

This example demonstrates how to build a library with webpack that has dependencies on other libraries which should not be included in the compiled version.

We use the `libraryTarget: "umd"` option to build a UMD module that is consumable in CommonJS, AMD and with script tags. We don't specify the `library` option so the library is exported to the root namespace.

We use the `externals` option to define dependencies that should be resolved in the target environment.

In the simple case we just need to specify a string (`"add"`). Then it's resolved as `"add"` module in CommonJS and AMD, and as global `add` when used with the script tag.

In the complex case we specify different values for each environment:

environment	config value	resolved as
CommonJS (strict)	<code>["./math", "subtract"]</code>	<code>require("./math").subtract</code>
CommonJS (node.js)	<code>"./subtract"</code>	<code>require("./subtract")</code>
AMD	<code>"subtract"</code>	<code>define(["subtract"], ...)</code>
script tag	<code>"subtract"</code>	<code>this.subtract</code>

example.js

```
var add = require("add");
var subtract = require("subtract");

exports.exampleValue = subtract(add(42, 2), 2);
```

webpack.config.js

```
module.exports = {
  // mode: "development" || "production",
  output: {
    libraryTarget: "umd"
  },
  externals: [
    "add",
    {
      subtract: {
        root: "subtract",
        commonjs2: "./subtract",
        commonjs: ["./math", "subtract"],
        amd: "subtract"
      }
    }
  ]
};
```

dist/output.js

```
(function webpackUniversalModuleDefinition(root, factory) {
  if(typeof exports === 'object' && typeof module === 'object')
    module.exports = factory(require("add"), require("./subtract"));
  else if(typeof define === 'function' && define.amd)
    define(["add", "subtract"], factory);
  else {
    var a = typeof exports === 'object' ? factory(require("add"),
require("./math")["subtract"]) : factory(root["add"], root["subtract"]);
    for(var i in a) (typeof exports === 'object' ? exports : root)[i] = a[i];
  }
})(self, function(__WEBPACK_EXTERNAL_MODULE__1__, __WEBPACK_EXTERNAL_MODULE__2__) {
  return /*****/ (() => { // webpackBootstrap
  /*****/      var __webpack_modules__ = ([
/* 0 */,
/* 1 */
/*!*****!*\
  !*** external "add" ***!
  \*****/
/*! dynamic exports */
/*! exports [maybe provided (runtime-defined)] [no usage info] */
/*! runtime requirements: module */
****/ ((module) => {

  "use strict";
  module.exports = __WEBPACK_EXTERNAL_MODULE__1__;

  ****/ }),
/* 2 */
/*!*****!*\
  !*** external {"root":"subtract","commonjs2":"./subtract","commonjs":
["./math","subtract"],"amd":"subtract"} ***!
  \*****/

/*! dynamic exports */
/*! exports [maybe provided (runtime-defined)] [no usage info] */
/*! runtime requirements: module */
****/ ((module) => {

  "use strict";
  module.exports = __WEBPACK_EXTERNAL_MODULE__2__;

  ****/ })
  /*****/
]);
```

► /* webpack runtime code */

```

var __webpack_exports__ = {};
// This entry need to be wrapped in an IIFE because it need to be isolated against
other modules in the chunk.
(() => {
var exports = __webpack_exports__;
/*!*****!*\
  !*** ./example.js ***!
  \*****/
/*! default exports */
/*! export exampleValue [provided] [maybe used in main (runtime-defined)] [usage
prevents renaming] */
/*! other exports [not provided] [maybe used in main (runtime-defined)] */
/*! runtime requirements: __webpack_exports__, __webpack_require__ */
var add = __webpack_require__(/*! add */ 1);
var subtract = __webpack_require__(/*! subtract */ 2);

exports.exampleValue = subtract(add(42, 2), 2);
})();

/*****/      return __webpack_exports__;
/*****/ })()
;
});

```

Info

Unoptimized

```

asset output.js 3.28 KiB [emitted] (name: main)
chunk (runtime: main) output.js (main) 194 bytes [entry] [rendered]
  > ./example.js main
  dependent modules 84 bytes [dependent] 2 modules
  ./example.js 110 bytes [built] [code generated]
    [exports: exampleValue]
    [used exports unknown]
  entry ./example.js main
  used as library export
webpack 5.51.1 compiled successfully

```

Production mode

```

asset output.js 679 bytes [emitted] [minimized] (name: main)
chunk (runtime: main) output.js (main) 194 bytes [entry] [rendered]
  > ./example.js main
  dependent modules 84 bytes [dependent] 2 modules
  ./example.js 110 bytes [built] [code generated]
    [exports: exampleValue]
  entry ./example.js main

```

```
used as library export  
webpack 5.51.1 compiled successfully
```