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Javscript

async/await

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Hey Everyones 👋

In this post, you will learn about JavaScript async/await keywords with the help of examples.

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async/await

- We use the async keyword with a function to represent that the function is an asynchronous function.
- The async function returns a promise.

```
async function name(parameter1, parameter2, ...paramaterN) {
    // statements
}
```

- **name** - name of the function.
- **parameters** - parameters that are passed to the function.

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Async Function

```
// async function example
async function f() {
    console.log('Async function.');
    return Promise.resolve(1);
}
f();
```

- Since this function returns a promise, you can use the chaining method then().

```
async function f() {
    console.log('Async function.');
    return Promise.resolve(1);
}
f().then(function(result) {
    console.log(result)
});
```

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await Keyword

- The await keyword is used inside the async function to wait for the asynchronous operation.

```
let result = await promise;
```

- The use of await pauses the async function until the promise returns a result value.

```
let promise = new Promise(function (resolve, reject) {
    setTimeout(function () {
    resolve('Promise resolved')}, 4000);
});
async function asyncFunc() { // async function
    // wait until the promise resolves
    let result = await promise;
    console.log(result);
    console.log('hello');
}
// calling the async function
asyncFunc();
```

Output

```
Promise resolved
hello
```

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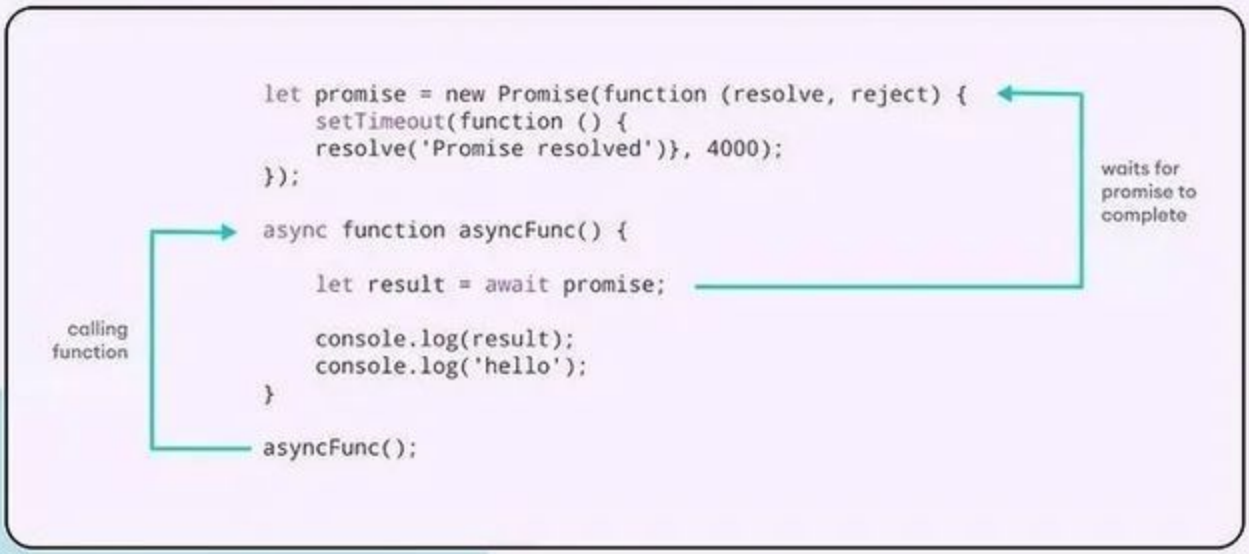
- In the prev. program, a Promise object is created and it gets resolved after 4000 milliseconds.
- Here, the asyncFunc() function is written using the async function.
- The await keyword waits for the promise to be complete (resolve or reject).
- Hence, hello is displayed only after promise value is available to the result variable



Error Handling

- While using the async function, you write the code in a synchronous manner.
- And you can also use the catch() method to catch the error.

```
asyncFunc().catch(
    // catch error and do something
)
```

- The other way you can handle an error is by using try/catch block.

```
// a promise
let promise = new Promise(function (resolve, reject) {
    setTimeout(function () {
    resolve('Promise resolved')}, 4000);
});
// async function
async function asyncFunc() {
    try {
        // wait until the promise resolves
        let result = await promise;
        console.log(result);
    }
    catch(error) {
        console.log(error);
    }
}
// calling the async function
asyncFunc(); // Promise resolved
```

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Benefits of Using async Function

- The code is more readable than using a callback or a promise.
- Error handling is simpler.
- Debugging is easier.

Note: You can use `await` **only inside of** `async` **functions.**

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Best Of Luck :)

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