

Creating a Type Declaration File in TypeScript 5

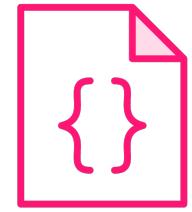
Declaration File Basics



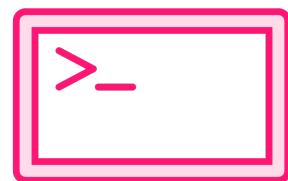
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Senior Developer

Module Topics



What are TypeScript declaration files?



Using the compiler to create declaration files



Enhancing type information with JSDoc



| What Are Declaration Files, and Why Do We Need Them?

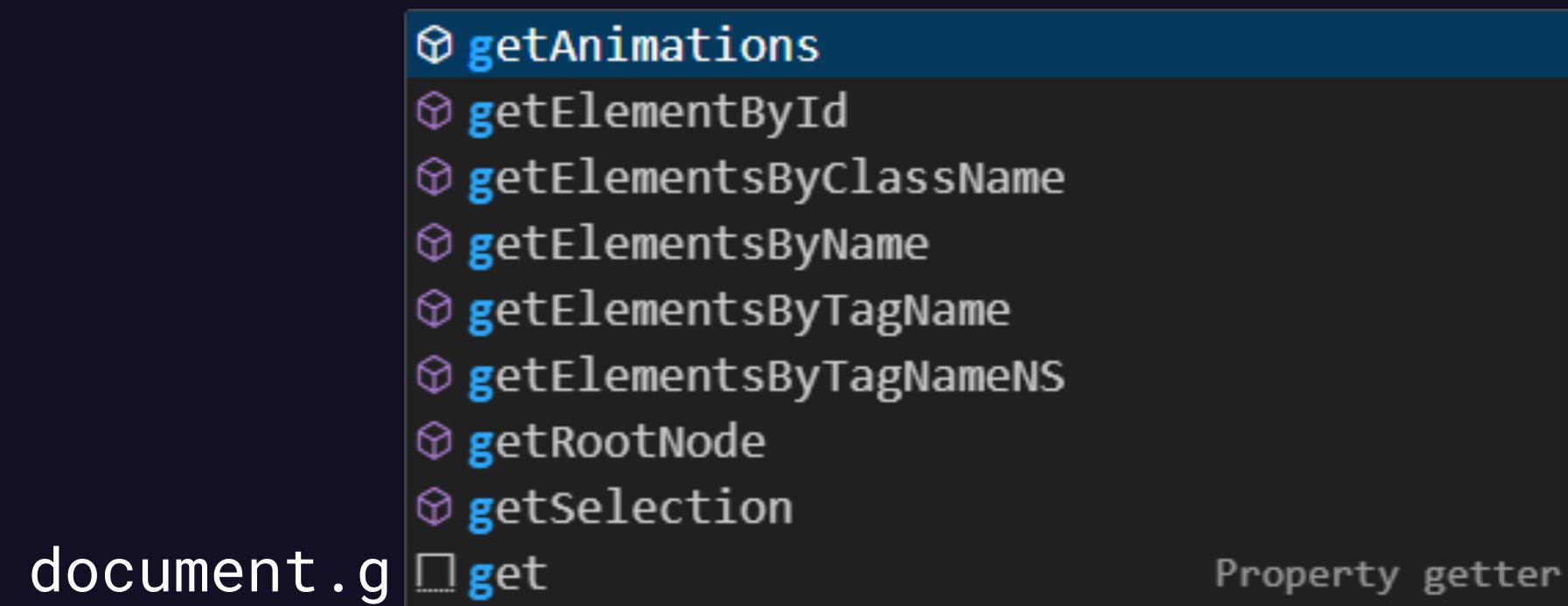


Writing TypeScript in a Supporting Editor

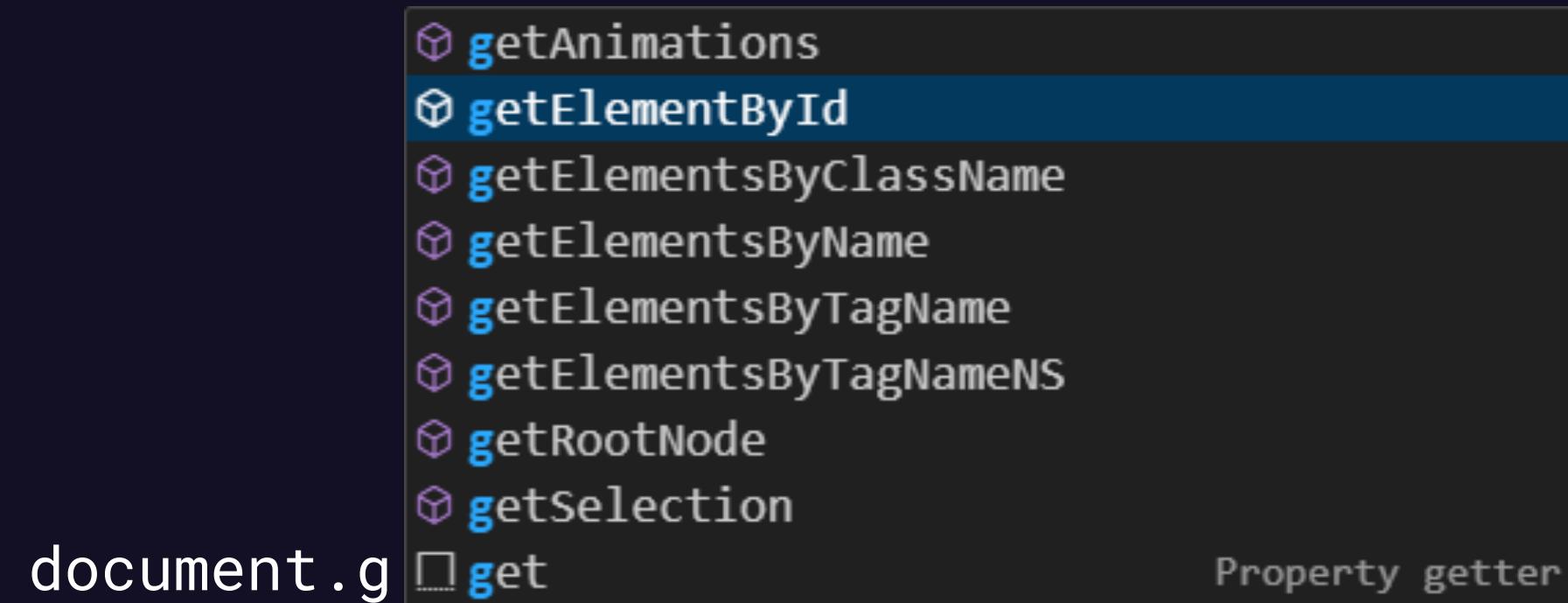
document.g



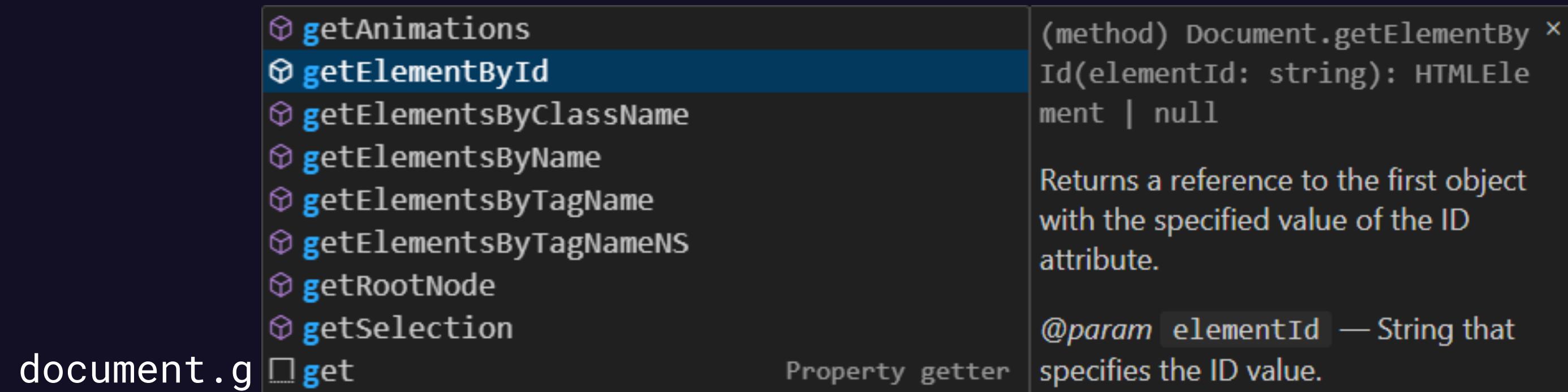
Writing TypeScript in a Supporting Editor



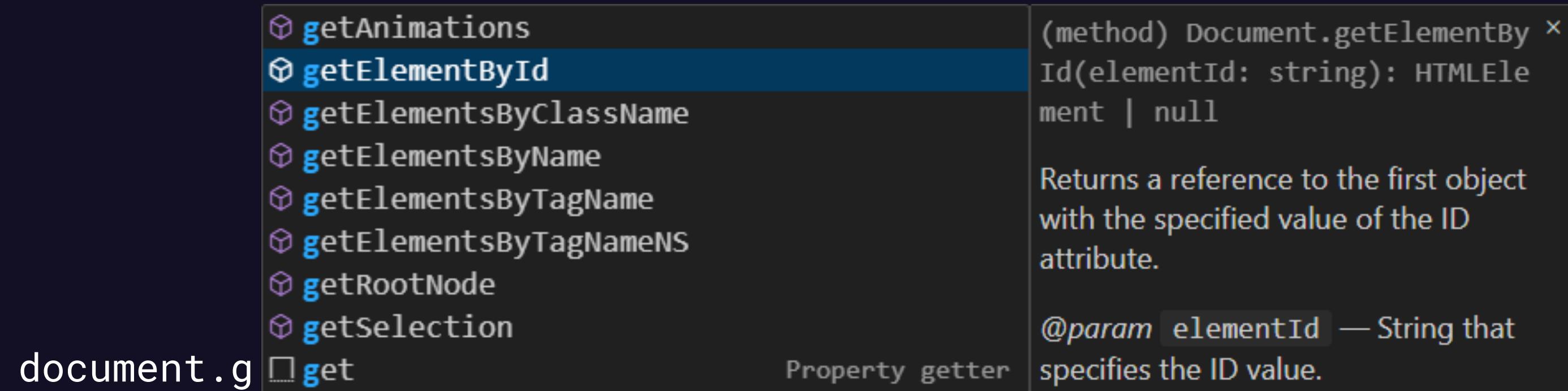
Writing TypeScript in a Supporting Editor



Writing TypeScript in a Supporting Editor



Writing TypeScript in a Supporting Editor



Powered by declaration files!



Declaration files are:

TypeScript files with
a `d.ts` extension

Used by the editor to
provide code-
completion

Used by the compiler
to enforce correct
usage



Declaration files may be:

Regular files that use globals (for older code)

Modules that use export (ambient)



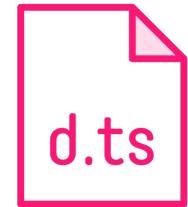
Declaration files are:

**Often included with modern
libraries/frameworks**

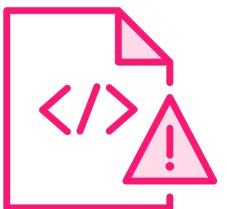
**Often available from
DefinitelyTyped if not provided**



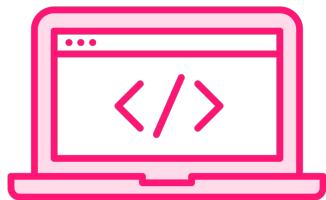
Declaration files are:



Just TypeScript files, but with a d.ts extension and only types



Used to enforce types in our application



Power the editor's auto-completion



A vibrant hot air balloon with horizontal stripes in purple, yellow, red, and blue is the central focus. It is positioned on the left side of the frame, flying over a lush green vineyard. The background features rolling hills covered in dense green forests under a vast sky transitioning from blue to warm orange and yellow hues of a setting sun.

Creating declaration files with the compiler



Creating Declaration Files with the Compiler



**Third-party libraries/types
are usually insalled in the
node_modules folder and
consumed from there.**



A vibrant hot air balloon with horizontal stripes in purple, yellow, red, and blue is the central focus. It is positioned on the left side of the frame, flying over a lush green vineyard. The landscape extends to a dense forested hillside in the background under a vast, colorful sky transitioning from blue to orange and yellow.

Create declaration files from JavaScript



Creating Declaration Files with the Compiler in JavaScript Projects



A vibrant hot air balloon with horizontal stripes in purple, yellow, red, and blue is the central focus. It is positioned on the left side of the frame, flying over a lush green vineyard. The landscape extends to a dense forested hillside in the background under a vast, colorful sky transitioning from blue to orange and yellow.

Enhance type information with JSDoc



Using JSDoc with Declaration Files



**Developers don't like to
root around deep in the
node_modules folder**



Use JSDoc to provide usage
information so they don't
have to



Summary



First we answered two questions:

- What are declaration files?**
- Why do we need them?**



Summary



Declaration Files are:

- Special TypeScript files with a `d.ts` extension
- Used to enforce types and provide information in the editor



Summary



Next we saw:

- How to generate declaration files with the compiler
- How to generate declaration files for JavaScript projects



Summary



Last we learned how to enhance type information using JSDoc



Up Next:

Creating Declaration Files Manually

