

JavaScript: Executing synchronously

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I am being asked this question often; therefore, I am posting the answer here.

Commonly there are those who wish to do a process that normally is asynchronously, such as performing AJAX operations in a synchronous fashion. There are a few ways to do this.

If you are coding in JS for NodeJS, then you can use the package `async-waterfall`, example:

```
function readFile(callback) {
    fs.readFile('your_file.json', function (error, file) {
        if (error) {
            callback(error);
        } else {
            callback(null, file);
        }
    });
}
...
function processFile(file, callback){
    // Some code here
}
...
async.waterfall([
    readFile,
    processFile
], function (error) {
    if (error) {
        // handle error made in readFile or processFile method
    }
});
```

Else, you can use promise chains which is part of Javascript, example:

```
new Promise(function(resolve, reject) {
    try{
        resolve(readfile());
    }catch(e){
        reject("error message");
    }
}).then(function(result) {
    return processFile(result)
});
```

Or, you can use `async/await`: https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Statements/async_function

