



JavaScript



TypeScript

JS

JavaScript

A scripting language used to create and control dynamic website content. It's what makes web pages interactive.

**TS**

TypeScript

Essentially, it's JavaScript with added features. It's a superset of JavaScript, which means it has everything JavaScript has, plus some extra goodies.

JS

JavaScript

Dynamically typed. This means you don't have to explicitly declare what type (like number, string, etc.) a variable is.

It's more flexible but can lead to unexpected errors.

**TS**

TypeScript

Statically typed. You have to declare the type of variables.

This can catch errors early and make the code more predictable.

JS

JavaScript

```
let x = 'Hello';  
x = 5; // Totally fine in JavaScript
```

TS

TypeScript

```
let x: string = 'Hello';  
x = 5; // Error, because x is supposed to be a string
```

**JS**

JavaScript

Errors are often found at runtime, which means when the webpage is actually running.

**ERROR****TS**

TypeScript

Errors can be caught during development (compile-time), preventing many common mistakes from making it to the running webpage.



JavaScript

Generally easier for beginners.



TypeScript

Requires understanding of types and some advanced concepts, so it has a steeper learning curve.



JS

JavaScript

It enables rapid development and quick prototyping, making it a go-to for projects that prioritize speed in the early stages.

**TS**

TypeScript

Though it might take longer to set up initially, its robustness in catching errors early often leads to smoother development cycles and higher code quality over time.