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require() Caching

`require()` caches the results based on the filename and path. Any code outside of the `module.exports` assignment will be run just once during the process execution. For example, the following code is a module named `utility.js` and it has some code outside of `module.exports`:

```
console.log('This will be printed just once')

module.exports = function(numbersToSum) {
  let sum = 0,
    i = 0,
    l = numbersToSum.length;
    while (i < l) {
        sum += numbersToSum[i++]
    }
    return sum
}
```

The `account-service.js` file uses our `utility.js` module:

```
const sum = require('./utility.js')

let checkingAccountBalance = 200
let savingsAccountBalance = 1000
let retirementAccountBalance = 20000

let totalBalance=sum([checkingAccountBalance, savingsAccountBalance,
console.log(totalBalance)
```

This is `app.js` which imports two files. AYou can also use `require()` to run code without assigning the result to anything (line 2).

```
const sum = require('./utility.js')
require('./account-service.js')

let checkingAccountBalance = 200
let savingsAccountBalance = 1000
let retirementAccountBalance = 20000

retirementAccountBalance = 40000

let totalBalance=sum([checkingAccountBalance, savingsAccountBalance,
console.log(totalBalance)
```

In `app.js` when you import the module `utility.js` two or more times (directly and indirectly via `account-service.js`), the code in `utility.js` which prints `This will be printed just once` (it's outside the `module.exports`) will be **run just once** despite the fact that the function `module.exports` (which we exported) is invoked twice: once in `account-service.js` and the second time in `app.js`.

Therefore, running `app.js` will result in its balance being printed twice, one time in account-service and another time in `app.js`, but the `This will be printed just once` console log only appears once:

```
This will be printed just once
21200
41200
```

Why did the code outside `module.exports` run just once even though we imported the `utility.js` module twice (once directly and one indirectly via `account-service.js`)?

The reason is because Node.js will cache imports. The second time you `require()` the same file or a module, it's not running the code. The results of the module are already there for you to use.

Just keep this behavior in mind and as a general rule, have all the logic exported in `module.exports` to avoid any unwanted behavior or conflicts.