



-



US GB JP

Code Blocks

```
const x = 42; and console.log("hello").
```

TypeScript

```
1 import { readFile } from 'fs/promises';
2
3 interface Config {
4   name: string;
5   port: number;
6   debug: boolean;
7 }
8
9 async function loadConfig(path: string): Promise<Config> {
10   const raw = await readFile(path, 'utf-8');
11   const config: Config = JSON.parse(raw);
12   // Validate required fields
13   if (!config.name || config.port <= 0) {
14     throw new Error(`Invalid config: ${config.name}`);
15   }
16   return config;
17 }
18
19 const DEFAULT_PORT = 3000;
20 export { loadConfig, DEFAULT_PORT };
```

JavaScript

```

1 class EventEmitter {
2   constructor() {
3     this.listeners = new Map();
4   }
5
6   on(event, callback) {
7     if (!this.listeners.has(event)) {
8       this.listeners.set(event, []);
9     }
10    this.listeners.get(event).push(callback);
11    return this;
12  }
13
14  emit(event, ...args) {
15    const handlers = this.listeners.get(event) || [];
16    for (const handler of handlers) {
17      handler(...args);
18    }
19    return handlers.length > 0;
20  }
21 }
22
23 // Usage
24 const emitter = new EventEmitter();
25 emitter.on('data', (msg) => console.log(`Received: ${msg}`));
26 emitter.emit('data', 'Hello World!');

```

Python

```
1 from dataclasses import dataclass
2 from typing import Optional
3
4 @dataclass
5 class User:
6     name: str
7     email: str
8     age: Optional[int] = None
9
10    def greet(self) -> str:
11        """Return a greeting message."""
12        return f"Hello, {self.name}!"
13
14    @property
15    def is_adult(self) -> bool:
16        return self.age is not None and self.age >= 18
17
18 # Create and use
19 users = [User("Alice", "alice@example.com", 30), User("Bob", "bob@example.com")]
20 active = [u for u in users if u.is_adult]
21 print(f"Found {len(active)} adult users")
```