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## **JURNAL MODUL 8**

### **KONSTRUKSI PERANGKAT LUNAK**

#### **1. BankTransferConfig.cs**

Kelas utama untuk memuat, menyimpan, dan menyediakan konfigurasi transfer bank.

Konfigurasi dibaca dari file `bank_transfer_config.json`. Jika file tidak ditemukan, maka dibuat konfigurasi default.

Properti konfigurasi meliputi:

`lang`

`transfer` (mencakup `threshold`, `low_fee`, `high_fee`)

`methods` (metode transfer)

`confirmation` (konfirmasi pengguna)

#### **2. bank\_transfer\_config.json**



```
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 {
20   "lang": "en",
21   "transfer": {
22     "threshold": 25000000,
23     "low_fee": 6500,
24     "high_fee": 15000
25   },
26   "methods": [
27     "RTO (real-time)",
28     "SKN",
29     "RTGS",
30     "BI FAST"
31   ],
32   "confirmation": {
33     "en": "yes",
34     "id": "ya"
35   }
36 }
37
```

### 3. BankTransferConfig.cs

```
1 using System;
2 using System.Collections.Generic;
3 using System.IO;
4 using System.Text.Json;
5
6 public class BankTransferConfig
7 {
8     public string lang { get; set; }
9     public Transfer transfer { get; set; }
10    public List<string> methods { get; set; }
11    public Confirmation confirmation { get; set; }
12
13    public class Transfer
14    {
15        public int threshold { get; set; }
16        public int low_fee { get; set; }
17        public int high_fee { get; set; }
18    }
19
20    public class Confirmation
21    {
22        public string en { get; set; }
23        public string id { get; set; }
24    }
25
26    private const string filePath = "bank_transfer_config.json";
27
28    public BankTransferConfig()
29    {
30        try
31        {
32            ReadConfig();
33        }
34        catch (FileNotFoundException)
35        {
36            SetDefault();
37            WriteConfig();
38        }
39    }
40
41    private void SetDefault()
42    {
43        lang = "en";
44        transfer = new Transfer { threshold = 25000000, low_fee = 6500, high_fee = 15000 };
45        methods = new List<string> { "RTO (real-time)", "SKN", "RTGS", "BI FAST" };
46        confirmation = new Confirmation { en = "yes", id = "ya" };
47    }
48
49    private void ReadConfig()
50    {
51        string json = File.ReadAllText(filePath);
52        BankTransferConfig? config = JsonSerializer.Deserialize<BankTransferConfig>(json);
53
54        this.lang = config.lang;
55        this.transfer = config.transfer;
56        this.methods = config.methods;
57        this.confirmation = config.confirmation;
58    }
59
60    private void WriteConfig()
61    {
62        string json = JsonSerializer.Serialize(this);
63        File.WriteAllText(filePath, json);
64    }
65 }
66
```

## 4. Program.cs

```
1 using System;
2
3 class Program
4 {
5     static void Main(string[] args)
6     {
7         BankTransferConfig config = new BankTransferConfig();
8
9         string lang = config.lang;
10        string msg1, msg2, msg3, msg4, msg5, msg6, msg7;
11        msg1 = (lang == "en") ? "Please insert the amount of money to transfer:" : "Masukkan jumlah uang yang akan di-transfer:";
12        msg2 = (lang == "en") ? "Transfer fee = " : "Biaya transfer = ";
13        msg3 = (lang == "en") ? "Total amount = " : "Total biaya = ";
14        msg4 = (lang == "en") ? "Select transfer method:" : "Pilih metode transfer:";
15        msg5 = (lang == "en") ? "Please type " + config.confirmation.en + " to confirm the transaction:" : "Ketik " + config.confirmation.id + " untuk mengkonfirmasi transaksi:";
16        msg6 = (lang == "en") ? "The transfer is completed." : "Proses transfer berhasil.";
17        msg7 = (lang == "en") ? "Transfer is cancelled." : "Transfer dibatalkan.";
18
19        Console.WriteLine(msg1);
20        int amount = int.Parse(Console.ReadLine());
21
22        int fee = (amount <= config.transfer.threshold) ? config.transfer.low_fee : config.transfer.high_fee;
23        int total = amount + fee;
24
25        Console.WriteLine($"{msg2} {fee}");
26        Console.WriteLine($"{msg3} {total}");
27
28        Console.WriteLine(msg4);
29        for (int i = 0; i < config.methods.Count; i++)
30        {
31            Console.WriteLine($"{i + 1}. {config.methods[i]}");
32        }
33
34        Console.Write("Your choice: ");
35        int choice = int.Parse(Console.ReadLine());
36
37        Console.WriteLine(msg5);
38        string confirm = Console.ReadLine();
39
40        if ((lang == "en" && confirm.ToLower() == config.confirmation.en) || (lang == "id" && confirm.ToLower() == config.confirmation.id))
41        {
42            Console.WriteLine(msg6);
43        }
44        else
45        {
46            Console.WriteLine(msg7);
47        }
48    }
49 }
50
```

## ✓ Alur Program

**Konfigurasi** dibaca dari file JSON (bank\_transfer\_config.json).

**Bahasa** diatur otomatis berdasarkan field lang

**User memasukkan jumlah uang** yang ingin ditransfer.

**Biaya transfer dihitung** berdasarkan threshold.

**User memilih metode transfer** dari daftar.

**User dikonfirmasi**, jika setuju, maka transfer berhasil; jika tidak, dibatalkan.