

# Async / Await



**Mosh Hamedani**  
[programmingwithmosh.com](https://programmingwithmosh.com)

```
12
13 // Promise-based approach
14 getUser(1)
15   .then(user => getRepositories(user.githubUsername))
16   .then(repos => getCommits(repos[0]))
17   .then(commits => console.log('Commits', commits))
18   .catch(err => console.log('Error', err.message));
19
20 // Async and Await approach
21 async function displayCommits() {
22   const user = await getUser(1);
23   const repos = await getRepositories(user.githubUsername);
24   const commits = await getCommits(repos[0]);
25   console.log(commits);
26 }
27 displayCommits()
28
29 console.log('After');
```

JS promise-api.js JS index.js X

JS index.js X



```
1 console.log('Before');
```

```
3 // Callback-based approach
```

```
13 // Prom
```

Complexity is 3 Everything is cool!

Reading  
Callie

```
Calling Github API For Commits...
[ 'commit' ]
```

ganday@ny-ubuntu: ~/keep/github/keep

ter\*   0  0  4 ✓ javascript | ✓ index.js

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Activities

Visual Studio Code

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index.js - Applications - Visual Studio Code

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JS promise-api.js JS index.js

11. Async And Await > async-demo > JS index.js > getCommits > <function> > setTimeout() callback

```
20 // Async and Await approach
    Complexity is 3 Everything is cool!
21 async function displayCommits() {
22     try {
23         const user = await getUser(1);
24         const repos = await getRepositories(user.githubUsername);
25         const commits = await getCommits(repos[0]);
26         console.log(commits);
27     }
28     catch (err) {
29         console.log('Error', err.message);
30     }
31 }
32 displayCommits();
33
34 console.log('After');
35
    Complexity is 4 Everything is cool!
36 function getUser(id) {
37     return new Promise((resolve, reject) => {
38         // Kick off some async work
39         setTimeout(() => {
```

DEBUG CONSOLE PROBLEMS 4 OUTPUT TERMINAL

2: bash

```
dandy@My-Ubuntu:~/Keep/GitHub Repositories/Node.js/06. Asynchronous JavaScript/Applications/11. Async And Await/async-demo$ node index.js
Before
After
Reading a user from a database...
Calling GitHub API For Repositories...
Calling GitHub API For Commits...
[ 'commit' ]
dandy@My-Ubuntu:~/Keep/GitHub Repositories/Node.js/06. Asynchronous JavaScript/Applications/11. Async And Await/async-demo$
```

master\* 0 0 0 4 javascript | index.js

Ln 58, Col 50 Spaces: 2 UTF-8 LF Babel JavaScript JavaScript Standard Style

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JS promise-api.jsJS index.js

11. Async And Await > async-demo > JS index.js > getCommits > <function> > setTimeout() callback

```
36 function getUser(id) {
37   return new Promise((resolve, reject) => {
38     // Kick off some async work
39     setTimeout(() => {
40       console.log('Reading a user from a database...');
41       resolve({ id: id, gitHubUsername: 'mosh' });
42     }, 2000);
43   });
44 }
45
46 function getRepositories(username) {
47   return new Promise((resolve, reject) => {
48     setTimeout(() => {
49       console.log('Calling GitHub API For Repositories...');
50       resolve(['repo1', 'repo2', 'repo3']);
51     }, 2000);
52   });
53 }
54
```

Complexity is 4 Everything is cool!

DEBUG CONSOLEPROBLEMS4OUTPUTTERMINAL

2: bash

```
dandy@My-Ubuntu:~/Keep/GitHub Repositories/Node.js/06. Asynchronous JavaScript/Applications/11. Async And Await/async-demo$ node index.js
Before
After
Reading a user from a database...
Calling GitHub API For Repositories...
Calling GitHub API For Commits...
[ 'commit' ]
dandy@My-Ubuntu:~/Keep/GitHub Repositories/Node.js/06. Asynchronous JavaScript/Applications/11. Async And Await/async-demo$
```

master\*0004✓ javascript | ✓ index.jsLn 58, Col 50Spaces: 2UTF-8LFBabel JavaScriptJavaScript Standard Style

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JS promise-api.jsJS index.js

11. Async And Await > async-demo > JS index.js > getCommits > <function> > setTimeout() callback

55function getCommits(repo) {

56 return new Promise((resolve, reject) => {

57 setTimeout(() => {

58 console.log(['Calling GitHub API For Commits...']);

59 resolve(['commit']);

60 }, 2000);

61 });

62 }

DEBUG CONSOLEPROBLEMS4OUTPUTTERMINAL

2: bash

dandy@My-Ubuntu:~/Keep/GitHub Repositories/Node.js/06. Asynchronous JavaScript/Applications/11. Async And Await/async-demo\$ node index.js

Before

After

Reading a user from a database...

Calling GitHub API For Repositories...

Calling GitHub API For Commits...

[ 'commit' ]

dandy@My-Ubuntu:~/Keep/GitHub Repositories/Node.js/06. Asynchronous JavaScript/Applications/11. Async And Await/async-demo\$

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2: bash



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JS promise-api.jsJS index.js

11. Async And Await > async-demo > JS index.js > getRepositories > <function> > setTimeout() callback

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20 // Async and Await approach
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25     const commits = await getCommits(repos[0]);
26     console.log(commits);
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28   catch (err) {
29     console.log('Error', err.message);
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31 }
32 displayCommits();
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36 Complexity is 4 Everything is cool!
37 function getUser(id) {
38   return new Promise((resolve, reject) => {
39     // Kick off some async work
40     setTimeout(() => {
41       console.log('Reading a user from a database...');
42       resolve({ id: id, githubUsername: 'mosh' });
43     }, 2000);
44   });
45 }
```

DEBUG CONSOLEPROBLEMS4OUTPUTTERMINAL

2: bash

```
dandy@My-Ubuntu:~/Keep/GitHub Repositories/Node.js/06. Asynchronous JavaScript/Applications/11. Async And Await/async-demo$ node index.js
Before
After
Reading a user from a database...
Calling GitHub API For Repositories...
Error Could not get the repository...
dandy@My-Ubuntu:~/Keep/GitHub Repositories/Node.js/06. Asynchronous JavaScript/Applications/11. Async And Await/async-demo$
```

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JS promise-api.jsJS index.js

11. Async And Await > async-demo > JS index.js > getRepositories > <function> > setTimeout() callback

Complexity is 4 Everything is cool!

46function getRepositories(username) {

47 return new Promise((resolve, reject) => {

48 setTimeout(() => {

49 console.log('Calling GitHub API For Repositories...');

50 // resolve(['repo1', 'repo2', 'repo3']);

51 reject(new Error('Could not get the repository...'));

52 }, 2000);

53 });

54 }

55

Complexity is 4 Everything is cool!

56function getCommits(repo) {

57 return new Promise((resolve, reject) => {

58 setTimeout(() => {

59 console.log('Calling GitHub API For Commits...');

60 resolve(['commit']);

61 }, 2000);

62 });

63 }

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2: bash

dandy@My-Ubuntu:~/Keep/GitHub Repositories/Node.js/06. Asynchronous JavaScript/Applications/11. Async And Await/async-demo\$ node index.js

Before

After

Reading a user from a database...

Calling GitHub API For Repositories...

Error Could not get the repository...

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