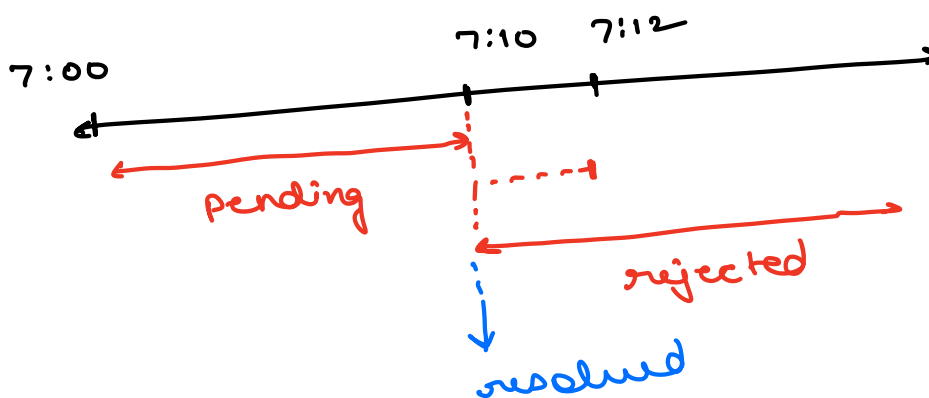


Agenda

- What are Promise
- Async programming with Promise
- Chaining of Promises
- Serial operation with promises

Promise:- In JS, a promise is an object representing the eventual completion or failure of an asynchronous task.

Note:- It provides a way to handle async tasks more elegantly while maintaining the code readability.



3 states

- ① Pending
 - ② Fulfilled or resolved
 - ③ Rejected
- } Settled

clean the room ~~success~~ → ice cream (Resolved)
~~failed~~ → no ice cream (Rejected)

There are 3 methods that can be used to do something or react when the promise is settled (resolved or rejected)

- .then (resolved)
- .catch (rejected)
- .finally

```
myPromise
  .then(function (val) {
    console.log("Success:", val);
  })
  .catch(function (val) {
    console.log("Failed:", val);
    return "testing";
  })
  .then(function (val) {
    console.log(val);
  })
  .finally(function () {
    console.log("Accept your fate!");
  });
```

- 1) Make API call
- 2) Read DB
- 3) Write DB
- 4) Make API call

Call Stack

Web/Node API

```
fs.promises.readFile("./files/f1.txt", "utf-8");
fs.promises.readFile("./files/f2.txt", "utf-8");
fs.promises.readFile("./files/f3.txt", "utf-8");
```

event
loop

```
const onFulfilled = (data) => {  
  console.log("This is file data:", data);  
};  
  
const onRejected = (error) => {  
  console.log("This is the error:", error);  
};
```

call back
queue

micro task
queue