

TUGAS INDIVIDU
PEMROGRAMAN BERBASIS FRAMEWORK
PERTEMUAN 2



Disusun oleh:

Rijal Ammar Irsyadul Ibad

TI-3B/2041720184

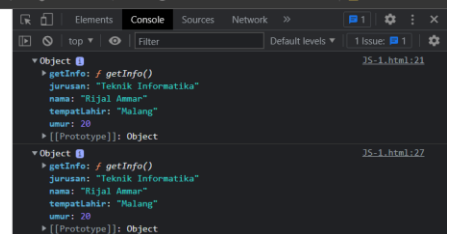
D4 TEKNIK INFORMATIKA
TEKNOLOGI INFORMASI
POLITEKNIK NEGERI MALANG

2023

A. Memproses Object pada JS

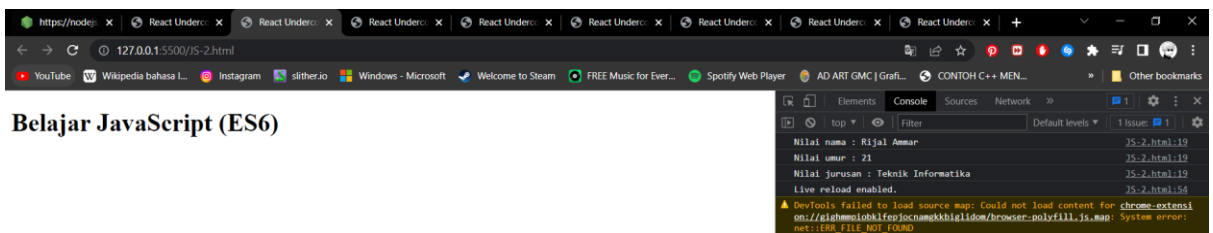
```
1 <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2 <!DOCTYPE html>
3 <html lang="en">
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>React Undercover</title>
9 </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13     let mahasiswa = {
14       nama: "Rijal Ammar",
15       umur: 21,
16       jurusan: "Teknik Informatika",
17       getInfo() {
18         return `${this.nama} (${this.umur} tahun) dari jurusan ${this.jurusan}`;
19       }
20     }
21
22     console.log(mahasiswa);
23     // {nama: "Rijal Ammar", umur: 21, jurusan: "Teknik Informatika", getInfo: f}
24
25     mahasiswa.umur = 20;
26     mahasiswa.tempatLahir = "Malang";
27
28     console.log(mahasiswa);
29     // {nama: "Rijal Ammar", umur: 21, jurusan: "Teknik Informatika", tempatLahir: "Malang", getInfo: f}
30
31   </script>
32 </body>
33 </html>
```

Belajar JavaScript (ES6)





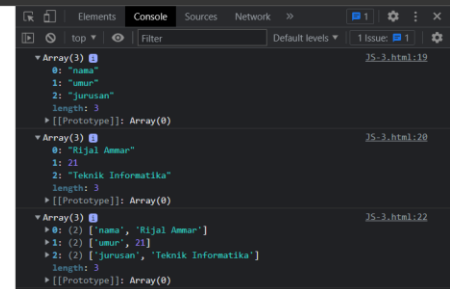
```
1 <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2 <!DOCTYPE html>
3 <html lang="en">
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>React Undercover</title>
9 </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13     let mahasiswa = {
14       nama: "Rijal Ammar",
15       umur: 21,
16       jurusan: "Teknik Informatika",
17     }
18
19     for (prop in mahasiswa){
20       console.log(`Nilai ${prop} : ${mahasiswa[prop]}`);
21     }
22
23     // Nilai Nama : Rijal Ammar
24     // Nilai Umur : 21
25     // Nilai Jurusan : Teknik Informatika
26   </script>
27 </body>
28 </html>
```



B. Contoh Penggunaan Memproses Object pada JS

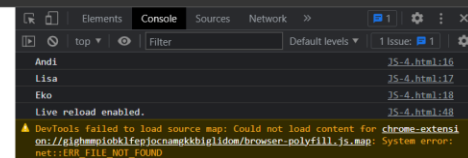
```
1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5    <meta charset="UTF-8">
6    <meta http-equiv="X-UA-Compatible" content="IE=edge">
7    <meta name="viewport" content="width=device-width, initial-scale=1.0">
8    <title>React Undercover</title>
9  </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13     let mahasiswa = {
14       nama: "Rijal Ammar",
15       umur: 21,
16       jurusan: "Teknik Informatika",
17     }
18
19     console.log(Object.keys(mahasiswa)); //["nama", "umur", "jurusan"]
20     console.log(Object.values(mahasiswa)); //["Rijal", "21", "Teknik Informatika"]
21
22     console.log(Object.entries(mahasiswa));
23     // [
24     //   ["nama", "Rijal Ammar"]
25     //   ["umur", "21"]
26     //   ["jurusan", "Teknik informatika"]
27     // ]
28   </script>
29 </body>
30 </html>
```

Belajar JavaScript (ES6)



```
1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Undercover</title>
9  </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13       let mahasiswa = ["Andi", "Lisa", "Eko"];
14       let [a, b, c] = mahasiswa;
15
16       console.log(a); //Andi
17       console.log(b); //Lisa
18       console.log(c); // Eko
19   </script>
20 </body>
21 </html>
```

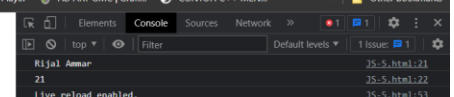
Belajar JavaScript (ES6)



C. Array dan Object Destructuring

```
1 <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2 <!DOCTYPE html>
3 <html lang="en">
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>React Undercover</title>
9 </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13     let mahasiswa = {
14       nama: "Rijal Ammar",
15       umur: "21",
16       jurusan: "Teknik Informatika",
17     };
18
19     let {nama, umur} = mahasiswa;
20
21     console.log(nama); //Rijal Ammar
22     console.log(umur); //21
23
24   </script>
25 </body>
26 </html>
```

Belajar JavaScript (ES6)

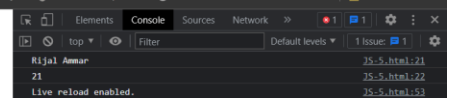


```

1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Undercover</title>
9  </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13       const dataMahasiswa = () => {
14           return {nama: "Rijal Ammar", umur: 21, jurusan: "Teknik Informatika"}
15       }
16
17       let {nama, umur} = dataMahasiswa();
18
19       console.log(nama); //Rijal Ammar
20       console.log(umur); //21
21   </script>
22 </body>
23 </html>

```

Belajar JavaScript (ES6)



```

1 <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2 <!DOCTYPE html>
3 <html lang="en">
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>React Undercover</title>
9 </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13     const dataMahasiswa = () => {
14       return {nama: "Rijal Ammar", umur: 21, jurusan: "Teknik Informatika"}
15     }
16
17     let {nama: namaMahasiswa, umur: umurMahasiswa} = dataMahasiswa();
18
19     console.log(namaMahasiswa); //Rijal Ammar
20     console.log(umurMahasiswa); //21
21   </script>
22 </body>
23 </html>

```

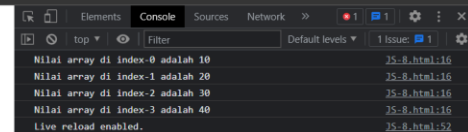
Belajar JavaScript (ES6)

Elements	Console	Sources	Network	Filter	Default levels	1 issue
	Rijal Ammar					JS-7.html:19
	21					JS-7.html:20
	Live reload enabled.					JS-7.html:50

D. Array Method: `forEach()` dan `map()`

```
1 <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2 <!DOCTYPE html>
3 <html lang="en">
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>React Undercover</title>
9 </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13     let arr = [10,20,30,40];
14
15     arr.forEach(function(val,key){
16       console.log(`Nilai array di index-${key} adalah ${val}`);
17     });
18
19     // Nilai Array di index-0 adalah 10
20     // Nilai Array di index-0 adalah 20
21     // Nilai Array di index-0 adalah 30
22     // Nilai Array di index-0 adalah 40
23   </script>
24 </body>
25 </html>
```

Belajar JavaScript (ES6)



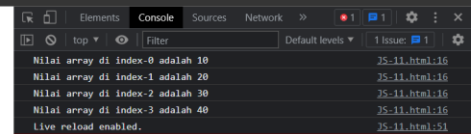
Message	File
Nilai array di index-0 adalah 10	25-B.html:16
Nilai array di index-1 adalah 20	25-B.html:16
Nilai array di index-2 adalah 30	25-B.html:16
Nilai array di index-3 adalah 40	25-B.html:16
Live reload enabled.	25-B.html:52

```

1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Undercover</title>
9  </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13       let arr = [10,20,30,40];
14
15       arr.forEach( (val,key) =>
16           console.log(`Nilai array di index-${key} adalah ${val}`));
17
18           // Nilai Array di index-0 adalah 10
19           // Nilai Array di index-0 adalah 20
20           // Nilai Array di index-0 adalah 30
21           // Nilai Array di index-0 adalah 40
22   </script>
23 </body>
24 </html>

```

Belajar JavaScript (ES6)





```
1 <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2 <!DOCTYPE html>
3 <html lang="en">
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>React Undercover</title>
9 </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13     let arr = [10,20,30,40];
14     arrKuadrat = [];
15
16     arr.forEach((val) => arrKuadrat.push(val*val));
17     console.log(arrKuadrat); // [100,400,900,1600]
18   </script>
19 </body>
20 </html>
```

Belajar JavaScript (ES6)

The screenshot shows a web browser window with the title "Belajar JavaScript (ES6)". The address bar shows the URL "127.0.0.1:5500/JS-9.html". The browser has multiple tabs open, including "Rijal Ammar", "React Undercover", and "React Undercover". The Chrome DevTools Console is open, showing the output of the JavaScript code: an array [100, 400, 900, 1600]. The console also shows the array's length as 4 and its prototype as Array(0).

```

1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/II3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Uncover</title>
9  </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13       const mahasiswa = [
14           {
15               nama: "Eka",
16               umur: 19,
17               jurusan: "Teknik Informatika"
18           },
19           {
20               nama: "Lisa",
21               umur: 18,
22               jurusan: "Sistem Informasi"
23           },
24           {
25               nama: "Rudi",
26               umur: 19,
27               jurusan: "Teknik Elektro"
28           }
29       ];
30
31       const prosesMahasiswa = (mahasiswa) =>
32       `<p>${mahasiswa.nama} (${mahasiswa.umur}), ${mahasiswa.jurusan}</p>`;
33
34       const formatMahasiswas = mahasiswa.map(prosesMahasiswa);
35
36       console.log(formatMahasiswas);
37   </script>
38
39   <!-- [
40       <p>Eka (19), Teknik Informatika</p>,
41       <p>Lisa (18), Sistem Informasi</p>,
42       <p>Rudi (19), Teknik Elektro</p>,
43   ] -->
44 </body>
45 </html>

```

Belajar JavaScript (ES6)

array_foreach_map2.html:36

```

Array(3)
0: "<p>Eka (19), Teknik Informatika</p>"
1: "<p>Lisa (18), Sistem Informasi</p>"
2: "<p>Rudi (19), Teknik Elektro</p>"
length: 3
__proto__: Array(0)

```

```

1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Uncover</title>
9  </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <div id="root"></div>
13   <button onclick="renderData()">Tampilkan Data Mahasiswa</button>
14   <script>
15       const mahasiswa = [
16           {
17               nama: "Eka",
18               umur: 19,
19               jurusan: "Teknik Informatika"
20           },
21           {
22               nama: "Lisa",
23               umur: 18,
24               jurusan: "Sistem Informasi"
25           },
26           {
27               nama: "Rudi",
28               umur: 19,
29               jurusan: "Teknik Elektro"
30           }
31       ];
32
33       const prosesMahasiswa = (mahasiswa) =>
34       `<p>${mahasiswa.nama} (${mahasiswa.umur} tahun) -
35         <i>${mahasiswa.jurusan}</i></p>`;
36
37       const formatMahasiswas = mahasiswa.map(prosesMahasiswa);
38
39       const renderData = () => {
40           document.getElementById('root').innerHTML = formatMahasiswas.join("");
41       }
42   </script>
43
44   <!-- [
45       "<p>Eka (19), Teknik Informatika</p>",
46       "<p>Lisa (18), Sistem Informasi</p>",
47       "<p>Rudi (19), Teknik Elektro</p>",
48   ] -->
49 </body>
50 </html>

```

Belajar JavaScript (ES6)

Eka (19 tahun) - *Teknik Informatika*

Lisa (18 tahun) - *Sistem Informasi*

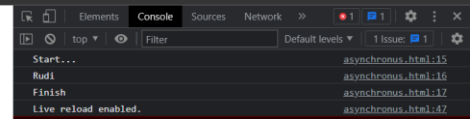
Rudi (19 tahun) - *Teknik Elektro*

Tampilkan Data Mahasiswa

E. Asynchronous JavaScript (Promise / Async - Await)

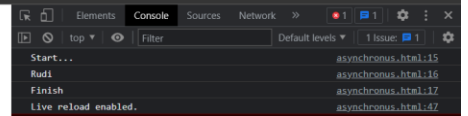
```
1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Uncover</title>
9  </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13       const getUser = () => "Rudi";
14
15       console.log("Start...");    // Start...
16       console.log(getUser());     // Rudi
17       console.log("Finish");     // Finish
18   </script>
19 </body>
20 </html>
```

Belajar JavaScript (ES6)



```
1 <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2 <!DOCTYPE html>
3 <html lang="en">
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>React Uncover</title>
9 </head>
10 <body>
11   <h1>Belajar JavaScript (ES6)</h1>
12   <script>
13     const getUser = () => "Rudi";
14
15     console.log("Start..."); // Start...
16     console.log(getUser());  // Rudi
17     console.log("Finish");   // Finish
18   </script>
19 </body>
20 </html>
```

Belajar JavaScript (ES6)

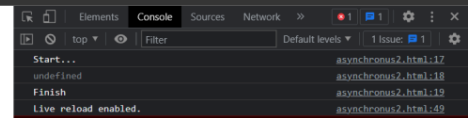


```

1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Uncover</title>
9  </head>
10 <body>
11     <h1>Belajar JavaScript</h1>
12     <script>
13         const getUser = () => {
14             setTimeout(() => "Rudi", 2000)
15         }
16
17         console.log("Start...");    // Start...
18         console.log(getUser());    // undefined
19         console.log("Finish");    // Finish
20     </script>
21 </body>
22 </html>

```

Belajar JavaScript

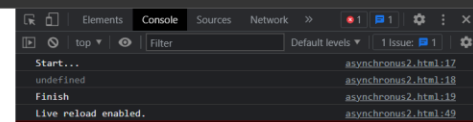



```

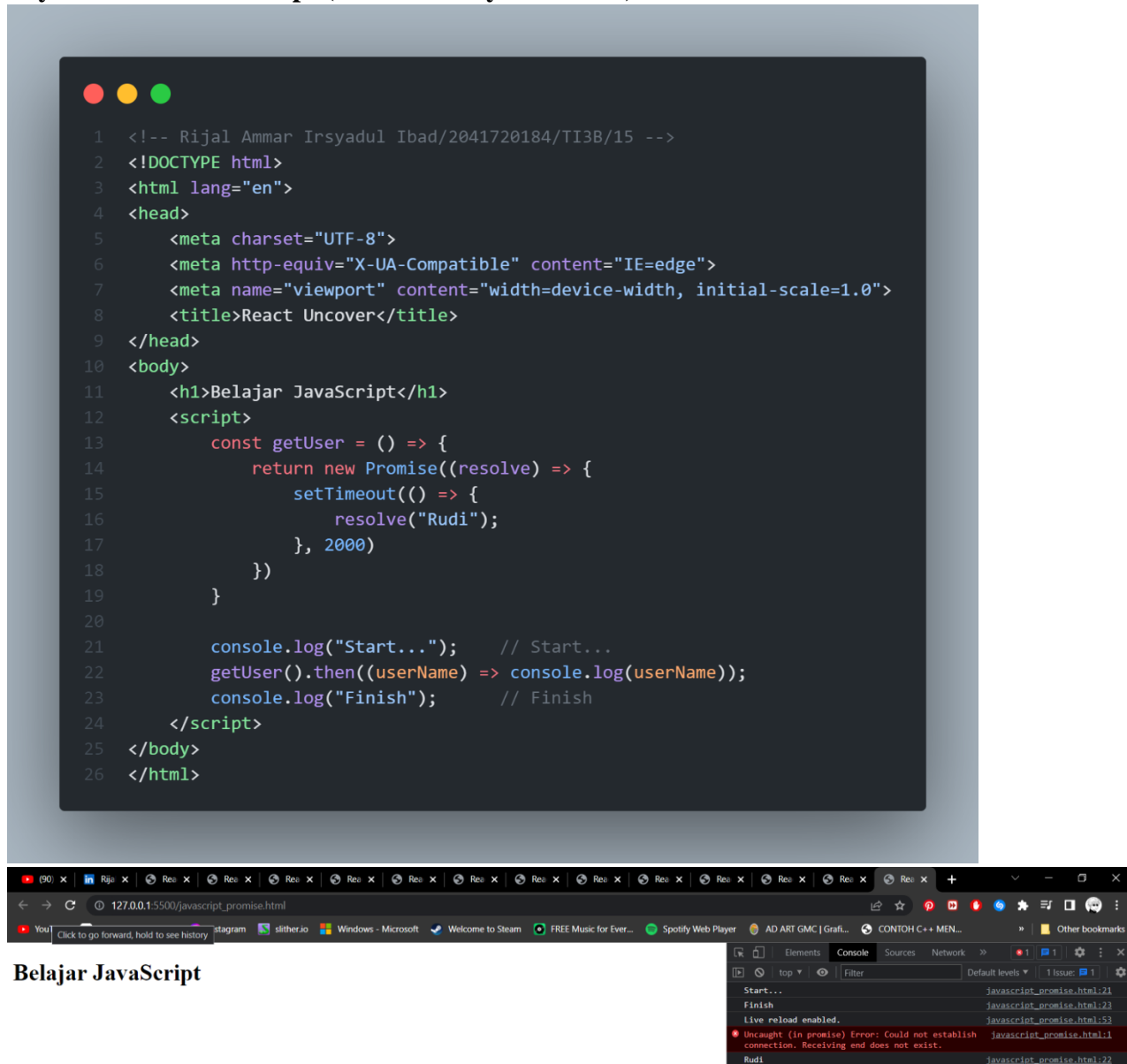
1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Uncover</title>
9  </head>
10 <body>
11   <h1>Belajar JavaScript</h1>
12   <script>
13       const getUser = () => {
14           setTimeout(() => {
15               console.log("Processing done!");
16               return "Rudi";
17           }, 2000)
18       }
19
20       console.log("Start...");    // Start...
21       console.log(getUser());    // undefined
22       console.log("Finish");    // Finish
23   </script>
24 </body>
25 </html>

```

Belajar JavaScript



F. Asynchronous JavaScript (Promise / Async - Await)



```
1 <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2 <!DOCTYPE html>
3 <html lang="en">
4 <head>
5   <meta charset="UTF-8">
6   <meta http-equiv="X-UA-Compatible" content="IE=edge">
7   <meta name="viewport" content="width=device-width, initial-scale=1.0">
8   <title>React Uncover</title>
9 </head>
10 <body>
11   <h1>Belajar JavaScript</h1>
12   <script>
13     const getUser = () => {
14       return new Promise((resolve) => {
15         setTimeout(() => {
16           resolve("Rudi");
17         }, 2000)
18       })
19     }
20
21     console.log("Start..."); // Start...
22     getUser().then((userName) => console.log(userName));
23     console.log("Finish"); // Finish
24   </script>
25 </body>
26 </html>
```

Belajar JavaScript

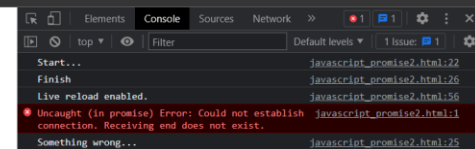
Console:

- Start... javascript_promise.html:21
- Finish javascript_promise.html:22
- Live reload enabled. javascript_promise.html:53
- Uncaught (in promise) Error: Could not establish connection. Receiving end does not exist. javascript_promise.html:1
- Rudi javascript_promise.html:22



```
1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Uncover</title>
9  </head>
10 <body>
11   <h1>Belajar JavaScript</h1>
12   <script>
13       const getUser = () => {
14           return new Promise((resolve, reject) => {
15               setTimeout(() => {
16                   //resolve("Rudi");
17                   reject("Something wrong...");
18               }, 2000)
19           })
20       }
21
22       console.log("Start...");    // Start...
23       getUser()
24           .then((userName) => console.log(userName))
25           .catch((error) => console.log(error));
26       console.log("Finish");      // Finish
27   </script>
28 </body>
29 </html>
```

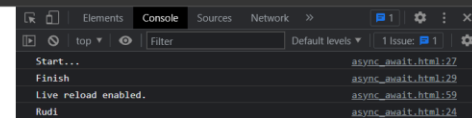
Belajar JavaScript



G. Async – Await

```
1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Uncover</title>
9  </head>
10 <body>
11   <h1>Belajar JavaScript</h1>
12   <script>
13       const getUser = () => {
14           return new Promise((resolve, reject) => {
15               setTimeout(() => {
16                   resolve("Rudi");
17                   reject("Something wrong...");
18               }, 2000)
19           })
20       }
21
22       const tryGetGame = async () => {
23           let userName = await getUser();
24           console.log(userName);
25       };
26
27       console.log("Start...");
28       tryGetGame();
29       console.log("Finish");
30   </script>
31 </body>
32 </html>
```

Belajar JavaScript



```

1  <!-- Rijal Ammar Irsyadul Ibad/2041720184/TI3B/15 -->
2  <!DOCTYPE html>
3  <html lang="en">
4  <head>
5      <meta charset="UTF-8">
6      <meta http-equiv="X-UA-Compatible" content="IE=edge">
7      <meta name="viewport" content="width=device-width, initial-scale=1.0">
8      <title>React Uncover</title>
9  </head>
10 <body>
11     <h1>Belajar JavaScript</h1>
12     <script>
13         const getUser = () => {
14             return new Promise((resolve, reject) => {
15                 setTimeout(() => {
16                     //resolve("Rudi");
17                     reject("Something wrong...");
18                 }, 2000)
19             })
20         }
21
22         const tryGetGame = async () => {
23             try{
24                 let userName = await getUser();
25                 console.log(userName);
26             }
27             catch (error){
28                 console.log(error);
29             }
30         };
31
32         console.log("Start...");
33         tryGetGame();
34         console.log("Finish");
35     </script>
36 </body>
37 </html>

```

Belajar JavaScript

