — Success

| Code | Meaning |
|------|---------|
| 200 | OK |
| 201 | Created |
| 204 | No Content |

### 🔁 3xx — Redirect

| Code | Meaning |
|------|---------|
| 301 | Permanent Redirect |
| 302 | Temporary Redirect |

📌 TinyURL এখানে 301 / 302 use করে

### 🔴 4xx — Client Error

| Code | Meaning |
|------|---------|
| 400 | Bad Request |
| 401 | Unauthorized |

| 403 | Forbidden |
|-----|-----------|
| 404 | Not Found |
| 429 | Too Many Requests |

## 🔥 5xx — Server Error

| Code | Meaning |
|------|---------|
| 500 | Internal Server Error |
| 502 | Bad Gateway |
| 503 | Service Unavailable |

## 🧠 Real Example Flow

1. Client → POST /users

2. Server → user create

3. Server → 201 Created

4. Client → GET /users/999

5. Server → not found

6. Server → 404 Not Found

## ❌ Common Beginner Mistakes

🚫 GET দিয়ে data change করা
🚫 Wrong status code return
🚫 200 সব জায়গায় ব্যবহার


## 🏆 FAANG Interview Golden Lines

- "HTTP methods define intent."

- "Status codes communicate outcome."

- "Proper usage improves debuggability."


## 🔚 One-Line Summary

**Method = What you want**
**Status Code = What happened**