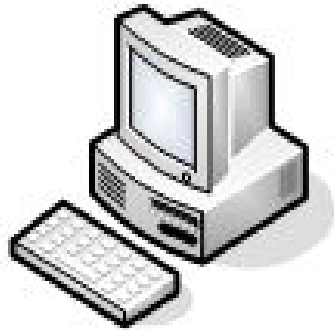


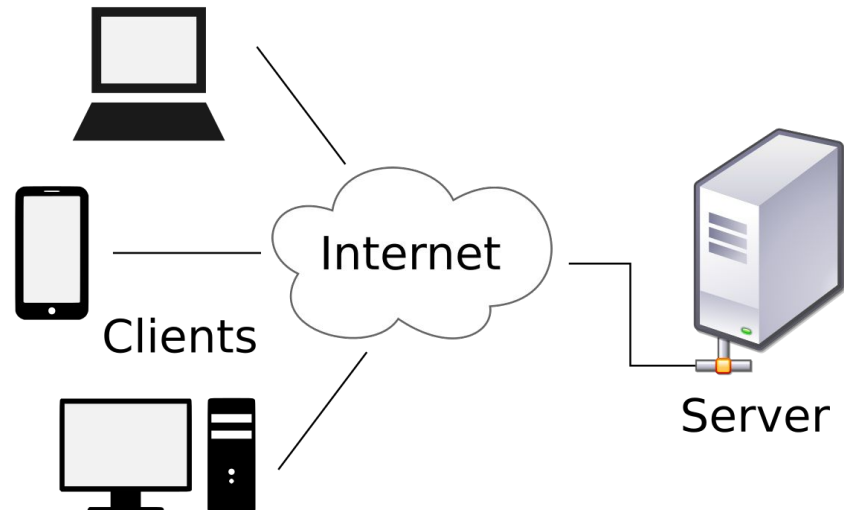
# Construcción de Interfaces de Usuario

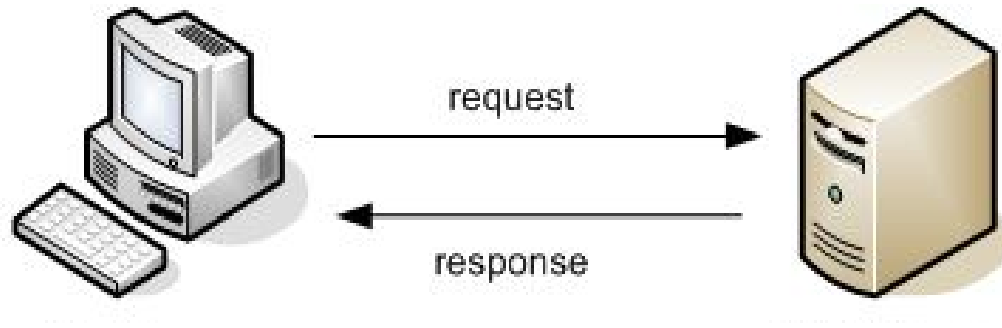
**>>> Rest APIs <<<**

## Aplicación Desktop (Arena)



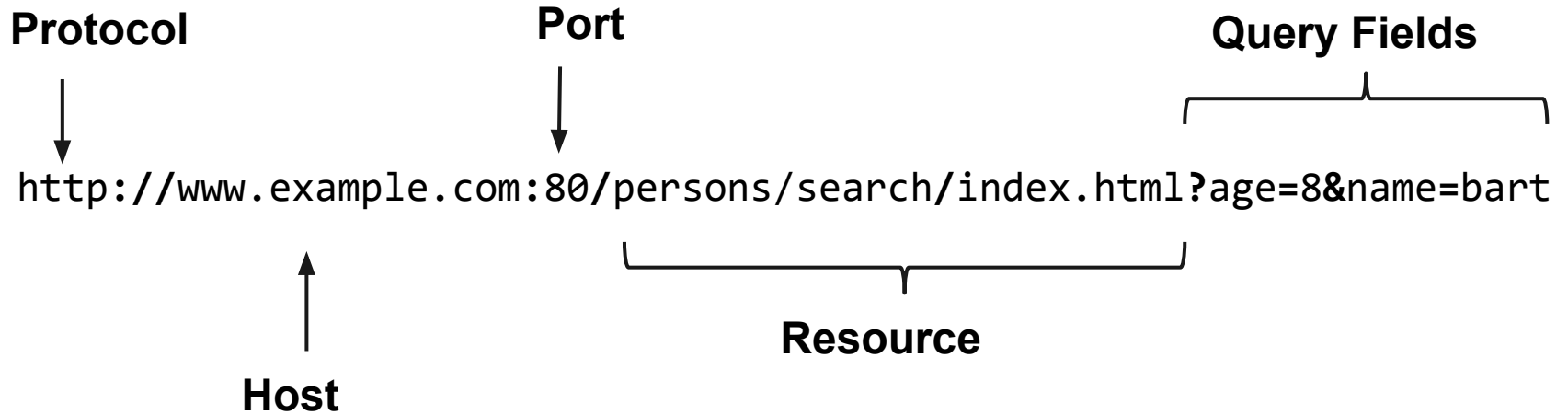
## Aplicación Web





- Client/Server
- Stateless

**HTTP: Hypertext Transfer Protocol**



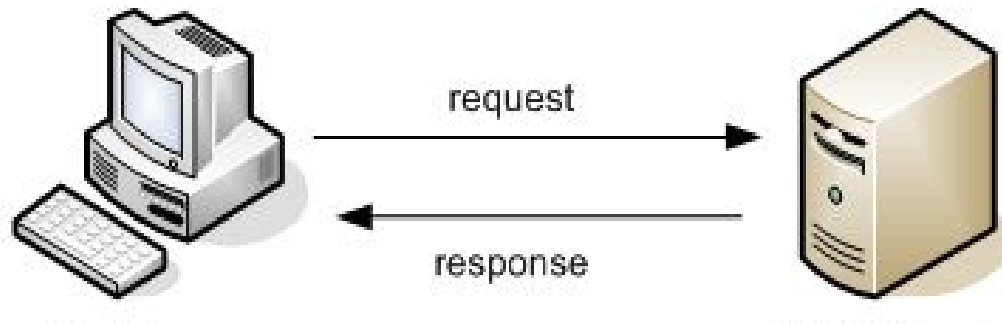
**URL: Localizacion de Recursos**

# Request

```
GET /persons/search/index.html... HTTP/1.1
Host: www.example.com
Cache-Control: no-cache
—
```

# Response

```
HTTP/1.1 200 OK
Date: Fri, 31 Dec 2003 23:59:59 GMT
Content-Type: text/html
Content-Length: 1221
—
<html>
...
</html>
```



**200 - OK**

**403 - Forbidden**

**404 - Not Found**

**500 - Internal Server Error**

**503 - Service Unavailable**

**1xx: Respuestas informativas**

**2xx: Peticiones correctas**

**3xx: Redirecciones**

**4xx: Errores del cliente**

**5xx: Errores de servidor**

## HTTP Response Status

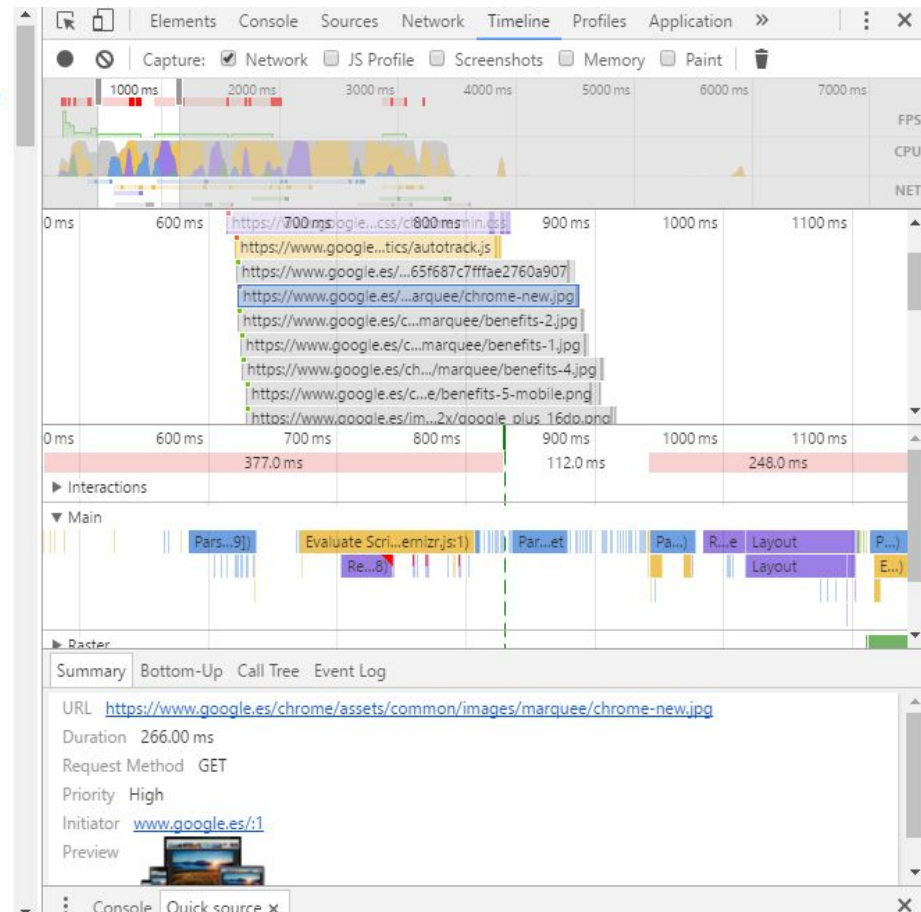
HTTP Method ⬆	Request Has Body ⬆	Response Has Body ⬆	Safe ⬆	Idempotent ⬆	Cacheable ⬆
GET	No	Yes	Yes	Yes	Yes
HEAD	No	No	Yes	Yes	Yes
POST	Yes	Yes	No	No	Yes
PUT	Yes	Yes	No	Yes	No
DELETE	No	Yes	No	Yes	No

## HTTP Methods

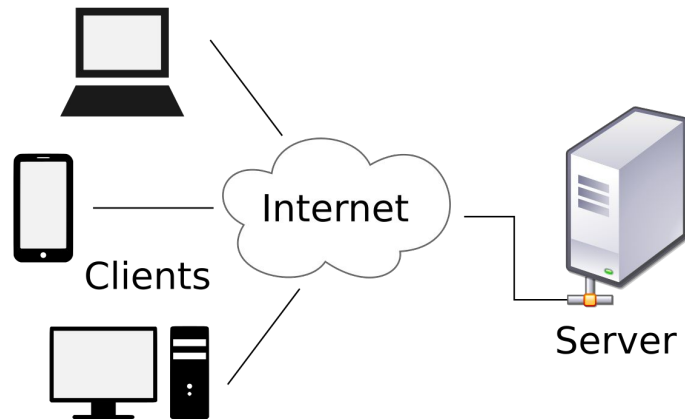
- `text/html`
- `text/css`
- `text/javascript`
- `image/jpeg`
- `application/json`
- ...

## MIME Content Types





## HTTP: Demo Chrome Timeline (F12)



Si nos organizamos...

- Estructura **uniforme** para recursos
- Formato común

## REST (Representational State Transfer)

>>> “an architectural style used for web development” <<<

GET /tickets/12/messages - Retrieves list of messages for ticket #12

GET /tickets/12/messages/5 - Retrieves message #5 for ticket #12

POST /tickets/12/messages - Creates a new message in ticket #12

PUT /tickets/12/messages/5 - Updates message #5 for ticket #12

DELETE /tickets/12/messages/5 - Deletes message #5 for ticket #12

## Rest: Ejemplo

[Pricing](#)[Apps](#)[Documentation](#)[Integrations](#)[Community](#)[Sign in](#)

# POSTMAN

## Modern software is built on APIs.

Postman helps you develop APIs faster.



Chrome App



Mac App

Go ahead and download our apps, they're free!

## REST: Demo Postman

# ¡Manos a la obra!

## >>> A nuestra API Rest <<<

```
@Controller
```

```
class BibliotecaController {
```

```
    @Get("/libros")
```

```
    def libros() {
```

```
        response.contentType = "application/json"
```

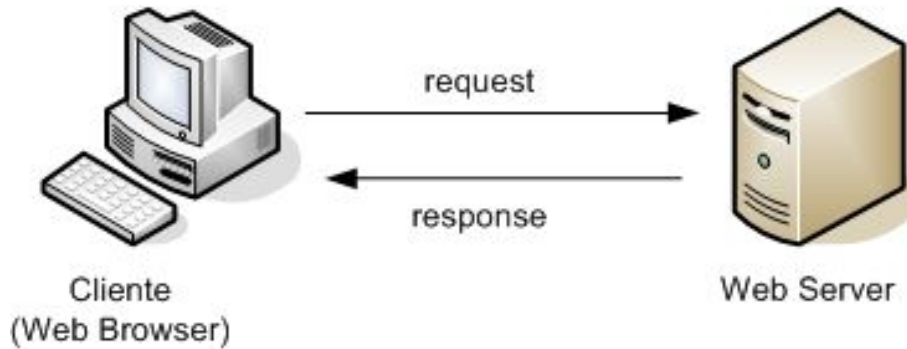
```
        ok(libros.toJson)
```

```
    }
```

```
}
```

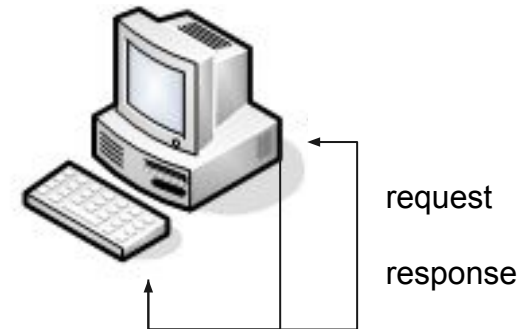
**XTRest - <https://github.com/uqbar-project/xtrest>**

# Producción



`http://www.biblioteca.com.ar/libros`

# Desarrollo



`http://localhost:9000/libros`

[github.com/uqbar-project/eg-biblioteca-xtrest](https://github.com/uqbar-project/eg-biblioteca-xtrest)

**Ejemplo Biblioteca XTRest**