This is a simple example that shows the usage of WebAssembly.

WebAssembly modules can be imported like other async modules with `import` or `import()`. When importing, they are downloaded and instantiated in a streaming way.

example.js

```
import { add } from "./add.wasm";
import {
    add as mathAdd,
    factorial,
    factorialJavascript,
    fibonacci,
    fibonacciJavascript
} from "./math";

console.log(add(22, 2200));
console.log(mathAdd(10, 101));
console.log(factorial(15));
console.log(factorialJavascript(15));
console.log(fibonacci(15));
console.log(fibonacciJavascript(15));
timed("wasm factorial", () => factorial(1500));
timed("js factorial", () => factorialJavascript(1500));
timed("wasm fibonacci", () => fibonacci(22));
timed("js fibonacci", () => fibonacciJavascript(22));

function timed(name, fn) {
    if (!console.time || !console.timeEnd) return fn();
    // warmup
    for (var i = 0; i < 10; i++) fn();
    console.time(name);
    for (var i = 0; i < 5000; i++) fn();
    console.timeEnd(name);
}
```

math.js

```
import { add } from "./add.wasm";
import { factorial } from "./factorial.wasm";
import { fibonacci } from "./fibonacci.wasm";

export { add, factorial, fibonacci };
```

```
export function factorialJavascript(i) {
    if (i < 1) return 1;
    return i * factorialJavascript(i - 1);
}

export function fibonacciJavascript(i) {
    if (i < 2) return 1;
    return fibonacciJavascript(i - 1) + fibonacciJavascript(i - 2);
}
```

dist/output.js

```
/******/ (() => { // webpackBootstrap
/******/     "use strict";
/******/     var __webpack_modules__ = ([
/* 0 */
/*!**********************!*\
  !*** ./example.js ***!
  \**********************/
/*! namespace exports */
/*! exports [not provided] [no usage info] */
/*! runtime requirements: __webpack_require__, __webpack_require__.r, __webpack_exports__, 
/***/ ((module, __webpack_exports__, __webpack_require__) => {

__webpack_require__.a(module, async (__webpack_handle_async_dependencies__) => {
__webpack_require__.r(__webpack_exports__);
/* harmony import */ var _add_wasm__WEBPACK_IMPORTED_MODULE_0__ = __webpack_require__(/*! .
/* harmony import */ var _math__WEBPACK_IMPORTED_MODULE_1__ = __webpack_require__(/*! ./mat
var __webpack_async_dependencies__ = __webpack_handle_async_dependencies__([_math__WEBPACK_I
([_math__WEBPACK_IMPORTED_MODULE_1__, _add_wasm__WEBPACK_IMPORTED_MODULE_0__] = __webpack_as



console.log((0,_add_wasm__WEBPACK_IMPORTED_MODULE_0__.add)(22, 2200));
console.log((0,_math__WEBPACK_IMPORTED_MODULE_1__.add)(10, 101));
console.log((0,_math__WEBPACK_IMPORTED_MODULE_1__.factorial)(15));
console.log((0,_math__WEBPACK_IMPORTED_MODULE_1__.factorialJavascript)(15));
console.log((0,_math__WEBPACK_IMPORTED_MODULE_1__.fibonacci)(15));
console.log((0,_math__WEBPACK_IMPORTED_MODULE_1__.fibonacciJavascript)(15));
timed("wasm factorial", () => (0,_math__WEBPACK_IMPORTED_MODULE_1__.factorial)(1500));
timed("js factorial", () => (0,_math__WEBPACK_IMPORTED_MODULE_1__.factorialJavascript)(1500)
timed("wasm fibonacci", () => (0,_math__WEBPACK_IMPORTED_MODULE_1__.fibonacci)(22));
timed("js fibonacci", () => (0,_math__WEBPACK_IMPORTED_MODULE_1__.fibonacciJavascript)(22));

function timed(name, fn) {
```

```
    if (!console.time || !console.timeEnd) return fn();
    // warmup
    for (var i = 0; i < 10; i++) fn();
    console.time(name);
    for (var i = 0; i < 5000; i++) fn();
    console.timeEnd(name);
}

});

/***/ }),
/* 1 */
/*!*******************!*\
  !*** ./add.wasm ***!
  \*******************/
/*! namespace exports */
/*! export add [provided] [no usage info] [provision prevents renaming (no use info)] */
/*! other exports [not provided] [no usage info] */
/*! runtime requirements: module, module.id, __webpack_exports__, __webpack_require__.v, __
/***/ ((module, exports, __webpack_require__) => {

module.exports = __webpack_require__.v(exports, module.id, "0eaeab8b9fa3cef100d1");

/***/ }),
/* 2 */
/*!******************!*\
  !*** ./math.js ***!
  \******************/
/*! namespace exports */
/*! export add [provided] [no usage info] [missing usage info prevents renaming] -> ./add.w
/*! export factorial [provided] [no usage info] [missing usage info prevents renaming] -> .
/*! export factorialJavascript [provided] [no usage info] [missing usage info prevents rena
/*! export fibonacci [provided] [no usage info] [missing usage info prevents renaming] -> .
/*! export fibonacciJavascript [provided] [no usage info] [missing usage info prevents rena
/*! other exports [not provided] [no usage info] */
/*! runtime requirements: __webpack_require__, __webpack_exports__, __webpack_require__.d,
/***/ ((module, __webpack_exports__, __webpack_require__) => {

__webpack_require__.a(module, async (__webpack_handle_async_dependencies__) => {
__webpack_require__.r(__webpack_exports__);
/* harmony export */ __webpack_require__.d(__webpack_exports__, {
/* harmony export */   "add": () => (/* reexport safe */ _add_wasm__WEBPACK_IMPORTED_MODULE
/* harmony export */   "factorial": () => (/* reexport safe */ _factorial_wasm__WEBPACK_IMP
/* harmony export */   "fibonacci": () => (/* reexport safe */ _fibonacci_wasm__WEBPACK_IMP
/* harmony export */   "factorialJavascript": () => (/* binding */ factorialJavascript),
/* harmony export */   "fibonacciJavascript": () => (/* binding */ fibonacciJavascript)
```

```
/* harmony export */ });
/* harmony import */ var _add_wasm__WEBPACK_IMPORTED_MODULE_0__ = __webpack_require__(/*! .
/* harmony import */ var _factorial_wasm__WEBPACK_IMPORTED_MODULE_1__ = __webpack_require__
/* harmony import */ var _fibonacci_wasm__WEBPACK_IMPORTED_MODULE_2__ = __webpack_require__
var __webpack_async_dependencies__ = __webpack_handle_async_dependencies__([_fibonacci_wasm
([_fibonacci_wasm__WEBPACK_IMPORTED_MODULE_2__, _factorial_wasm__WEBPACK_IMPORTED_MODULE_1__
```

```
function factorialJavascript(i) {
    if (i < 1) return 1;
    return i * factorialJavascript(i - 1);
}

function fibonacciJavascript(i) {
    if (i < 2) return 1;
    return fibonacciJavascript(i - 1) + fibonacciJavascript(i - 2);
}

});

/***/ }),
/* 3 */
/*!*************************!*\
  !*** ./factorial.wasm ***!
  \*************************/
/*! namespace exports */
/*! export factorial [provided] [no usage info] [provision prevents renaming (no use info)]
/*! other exports [not provided] [no usage info] */
/*! runtime requirements: module, module.id, __webpack_exports__, __webpack_require__.v, __
/***/ ((module, exports, __webpack_require__) => {

module.exports = __webpack_require__.v(exports, module.id, "35a58b7c95860d720a3c");

/***/ }),
/* 4 */
/*!*************************!*\
  !*** ./fibonacci.wasm ***!
  \*************************/
/*! namespace exports */
/*! export fibonacci [provided] [no usage info] [provision prevents renaming (no use info)]
/*! other exports [not provided] [no usage info] */
/*! runtime requirements: module, module.id, __webpack_exports__, __webpack_require__.v, __
```

```
/***/ ((module, exports, __webpack_require__) => {

module.exports = __webpack_require__.v(exports, module.id, "5a6637e8d63cdf9c72da");

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

/* 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] = {
/******/            id: moduleId,
/******/            // 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;
/******/    }
/******/
/************************************************************************/
/******/    /* webpack/runtime/async module */
/******/    (() => {
/******/        var webpackThen = typeof Symbol === "function" ? Symbol("webpack then") : "
/******/        var webpackExports = typeof Symbol === "function" ? Symbol("webpack exports
/******/        var completeQueue = (queue) => {
/******/            if(queue) {
/******/                queue.forEach((fn) => (fn.r--));
/******/                queue.forEach((fn) => (fn.r-- ? fn.r++ : fn()));
/******/            }
/******/        }
/******/        var completeFunction = (fn) => (!--fn.r && fn());
/******/        var queueFunction = (queue, fn) => (queue ? queue.push(fn) : completeFuncti
```

```
/******/ 	var wrapDeps = (deps) => (deps.map((dep) => {
/******/ 	    if(dep !== null && typeof dep === "object") {
/******/ 	        if(dep[webpackThen]) return dep;
/******/ 	        if(dep.then) {
/******/ 	            var queue = [];
/******/ 	            dep.then((r) => {
/******/ 	                obj[webpackExports] = r;
/******/ 	                completeQueue(queue);
/******/ 	                queue = 0;
/******/ 	            });
/******/ 	            var obj = {};
/******/ 	                                                obj[webpackThen] = (fn, reject) =>
/******/ 	            return obj;
/******/ 	        }
/******/ 	    }
/******/ 	    var ret = {};
/******/ 	                            ret[webpackThen] = (fn) => (completeFunction(fn));
/******/ 	                            ret[webpackExports] = dep;
/******/ 	                            return ret;
/******/ 	}));
/******/ 	__webpack_require__.a = (module, body, hasAwait) => {
/******/ 	    var queue = hasAwait && [];
/******/ 	    var exports = module.exports;
/******/ 	    var currentDeps;
/******/ 	    var outerResolve;
/******/ 	    var reject;
/******/ 	    var isEvaluating = true;
/******/ 	    var nested = false;
/******/ 	    var whenAll = (deps, onResolve, onReject) => {
/******/ 	        if (nested) return;
/******/ 	        nested = true;
/******/ 	        onResolve.r += deps.length;
/******/ 	        deps.map((dep, i) => (dep[webpackThen](onResolve, onReject)));
/******/ 	        nested = false;
/******/ 	    };
/******/ 	    var promise = new Promise((resolve, rej) => {
/******/ 	        reject = rej;
/******/ 	        outerResolve = () => (resolve(exports), completeQueue(queue), queue
/******/ 	    });
/******/ 	    promise[webpackExports] = exports;
/******/ 	    promise[webpackThen] = (fn, rejectFn) => {
/******/ 	        if (isEvaluating) { return completeFunction(fn); }
/******/ 	        if (currentDeps) whenAll(currentDeps, fn, rejectFn);
/******/ 	        queueFunction(queue, fn);
/******/ 	        promise.catch(rejectFn);
/******/ 	    };
```

```
/******/            module.exports = promise;
/******/            body((deps) => {
/******/                if(!deps) return outerResolve();
/******/                currentDeps = wrapDeps(deps);
/******/                var fn, result;
/******/                var promise = new Promise((resolve, reject) => {
/******/                    fn = () => (resolve(result = currentDeps.map((d) => (d[webpackE
/******/                    fn.r = 0;
/******/                    whenAll(currentDeps, fn, reject);
/******/                });
/******/                return fn.r ? promise : result;
/******/            }).then(outerResolve, reject);
/******/            isEvaluating = false;
/******/        };
/******/    })();
/******/
/******/    /* webpack/runtime/define property getters */
/******/    (() => {
/******/        // define getter functions for harmony exports
/******/        __webpack_require__.d = (exports, definition) => {
/******/            for(var key in definition) {
/******/                if(__webpack_require__.o(definition, key) && !__webpack_require__.o
/******/                    Object.defineProperty(exports, key, { enumerable: true, get: de
/******/                }
/******/            }
/******/        };
/******/    })();
/******/
/******/    /* webpack/runtime/hasOwnProperty shorthand */
/******/    (() => {
/******/        __webpack_require__.o = (obj, prop) => (Object.prototype.hasOwnProperty.cal
/******/    })();
/******/
/******/    /* webpack/runtime/make namespace object */
/******/    (() => {
/******/        // define __esModule on exports
/******/        __webpack_require__.r = (exports) => {
/******/            if(typeof Symbol !== 'undefined' && Symbol.toStringTag) {
/******/                Object.defineProperty(exports, Symbol.toStringTag, { value: 'Module
/******/            }
/******/            Object.defineProperty(exports, '__esModule', { value: true });
/******/        };
/******/    })();
/******/
/******/    /* webpack/runtime/wasm loading */
/******/    (() => {
```

```
/******/         __webpack_require__.v = (exports, wasmModuleId, wasmModuleHash, importsObj)
/******/             var req = fetch(__webpack_require__.p + "" + wasmModuleHash + ".wasm");
/******/             if (typeof WebAssembly.instantiateStreaming === 'function') {
/******/                 return WebAssembly.instantiateStreaming(req, importsObj)
/******/                     .then((res) => (Object.assign(exports, res.instance.exports)));
/******/             }
/******/             return req
/******/                 .then((x) => (x.arrayBuffer()))
/******/                 .then((bytes) => (WebAssembly.instantiate(bytes, importsObj)))
/******/                 .then((res) => (Object.assign(exports, res.instance.exports)));
/******/         };
/******/     })();
/******/
/******/     /* webpack/runtime/publicPath */
/******/     (() => {
/******/         __webpack_require__.p = "dist/";
/******/     })();
/******/
/************************************************************************/

/******/
/******/     // startup
/******/     // Load entry module and return exports
/******/     // This entry module used 'module' so it can't be inlined
/******/     var __webpack_exports__ = __webpack_require__(0);
/******/
/******/ })()
;
```

Info

Unoptimized

```
asset output.js 12.6 KiB [emitted] (name: main)
asset 5a6637e8d63cdf9c72da.wasm 67 bytes [emitted] [immutable] (auxiliary name: main)
asset 35a58b7c95860d720a3c.wasm 62 bytes [emitted] [immutable] (auxiliary name: main)
asset 0eaeab8b9fa3cef100d1.wasm 41 bytes [emitted] [immutable] (auxiliary name: main)
chunk (runtime: main) output.js (main) 1.27 KiB (javascript) 170 bytes (webassembly) 3.35 Ki
  > ./example.js main
  runtime modules 3.35 KiB 6 modules
  dependent modules 552 bytes (javascript) 170 bytes (webassembly) [dependent] 4 modules
  ./example.js 753 bytes [built] [code generated]
    [no exports]
    [used exports unknown]
    entry ./example.js main
webpack 5.51.1 compiled successfully
```

Production mode

```
asset output.js 2.44 KiB [emitted] [minimized] (name: main)
asset 67aca7a09456080b5120.wasm 67 bytes [emitted] [immutable] (auxiliary name: main)
asset 36825f9224dde8d88de0.wasm 62 bytes [emitted] [immutable] (auxiliary name: main)
asset 10cff76bc58b7aa8f9cb.wasm 41 bytes [emitted] [immutable] (auxiliary name: main)
chunk (runtime: main) output.js (main) 1.27 KiB (javascript) 170 bytes (webassembly) 3.08 Ki
  > ./example.js main
  runtime modules 3.08 KiB 5 modules
  dependent modules 552 bytes (javascript) 170 bytes (webassembly) [dependent] 4 modules
  ./example.js 753 bytes [built] [code generated]
    [no exports]
    [no exports used]
    entry ./example.js main
webpack 5.51.1 compiled successfully
```