

# Installing Type Declaration Files

---



**Daniel Stern**  
CODE WHISPERER  
[@danieljackstern](#)



# What Are Type Declaration Files?

---



# What Are Type Declaration Files?



Type Declaration files usually compliment a JavaScript library



Used by compiler to prevent errors



Used by VSCode / Intellisense to provide code hints

**Type Declaration (d.ts) files are a key tool when combining JavaScript and TypeScript projects**



# Type Declaration Files

Declaration files help the IDE and compiler find compile-time errors in JavaScript files

## calculator.js

```
function calculate (number, currency)
{
  switch (currency) {
    case `USD`:
      return number * 1.35;
    case `CAD`:
      console.log(`Not supported.`);
      return null;
    default:
      return number * 1.15;
  }
}
```

## calculator.d.ts

```
declare module 'calculator' {

  export function calculate(
    number : number,
    currency : string
  ) : null | number;

}
```

# Reviewing the Contents of a Type Declaration File

---



# Working with Intellisense

---



# Demo



Explore various Intellisense features offered by VSCode

- Code hints
- Advanced error detection



# Creating and Configuring Custom Type Declaration Files

---





# Why Create Custom Declaration Files?



Required legacy tools  
may be ES5



Logically organize  
interfaces and other  
non-declarative code



Provide better code  
hints through  
annotations

# Demo



Create a new interface type that will be implemented by both front and back end

Import reference from type file and note the effects on code completion



# Adding Features to Our TypeScript Application

---



# Demo



**Add a client directory with code that is meant to be run on client's PC**

- Create separate referenced projects for front / back end

**Add Bootstrap and basic styles to give application a professional look**



# Module Summary



## **Type Declaration files exist alongside TypeScript and JavaScript files**

- Some are installed separately via NPM
- Some are included with their library
- Some are written by your team

**VSCode uses type declaration files extensively when providing code hints and type checking**

