

JURNAL MODUL 8

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Kelas :S1SE-07-01

1.) BankTransferConfig.JS

```
1  const fs = require('fs');
2
3  class BankTransferConfig {
4    constructor() {
5      this.filePath = 'bank_transfer_config.json';
6      this.config = {
7        lang: "en",
8        transfer: {
9          threshold: 25000000,
10         low_fee: 6500,
11         high_fee: 15000
12       },
13       methods: ["RTO (real-time)", "SKN", "RTGS", "BI FAST"],
14       confirmation: {
15         en: "yes",
16         id: "ya"
17       }
18     };
19     this.loadConfig();
20   }
21
22   loadConfig() {
23     if (fs.existsSync(this.filePath)) {
24       const data = fs.readFileSync(this.filePath, 'utf-8');
25       this.config = JSON.parse(data);
26     } else {
27       this.saveConfig();
28     }
29   }
30
31   saveConfig() {
32     fs.writeFileSync(this.filePath, JSON.stringify(this.config, null, 4));
33   }
34
35   getConfig() {
36     return this.config;
37   }
38 }
39
40 module.exports = BankTransferConfig;
```

2.)Bagian jsonnya :

```
1  {
2    "lang": "en",
3    "transfer": {
4      "threshold": 25000000,
5      "low_fee": 6500,
6      "high_fee": 15000
7    },
8    "methods": [
9      "RTO (real-time)",
10     "SKN",
11     "RTGS",
12     "BI FAST"
13   ],
14   "confirmation": {
15     "en": "yes",
16     "id": "ya"
17   }
18 }
19
```

3.)main js

```
1  const readline = require('readline');
2  const BankTransferConfig = require('./BankTransferConfig');
3
4  const rl = readline.createInterface({
5    input: process.stdin,
6    output: process.stdout
7  });
8
9  const configHandler = new BankTransferConfig();
10 const config = configHandler.getConfig();
11
12 // Step 1: Tanyakan jumlah uang
13 const promptAmount = config.lang === 'en'
14   ? "Please insert the amount of money to transfer: "
15   : "Masukkan jumlah uang yang akan di-transfer: ";
16
17 rl.question(promptAmount, (amountInput) => {
18   const amount = parseInt(amountInput);
19
20   // Step 2: Hitung biaya transfer
21   let fee = amount <= config.transfer.threshold
22     ? config.transfer.low_fee
23     : config.transfer.high_fee;
24   const total = amount + fee;
25
26   if (config.lang === 'en') {
27     console.log(`Transfer fee = ${fee}`);
28     console.log(`Total amount = ${total}`);
29   } else {
30     console.log(`Biaya transfer = ${fee}`);
31     console.log(`Total biaya = ${total}`);
32   }
33
34   // Step 3: Pilih metode transfer
35   const promptMethod = config.lang === 'en'
36     ? "Select transfer method:"
37     : "Pilih metode transfer:";
38   console.log(promptMethod);
39
40   config.methods.forEach((method, index) => {
41     console.log(`${index + 1}. ${method}`);
42   });
43
44   rl.question('Choose method (1/2/3/4): ', (methodInput) => {
45     const methodChoice = parseInt(methodInput);
46
47     if (methodChoice < 1 || methodChoice > config.methods.length) {
48       console.log("Invalid method selection.");
49       rl.close();
50       return;
51     }
52
53     // Step 4: Konfirmasi transaksi
54     const confirmationPrompt = config.lang === 'en'
55       ? `Please type "${config.confirmation.en}" to confirm the transaction: `
56       : `Ketik "${config.confirmation.id}" untuk mengkonfirmasi transaksi: `;
57
58     rl.question(confirmationPrompt, (confirmationInput) => {
59       const confirm = confirmationInput.trim().toLowerCase();
60
61       if ((config.lang === 'en' && confirm === config.confirmation.en.toLowerCase()) ||
62         (config.lang === 'id' && confirm === config.confirmation.id.toLowerCase())) {
63         const successMessage = config.lang === 'en'
64           ? "The transfer is completed"
65           : "Proses transfer berhasil";
66         console.log(successMessage);
67       } else {
68         const cancelMessage = config.lang === 'en'
69           ? "Transfer is cancelled"
70           : "Transfer dibatalkan";
71         console.log(cancelMessage);
72       }
73
74       rl.close();
75     });
76   });
77 });
78
```

penjelasannya :

Pada implementasi ini, program menggunakan teknik runtime configuration melalui class BankTransferConfig yang membaca file bank_transfer_config.json ketika program berjalan. Jika file konfigurasi tidak ditemukan, program otomatis membuat file tersebut dengan nilai default. Program utama (main.js) kemudian membaca konfigurasi untuk menentukan bahasa (English atau Indonesia), menampilkan pertanyaan mengenai jumlah transfer, menghitung biaya transfer berdasarkan nilai threshold yang ada, dan menampilkan total biaya. Selanjutnya, program meminta user untuk memilih metode transfer dari daftar yang tersedia dan melakukan konfirmasi transaksi berdasarkan kata kunci dari konfigurasi (yes/ya atau confirm/konfirmasi). Jika konfirmasi sesuai, transaksi dinyatakan berhasil; jika tidak, maka transaksi dibatalkan. Implementasi ini memungkinkan perubahan perilaku aplikasi hanya dengan mengedit file konfigurasi, tanpa perlu mengubah kode program, sesuai prinsip runtime configuration.

Runcodenya :

```
D:\Semester4\PRAKTIKUM KPL\KPL_Ghaza Zidane Nurraihan_2311104038_SE0701\08_RuntimeConfiguration_\JM_RC_2311104038>node main.js
Please insert the amount of money to transfer: 2000000
Transfer fee = 6500
Total amount = 2006500
Select transfer method:
1. RTO (real-time)
2. SKN
3. RTGS
4. BI FAST
Choose method (1/2/3/4): 4
Please type "yes" to confirm the transaction: yes
The transfer is completed
```