

This example illustrates a very simple case of Code Splitting with `require.ensure`.

- `a` and `b` are required normally via CommonJS
- `c` is made available(,but doesn't get execute) through the `require.ensure` array.
 - webpack will load it on demand
- `b` and `d` are required via CommonJs in the `require.ensure` callback
 - webpack detects that these are in the on-demand-callback and
 - will load them on demand
 - webpack's optimizer can optimize `b` away
 - * as it is already available through the parent chunks

You can see that webpack outputs two files/chunks:

- `output.js` is the entry chunk and contains
 - the module system
 - chunk loading logic
 - the entry point `example.js`
 - module `a`
 - module `b`
- `1.output.js` is an additional chunk (on-demand loaded) and contains
 - module `c`
 - module `d`

You can see that chunks are loaded via JSONP. The additional chunks are pretty small and minimize well.

example.js

```
var a = require("a");
var b = require("b");
require.ensure(["c"], function(require) {
  require("b").xyz();
  var d = require("d");
});
```

dist/output.js

```
/******/ (() => { // webpackBootstrap
/******/     var __webpack_modules__ = ([
/* 0 */
/* 1 */
/*! *****!*\
*** ./node_modules/a.js ***!
\***** */
```

```

    /*! unknown exports (runtime-defined) */
    /*! runtime requirements: */
    /***/ ((() => {

// module a

    /***/ }),
    /* 2 */
    /*!*****!\
      !*** ./node_modules/b.js ***!
      \******/
    /*! unknown exports (runtime-defined) */
    /*! runtime requirements: */
    /***/ ((() => {

// module b

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

/* webpack runtime code */

/******\
*****/    // The module cache
*****/    var __webpack_module_cache__ = {};
*****/
*****/    // The require function
*****/    function __webpack_require__(moduleId) {
*****/        // Check if module is in cache
*****/        var cachedModule = __webpack_module_cache__[moduleId];
*****/        if (cachedModule !== undefined) {
*****/            return cachedModule.exports;
*****/        }
*****/        // Create a new module (and put it into the cache)
*****/        var module = __webpack_module_cache__[moduleId] = {
*****/            // no module.id needed
*****/            // no module.loaded needed
*****/            exports: {}
*****/        };
*****/        // Execute the module function
*****/        __webpack_modules__[moduleId](module, module.exports, __webpack_require__);
*****/        // Return the exports of the module
*****/        return module.exports;
*****/    }
*****/

```

```

/*****/ // expose the modules object (__webpack_modules__)
/*****/ __webpack_require__.m = __webpack_modules__;
/*****/

/*****/ /* webpack/runtime/ensure chunk */
/*****/ (() => {
/*****/   __webpack_require__.f = {};
/*****/   // This file contains only the entry chunk.
/*****/   // The chunk loading function for additional chunks
/*****/   __webpack_require__.e = (chunkId) => {
/*****/     return Promise.all(Object.keys(__webpack_require__.f).reduce((promises,
/*****/       __webpack_require__.f[key](chunkId, promises);
/*****/     return promises;
/*****/   }, []));
/*****/   });
/*****/ })();
/*****/

/*****/ /* webpack/runtime/get javascript chunk filename */
/*****/ (() => {
/*****/   // This function allow to reference async chunks
/*****/   __webpack_require__.u = (chunkId) => {
/*****/     // return url for filenames based on template
/*****/     return "" + chunkId + ".output.js";
/*****/   };
/*****/ })();
/*****/

/*****/ /* webpack/runtime/hasOwnProperty shorthand */
/*****/ (() => {
/*****/   __webpack_require__.o = (obj, prop) => (Object.prototype.hasOwnProperty.call
/*****/ })();
/*****/

/*****/ /* webpack/runtime/load script */
/*****/ (() => {
/*****/   var inProgress = {};
/*****/   // data-webpack is not used as build has no uniqueName
/*****/   // loadScript function to load a script via script tag
/*****/   __webpack_require__.l = (url, done, key, chunkId) => {
/*****/     if(inProgress[url]) { inProgress[url].push(done); return; }
/*****/     var script, needAttach;
/*****/     if(key !== undefined) {
/*****/       var scripts = document.getElementsByTagName("script");
/*****/       for(var i = 0; i < scripts.length; i++) {
/*****/         var s = scripts[i];
/*****/         if(s.getAttribute("src") == url) { script = s; break; }
/*****/       }
/*****/     }
/*****/   }
/*****/ })();

```



```

/*****/      // no HMR manifest
/*****/
/*****/      // no on chunks loaded
/*****/
/*****/      // install a JSONP callback for chunk loading
/*****/      var webpackJsonpCallback = (parentChunkLoadingFunction, data) => {
/*****/          var [chunkIds, moreModules, runtime] = data;
/*****/          // add "moreModules" to the modules object,
/*****/          // then flag all "chunkIds" as loaded and fire callback
/*****/          var moduleId, chunkId, i = 0;
/*****/          if(chunkIds.some((id) => (installedChunks[id] !== 0))) {
/*****/              for(moduleId in moreModules) {
/*****/                  if(__webpack_require__.o(moreModules, moduleId)) {
/*****/                      __webpack_require__.m[moduleId] = moreModules[moduleId];
/*****/                  }
/*****/              }
/*****/              if(runtime) var result = runtime(__webpack_require__);
/*****/          }
/*****/          if(parentChunkLoadingFunction) parentChunkLoadingFunction(data);
/*****/          for(;i < chunkIds.length; i++) {
/*****/              chunkId = chunkIds[i];
/*****/              if(__webpack_require__.o(installedChunks, chunkId) && installedChunks[chunkId][0]())
/*****/                  installedChunks[chunkId][0]();
/*****/              installedChunks[chunkIds[i]] = 0;
/*****/          }
/*****/      }
/*****/
/*****/      var chunkLoadingGlobal = self["webpackChunk"] = self["webpackChunk"] || [];
/*****/      chunkLoadingGlobal.forEach(webpackJsonpCallback.bind(null, 0));
/*****/      chunkLoadingGlobal.push = webpackJsonpCallback.bind(null, chunkLoadingGlobal
/*****/      )();
/*****/
/*****/
/*****/
var __webpack_exports__ = {};
// This entry need to be wrapped in an IIFE because it need to be isolated against other mo
(( ) => {
    /*!*****!\
    !*** ./example.js ***!
    \*****\
    /*! unknown exports (runtime-defined) */
    /*! runtime requirements: __webpack_require__, __webpack_require__.e, __webpack_require__.*
var a = __webpack_require__(/*! a */ 1);
var b = __webpack_require__(/*! b */ 2);

```

```

__webpack_require__.e(/*! require.ensure */ 796).then((function(require) {
  __webpack_require__(/*! b */ 2).xyz();
  var d = __webpack_require__(/*! d */ 4);
}).bind(null, __webpack_require__)).catch(__webpack_require__.oe);
})();

/*****/ })()
;

```

dist/796.output.js

```

(self["webpackChunk"] = self["webpackChunk"] || []).push([[796], [
  /* 0 */,
  /* 1 */,
  /* 2 */,
  /* 3 */
  /*!*****!*\
    *** ./node_modules/c.js ***!
    \***** */
  /*! unknown exports (runtime-defined) */
  /*! runtime requirements: */
  /***/ (( ) => {

    // module c

    /***/ }),
  /* 4 */
  /*!*****!*\
    *** ./node_modules/d.js ***!
    \***** */
  /*! unknown exports (runtime-defined) */
  /*! runtime requirements: */
  /***/ (( ) => {

    // module d

    /***/ })
  ]]);
Minimized
(self.webpackChunk=self.webpackChunk || []).push([[796], {286: ()=>{}, 882: ()=>{}}]);

```

Info

Unoptimized

```
asset output.js 9.49 KiB [emitted] (name: main)
asset 796.output.js 528 bytes [emitted]
chunk (runtime: main) output.js (main) 161 bytes (javascript) 4.98 KiB (runtime) [entry] [re
  > ./example.js main
    runtime modules 4.98 KiB 6 modules
    dependent modules 22 bytes [dependent] 2 modules
    ./example.js 139 bytes [built] [code generated]
      [used exports unknown]
    entry ./example.js main
chunk (runtime: main) 796.output.js 22 bytes [rendered]
  > ./example.js 3:0-6:2
    ./node_modules/c.js 11 bytes [built] [code generated]
      [used exports unknown]
      require.ensure item c ./example.js 3:0-6:2
    ./node_modules/d.js 11 bytes [built] [code generated]
      [used exports unknown]
      cjs require d ./example.js 5:12-24
webpack 5.51.1 compiled successfully
```

Production mode

```
asset output.js 1.74 KiB [emitted] [minimized] (name: main)
asset 796.output.js 80 bytes [emitted] [minimized]
chunk (runtime: main) output.js (main) 161 bytes (javascript) 4.98 KiB (runtime) [entry] [re
  > ./example.js main
    runtime modules 4.98 KiB 6 modules
    dependent modules 22 bytes [dependent] 2 modules
    ./example.js 139 bytes [built] [code generated]
      [no exports used]
    entry ./example.js main
chunk (runtime: main) 796.output.js 22 bytes [rendered]
  > ./example.js 3:0-6:2
    ./node_modules/c.js 11 bytes [built] [code generated]
      [used exports unknown]
      require.ensure item c ./example.js 3:0-6:2
    ./node_modules/d.js 11 bytes [built] [code generated]
      [used exports unknown]
      cjs require d ./example.js 5:12-24
webpack 5.51.1 compiled successfully
```