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SE0701

Jurnal 08 Runtime Configuration

Bank Transfer Config

```
const fs = require('fs');
const readline = require('readline');

class BankTransferConfig {
  constructor(path = 'bank_transfer_config.json') {
    this.default = {
      lang: "en",
      transfer: { ...
    },
    methods: ["RTO (real-time)", "SKN", "RTGS", "BI FAST"],
    confirmation: {
      en: "yes",
      id: "ya"
    }
  };
  this.config = this.loadConfig(path);
}

loadConfig(path) {
  try {
    if (fs.existsSync(path)) {
      const raw = fs.readFileSync(path, 'utf-8');
      return JSON.parse(raw);
    } else {
      return this.default;
    }
  } catch (e) {
    console.error("Error reading config file:", e);
    return this.default;
  }
}
```

```

async function runApp() {
  const config = new BankTransferConfig().config;
  const lang = config.lang;
  const threshold = config.transfer.threshold;
  const lowFee = config.transfer.low_fee;
  const highFee = config.transfer.high_fee;
  const methods = config.methods;
  const confirmation = config.confirmation;

  const rl = readline.createInterface({ input: process.stdin, output: process.stdout });
  const ask = (q) => new Promise(res => rl.question(q, res));

  // i. Pesan input jumlah uang
  const promptMsg = lang === "en"
    ? "Please insert the amount of money to transfer: "
    : "Masukkan jumlah uang yang akan di-transfer: ";

  let amountStr = await ask(promptMsg);
  let amount = parseInt(amountStr);
  if (isNaN(amount) || amount < 0) amount = 0;

  // ii. Hitung biaya transfer dan total
  const fee = amount <= threshold ? lowFee : highFee;
  const total = amount + fee;

  if (lang === "en") {
    console.log(`Transfer fee = ${fee}`);
    console.log(`Total amount = ${total}`);
  } else {
    console.log(`Biaya transfer = ${fee}`);
    console.log(`Total biaya = ${total}`);
  }

  // iii. Pesan pilih metode transfer
  console.log(lang === "en" ? "Select transfer method:" : "Pilih metode transfer:");

```

```

// iv. Print metode transfer dengan numbering
methods.forEach((m, i) => {
  console.log(`${i + 1}. ${m}`);
});

await ask('> '); // menerima input metode transfer tapi tidak diproses

// v. Pertanyaan konfirmasi
const confWord = lang === "en" ? confirmation.en : confirmation.id;
const confMsg = lang === "en"
  ? `Please type "${confWord}" to confirm the transaction: `
  : `Ketik "${confWord}" untuk mengkonfirmasi transaksi: `;

const userConf = await ask(confMsg);

// vi & vii. Output hasil konfirmasi
if (userConf.toLowerCase() === confWord.toLowerCase()) {
  console.log(lang === "en" ? "The transfer is completed" : "Proses transfer berhasil");
} else {
  console.log(lang === "en" ? "Transfer is cancelled" : "Transfer dibatalkan");
}

rl.close();
}

// Jalankan aplikasi
runApp();

```

Output:

```

Please insert the amount of money to transfer: 600000
Transfer fee = 6500
Total amount = 606500
Select transfer method:
1. RTO(real-time)
2. SKN
3. RTGS
4. BI FAST"
> 1
Please type "yes" to confirm the transaction: yes
Transfer fee = 6500
Total amount = 606500
Select transfer method:
1. RTO(real-time)
2. SKN
3. RTGS
4. BI FAST"
> 1
Please type "yes" to confirm the transaction: yes
4. BI FAST"
> 1
Please type "yes" to confirm the transaction: yes
Please type "yes" to confirm the transaction: yes
The transfer is completed
PS D:\KPL_MuhammadEathiBafa_2311104022_SE0701\08 Runtime Configur

```

Penjelasan:

File JavaScript ini menggunakan teknik runtime configuration dengan memisahkan pengaturan aplikasi ke dalam file JSON eksternal (bank_transfer_config.json) yang dibaca saat program berjalan. Dengan cara ini, program bisa menyesuaikan perilaku dan tampilannya—seperti bahasa, biaya transfer, metode pembayaran, dan kata konfirmasi—tanpa perlu mengubah kode sumbernya. Class BankTransferConfig bertugas memuat konfigurasi ini saat runtime, sehingga aplikasi bersifat fleksibel dan mudah dikustomisasi cukup dengan mengubah file konfigurasi saja. Ini memudahkan pemeliharaan dan adaptasi aplikasi ke kebutuhan yang berbeda tanpa harus re-deploy kode.