

async function expression

The `async function` keyword can be used to define `async` functions inside expressions.

You can also define `async` functions using an [async function statement](#).

Syntax

```
async function [name]([param1[, param2[, ..., paramN]]]) {  
    statements  
}
```

As of ES2015, you can also use [arrow functions](#).

Parameters

`name`

The function name. Can be omitted, in which case the function is *anonymous*. The name is only local to the function body.

`paramN`

The name of an argument to be passed to the function.

`statements`

The statements which comprise the body of the function.

Description

An `async function` expression is very similar to, and has almost the same syntax as, an [async function statement](#). The main difference between an `async function` expression and an `async function` statement is the *function name*, which can be omitted in `async function` expressions to create *anonymous* functions. An `async function` expression can be used as an IIFE (Immediately Invoked Function Expression) which runs as soon as it is defined. See also the chapter about [functions](#) for more information.

Examples

Simple example

```
1  function resolveAfter2Seconds(x) {
2      return new Promise(resolve => {
3          setTimeout(() => {
4              resolve(x);
5          }, 2000);
6      });
7  };
8
9
10 var add = async function(x) { // async function expression assigned to a variable
11     var a = await resolveAfter2Seconds(20);
12     var b = await resolveAfter2Seconds(30);
13     return x + a + b;
14 };
15
16 add(10).then(v => {
17     console.log(v); // prints 60 after 4 seconds.
18 });
19
20
21 (async function(x) { // async function expression used as an IIFE
22     var p_a = resolveAfter2Seconds(20);
23     var p_b = resolveAfter2Seconds(30);
24     return x + await p_a + await p_b;
25 })(10).then(v => {
26     console.log(v); // prints 60 after 2 seconds.
27 });
```

Specifications

Specification	Status	Comment
ECMAScript Latest Draft (ECMA-262) The definition of 'async function' in that specification.	 Living Standard	Initial definition in ES2017.

Browser compatibility

[Desktop](#)[Mobile](#)

Feature	Chrome	Edge	Firefox	Internet Explorer	Opera	Safari
---------	--------	------	---------	-------------------	-------	--------

Basic Support	55	?	52	No	42	10.1
---------------	----	---	----	----	----	------

See also

- [async function](#)
- [AsyncFunction object](#)
- [await](#)