

Nama : Diesti Hidayani

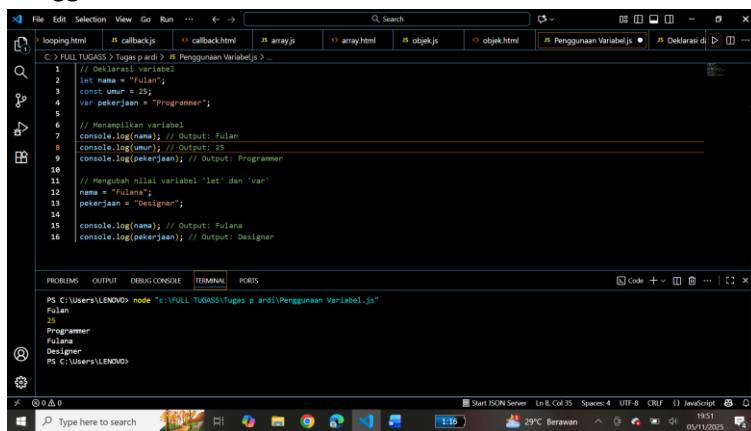
Nim : 202307002

Matkul : Rekayasa Web

Latihan Bab 3

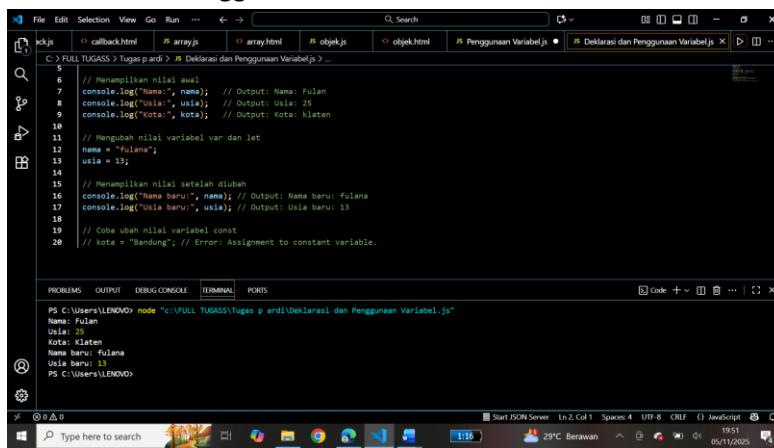
Outputnya

1. Penggunaan Variabel



```
// Declarasi variabel
1 let nama = "Fulan";
2 const umur = 25;
3 var pekerjaan = "Programmer";
4
5 // Menampilkan variabel
6 console.log(nama); // Output: Fulan
7 console.log(umur); // Output: 25
8 console.log(pekerjaan); // Output: Programmer
9
10 // Mengubah nilai variabel 'let' dan 'var'
11 nama = "Fulana";
12 pekerjaan = "Designer";
13
14 console.log(nama); // Output: Fulana
15 console.log(pekerjaan); // Output: Designer
```

2. Deklarasi dan Penggunaan Variabel



```
// Menampilkan nilai awal
1 // Declarasi variabel
2 let nama = "Fulan";
3 const umur = 25;
4 var kota = "Klaten";
5
6 // Mengubah nilai variabel var dan let
7 nama = "Fulana";
8 umur = 13;
9 kota = "Klaten";
10
11 // Menampilkan nilai setelah diubah
12 console.log("Nama:", nama); // Output: Nama: Fulan
13 console.log("Usia:", umur); // Output: Usia: 25
14 console.log("Kota:", kota); // Output: Kota: Klaten
15
16 // Menampilkan nilai setelah diubah
17 console.log("Nama baru:", nama); // Output: Nama baru: Fulana
18 console.log("Usia baru:", umur); // Output: Usia baru: 13
19
20 // Coba ubah nilai variabel const
21 // kota = "Bandung"; // Error: Assignment to constant variable.
```

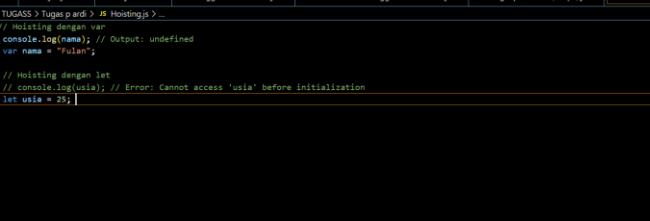
3. Lingkup Variabel (Scope)

```
C:\>FULL TUGASS> Tugas p_aridj & Lingkup Variabel (Scope).js > ...
1  if (true) {
2    var varScope = "Ini var scope";
3
4    let letScope = "Ini let scope";
5
6    // Mengakses variabel di luar blok
7    console.log(varScope); // Output: Ini var scope
8    // console.log(letScope); // Error: letScope is not defined
9
10   // console.log(letScope); // Error: letScope is not defined
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\LENOVO> node <:1!FULL TUGASS!>tugas_p_aridj/Lingkup Variabel (Scope).js
Ini var scope
PS C:\Users\LENOVO>
```

4. Hoisting



C:\> FULL TUGAS > Tugas p ard > JS Hoisting.js -

```
1 // Hoisting dengan var
2 console.log(name); // Output: undefined
3 var name = "clien";
4
5 // Hoisting dengan let
6 // console.log(usia); // Error: Cannot access 'usia' before initialization
7 let usia = 25;
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PAGES

```
PS C:\Users\LENOVO> node "c:\FULL TUGAS\Tugas p ard\Hoisting.js"
undefined
PS C:\Users\LENOVO>
```

5. Penggunaan Variabel dalam Fungsi

File Edit Selection View Go Run ... ↶ ↷ ⌂ Search

Iusi dan Penggunaan Variabel.js JS Lingkup Variabel (Scope).js JS Hoisting.js JS Penggunaan Variabel dalam Fungsi.js X JS Penggunaan const dengan Objek dan Array.js

C:\> FULL TUGAS> Tugas p andi> JS Penggunaan Variabel dalam Fungsi.js > hitungLuas

```
function hitungLuas(panjang, lebar) {
  1
  2
  3   let luas = panjang * lebar;
  4   return luas;
  5 }
  6
  7 // Menggunakan fungsi
  8 let hasil = hitungLuas(5, 3);
  9 console.log("Luas Persegi Panjang:", hasil); // Output: Luas Persegi Panjang: 15
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\LENOVO> node "C:\FULL TUGAS>Tugas p andi>Penggunaan Variabel dalam Fungsi.js"
Luas Persegi Panjang: 15
PS C:\Users\LENOVO>

Start JSON Server En 2, Col 1 Spaces: 4 URL: 8 JavaScript C:\

Type here to search

6. Penggunaan const dengan Objek dan Array

A screenshot of the Visual Studio Code interface. The terminal window shows the following command and output:

```
PS C:\FULL TUGASS> node "c:\FULL TUGASS\Tugas p andi\Penggunaan const dengan Objek dan Array.js"
{ name: 'John', umur: 25 }
[ 1, 2, 3, 4 ]
PS C:\Users\LENOVO>
```

7. Kombinasi Variabel dan Kondisi

A screenshot of the Visual Studio Code interface. The terminal window shows the following command and output:

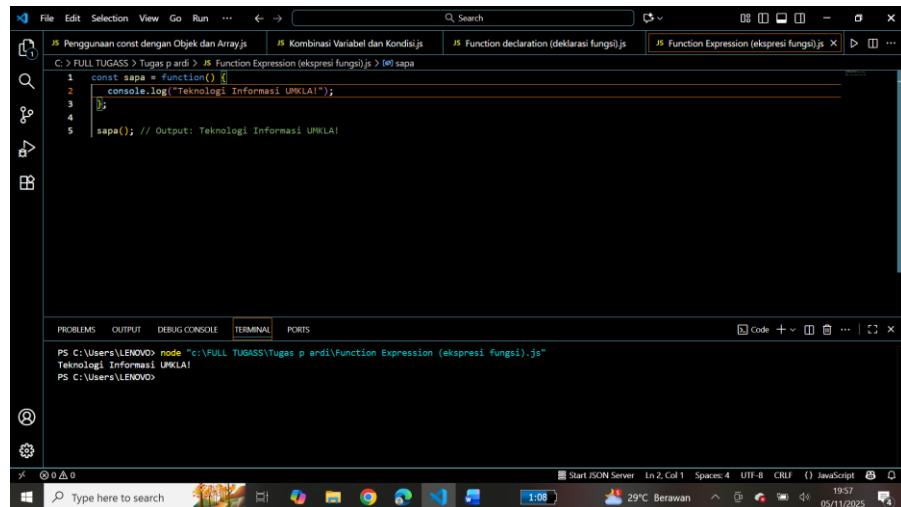
```
PS C:\Users\LENOVO> node "c:\FULL TUGASS\Tugas p andi\Kombinasi Variabel dan Kondisi.js"
Dewasa
PS C:\Users\LENOVO>
```

8. Function declaration (deklarasi fungsi)

A screenshot of the Visual Studio Code interface. The terminal window shows the following command and output:

```
PS C:\Users\LENOVO> node "c:\FULL TUGASS\Tugas p andi\Function declaration (deklarasi fungsi).js"
Teknologi Informasi UMKLAI
PS C:\Users\LENOVO>
```

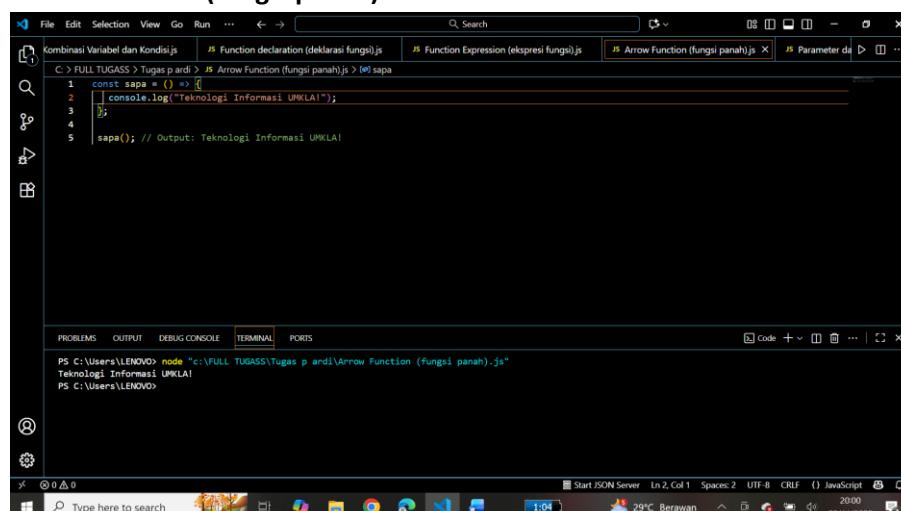
9. Function Expression (ekspressi fungsi)



A screenshot of the Visual Studio Code (VS Code) interface. The terminal window at the bottom shows the command `node "c:\FULL TUGASS\Tugas p andi\Function Expression (ekspressi fungsi).js"` and its output: `Teknologi Informasi UMKLAI`. The code editor shows a file named `sapa.js` with the following content:

```
1 const sapa = function() {
2   console.log("Teknologi Informasi UMKLAI");
3 }
4
5 sapa(); // Output: Teknologi Informasi UMKLAI
```

10. Arrow Function (fungsi panah)



A screenshot of the Visual Studio Code (VS Code) interface. The terminal window at the bottom shows the command `node "c:\FULL TUGASS\Tugas p andi\Arrow Function (fungsi panah).js"` and its output: `Teknologi Informasi UMKLAI`. The code editor shows a file named `sapa.js` with the following content:

```
1 const sapa = () => {
2   console.log("Teknologi Informasi UMKLAI");
3 }
4
5 sapa(); // Output: Teknologi Informasi UMKLAI
```

11. Parameter dan Argumen

A screenshot of the Visual Studio Code interface. The terminal at the bottom shows the command `node "c:\FULL TUGASS\Tugas p ardi\Parameter dan Argumen.js"`. The output is `Halo, Mahasiswa TI!`.

```
function sapa(nama) {
  console.log("Halo, " + nama + "!");
}

sapa("Mahasiswa ti"); // Output: Halo, Mahasiswa TI!
```

12. Return Value

A screenshot of the Visual Studio Code interface. The terminal at the bottom shows the command `node "c:\FULL TUGASS\Tugas p ardi\Return Value.js"`. The output is `15`.

```
function kali(a, b) {
  return a * b;
}

let hasil = kali(5, 3);
console.log(hasil); // Output: 15
```

13. Default Parameter

A screenshot of the Visual Studio Code interface. The terminal at the bottom shows the command `node "c:\FULL TUGASS\Tugas p ardi\Default Parameter.js"`. The output is `Halo, parameter default!` followed by `Halo, mahasiswa TI!`.

```
function sapa(nama = "parameter default") {
  console.log("Halo, " + nama + "!");
}

sapa(); // Output: Halo, parameter default!
sapa("mahasiswa TI"); // Output: Halo, mahasiswa TI!
```

14. Callback function

```
C:\> FULL TUGASS > Tugas p andi > JS Callback functions > prosesData
1 function prosesData(callback) {
2   console.log("Sedang memproses data..."); 
3   callback(); // Memanggil fungsi callback
4 }
5
6 function selesai() {
7   console.log("Data telah diproses.");
8 }
9
10 prosesData(selesai);
11 // Output:
12 // Sedang memproses data...
13 // Data telah diproses.

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\LENOVO> node "c:\FULL TUGASS\Tugas p andi\callback function.js"
Sedang memproses data...
Data telah diproses.
PS C:\Users\LENOVO>
```

15. IIFE

```
C:\> FULL TUGASS > Tugas p andi > JS IIFEjs
1 (function() {
2   console.log("Ini adalah IIFE");
3 })
4 // Output: Ini adalah IIFE

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\LENOVO> node "c:\FULL TUGASS\Tugas p andi\IIFE.js"
Ini adalah IIFE
PS C:\Users\LENOVO>
```

16. Recursion

```
C:\> FULL TUGASS > Tugas p andi > JS Recursionjs > faktorial
1 function faktorial(n) {
2   if (n === 1) {
3     return 1;
4   } else {
5     return n * faktorial(n - 1);
6   }
7 }
8
9
10 console.log(faktorial(5)); // Output: 120
11

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\LENOVO> node "c:\FULL TUGASS\Tugas p andi\Recursion.js"
120
PS C:\Users\LENOVO>
```

17. Penggunaan Fungsi dalam Program

The screenshot shows a Windows desktop environment. At the top is a taskbar with icons for File Explorer, File, Edit, Selection, View, Go, Run, and several pinned application icons. Below the taskbar is a system tray with icons for battery, signal strength, and volume.

The main area features a code editor window titled "Penggunaan Fungsi dalam Program.js". The code is as follows:

```
C:\> FULL TUGASS Tugas p erd> Penggunaan Fungsi dalam Program.js
1 // Fungsi untuk menghitung luas
2 function hitungLuas(panjang, lebar) {
3     return panjang * lebar;
4 }
5
6 // Fungsi untuk menghitung keliling
7 function hitungKeling(panjang, lebar) {
8     return 2 * (panjang + lebar);
9 }
10
11 // Memanggil fungsi
12 let panjang = 5;
13 let lebar = 3;
14
15 let luas = hitungLuas(panjang, lebar);
16 let keling = hitungKeling(panjang, lebar);
17
18 console.log("Luas Persegi Panjang: " + luas); // Output: Luas Persegi Panjang: 15
19
```

Below the code editor is a terminal window titled "PENGUNAAN FUNGSI DALAM PROGRAM.JS". It displays the command "PS C:\Users\LENOVO> node \"C:\FULL TUGASS Tugas p erd\Penggunaan Fungsi dalam Program.js\"". The output shows the results of the calculations: "Luas Persegi Panjang: 15" and "Keling Persegi Panjang: 16".

18. For

The screenshot shows a browser-based code editor interface. The top navigation bar includes File, Edit, Selection, View, Go, Run, and a search bar. Below the navigation is a tab bar with several tabs: Return Value.js, Default Parameter.js, Callback function.js, IIFE.js, Recursion.js, Penggunaan Fungsi dalam Program.js, For.js, and another unnamed tab. The main content area displays the following JavaScript code:

```
C:\ FULL TUGASS>Tugas p ardi>For.js>
1 for (let i = 0; i < 3; i++) {
2     console.log(`Iterasi ke- ${i}`);
3 }
4 // Output:
5 // Iterasi ke- 0
6 // Iterasi ke- 1
7 // Iterasi ke- 2
```

Below the code editor are several icons: magnifying glass, gear, double arrows, and a file icon. At the bottom, there are tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and PORTS. The TERMINAL tab is active, showing the command PS C:\Users\LENOVO> followed by the output of the executed script:

```
PS C:\Users\LENOVO> node "C:\FULL TUGASS\Tugas p ardi\For.js"
Iterasi ke-
Iterasi ke- 1
Iterasi ke- 2
PS C:\Users\LENOVO>
```

The status bar at the bottom right indicates Start JSON Server, Line 2, Col 1, Spaces 4, UFT-8, CRLF, JavaScript, 29°C - Berawan, and 20:08.

19 While

The screenshot shows a Microsoft Edge browser window. The address bar displays 'C:\FULL TUGASS> tugas p ardi > # Whilejs >'. The main content area contains a code editor with the following JavaScript code:

```
1 let i = 0;
2 while (i < 3) {
3     console.log(`Iterasi ke-${i}`);
4     i++;
5 }
6 // Output:
7 // Iterasi ke- 0
8 // Iterasi ke- 1
9 // Iterasi ke- 2
10 // Iterasi ke- 3
```

Below the code editor, there are tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and PORTIS. The TERMINAL tab is selected, showing the command 'node "c:\FULL TUGASS\Tugas p ardi\While.js"' and its execution results:

```
PS C:\Users\LENOVO> node "c:\FULL TUGASS\Tugas p ardi\While.js"
Iterasi ke- 0
Iterasi ke- 1
Iterasi ke- 2
Iterasi ke- 3
PS C:\Users\LENOVO>
```

The status bar at the bottom shows the time as 05:53, the date as 29/09/2023, the location as Berawan, and the temperature as 29°C. It also indicates the browser is running on Windows 10 Pro.

20. do ... While

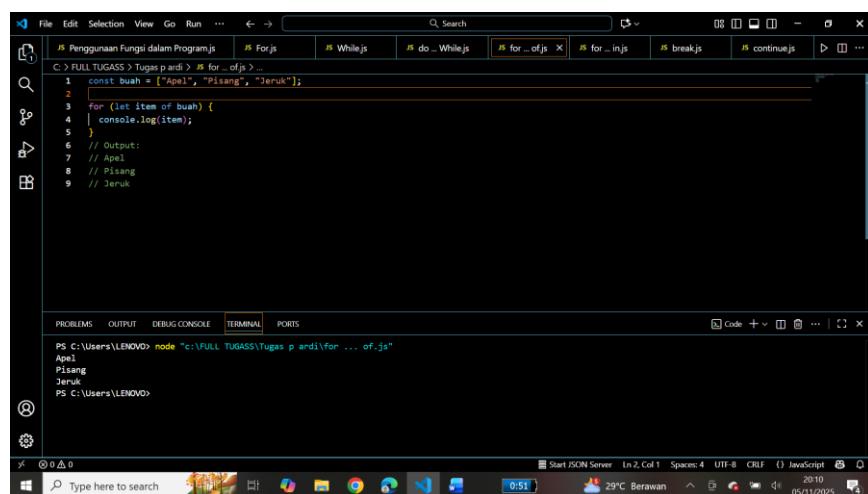


```
1 // Penggunaan Fungsi dalam Program.js
2 // For.js
3 // While.js
4 // do ... Whilejs
5 // for .. of.js
6 // for .. in.js
7 // breakjs
8 // continuejs
9
10 let i = 0;
11 do {
12     console.log("Iterasi ke-", i);
13     i++;
14 } while (i < 3);
15 // Output:
16 // Iterasi ke_0
17 // Iterasi ke_1
18 // Iterasi ke_2
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

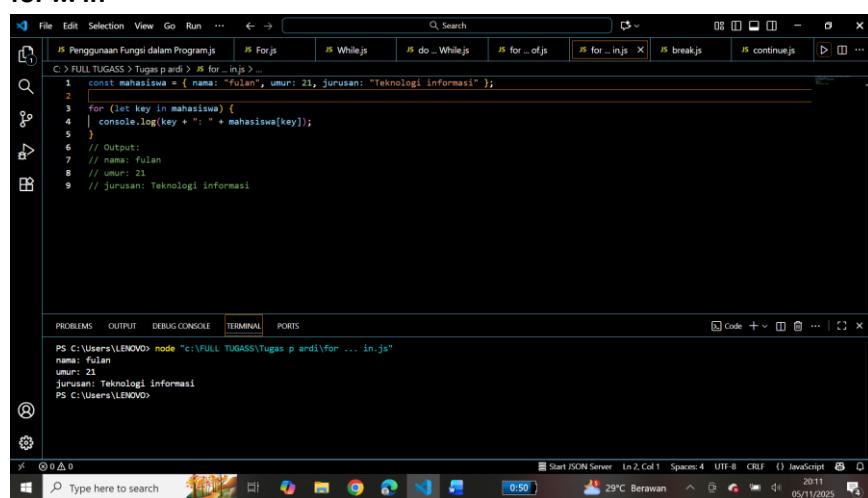
PS C:\Users\LENOVO> node "c:\FULL TUGASS\Tugas p ardi\do ... While.js"
Iterasi ke_0
Iterasi ke_1
Iterasi ke_2
PS C:\Users\LENOVO>

21. for ... of



```
1 // Penggunaan Fungsi dalam Program.js
2 // For.js
3 // While.js
4 // do ... Whilejs
5 // for .. of.js
6 // for .. in.js
7 // breakjs
8 // continuejs
9
10 const buah = ["Apel", "Pisang", "Jeruk"];
11
12 for (let item of buah) {
13     console.log(item);
14 }
15 // Output:
16 // Apel
17 // Pisang
18 // Jeruk
19
20 PS C:\Users\LENOVO> node "c:\FULL TUGASS\Tugas p ardi\for ... of.js"
Apel
Pisang
Jeruk
PS C:\Users\LENOVO>
```

22. for ... in



```
1 // Penggunaan Fungsi dalam Program.js
2 // For.js
3 // While.js
4 // do ... Whilejs
5 // for .. of.js
6 // for .. in.js
7 // breakjs
8 // continuejs
9
10 const mahasiswa = { nama: "fulan", umur: 21, jurusan: "Teknologi informasi" };
11
12 for (let key in mahasiswa) {
13     console.log(key + ": " + mahasiswa[key]);
14 }
15 // Output:
16 // nama: fulan
17 // umur: 21
18 // jurusan: Teknologi informasi
19
20 PS C:\Users\LENOVO> node "c:\FULL TUGASS\Tugas p ardi\for ... in.js"
nama: fulan
umur: 21
jurusan: Teknologi informasi
PS C:\Users\LENOVO>
```

23. break

```
for (let i = 0; i < 10; i++) {
  if (i === 5) {
    break; // Menghentikan loop saat i sama dengan 5
  }
  console.log(i);
}
// Output: 0 1 2 3 4
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\LENOVO> node "c:\FULL TUGASS\Tugas p ardi\break.js"

0
1
2
3
4

PS C:\Users\LENOVO>

24. continue

```
for (let i = 0; i < 10; i++) {
  if (i === 5) {
    continue; // Melewati iterasi saat i sama dengan 5
  }
  console.log(i);
}
// Output: 0 1 2 3 4 6 7 8 9
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

0
1
2
3
4
6
7
8
9

PS C:\Users\LENOVO>

Link code source github: [Diesjwoo/LatihanBab3](https://github.com/Diesjwoo/LatihanBab3)