



**TUGAS JURNAL**  
**KONSTRUKSI PERANGKAT LUNAK**  
**MODUL 8**

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**OLEH :**  
**TIURMA GRACE ANGELINA – 2311104042**  
**S1-SE07-02**

**Dosen :**  
**YIS**

**Prodi S1 Rekaya Perangkat Lunak**  
**Direktorat Kampus Purwokerto**

## 1. MELAKUKAN GIT COMMIT PADA PROJECT YANG DIBUAT

Commit pertama :

```
C:\WINDOWS\system32\cmd.exe
*****
** Visual Studio 2022 Developer Command Prompt v17.13.0
** Copyright (c) 2022 Microsoft Corporation
*****

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_S1SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur>git add tjmod8_2311104042_tjur
C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_S1SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur>git commit -m "up 1 .gitignore"
[main 2a995e6] up 1 .gitignore
3 files changed, 412 insertions(+)
create mode 100644 08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur\tjmod8_2311104042_tjur/.gitignore
create mode 100644 08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur\tjmod8_2311104042_tjur/Program.cs
create mode 100644 08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur\tjmod8_2311104042_tjur\tjmod8_2311104042_tjur.csproj

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_S1SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur>git push origin main
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 12 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (8/8), 3.72 KiB | 1.24 MiB/s, done.
Total 8 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/tiurmaGraceA/KPL_TiurmaGraceA_2311104042_S1SE-07-02.git
 e51784b..2a995e6  main -> main

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_S1SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur>
```

## 2. IMPLEMENTASI RUNTIME CONFIGURATION

Code Class – Class

### 1. bank\_transfer\_config.json

```
{
  "lang": "en",
  "transfer": {
    "threshold": 25000000,
    "low_fee": 6500,
    "high_fee": 15000
  },
  "methods": [ "RTO (real-time)", "SKN", "RTGS", "BI FAST" ],
  "confirmation": {
    "en": "yes",
    "id": "ya"
  }
}
```

Penjelasan :

File ini berfungsi sebagai *runtime configuration* yang memuat data konfigurasi dalam format JSON. Isinya meliputi:

- Bahasa (lang) yang digunakan dalam aplikasi.
- Batas nominal (threshold) untuk menentukan biaya transfer rendah atau tinggi.
- Biaya transfer rendah (low\_fee) dan tinggi (high\_fee).
- Metode transfer (methods) yang tersedia.
- Kata konfirmasi dalam dua bahasa (confirmation).

### 2. BankTransferConfig.cs

```
using System;
using System.IO;
using System.Text.Json;

public class BankTransferConfig
{
    public string Lang { get; set; } = "en";

    public TransferConfig Transfer { get; set; } = new
    TransferConfig();

    public string[] Methods { get; set; } = new string[]
    {
        "RTO (real-time)", "SKN", "RTGS", "BI FAST"
    };

    public ConfirmationConfig Confirmation { get; set; } = new
    ConfirmationConfig();

    public class TransferConfig
    {
        public int Threshold { get; set; } = 25000000;
    }
}
```

```

        public int Low_fee { get; set; } = 6500;
        public int High_fee { get; set; } = 15000;
    }

    public class ConfirmationConfig
    {
        public string En { get; set; } = "yes";
        public string Id { get; set; } = "ya";
    }

    public static BankTransferConfig LoadFromFile(string filePath)
    {
        if (!File.Exists(filePath))
        {
            return new BankTransferConfig(); // pakai default
        }

        string json = File.ReadAllText(filePath);
        return JsonSerializer.Deserialize<BankTransferConfig>(json);
    }
}

```

Penjelasan :

Class ini dibuat untuk membaca dan menyimpan isi dari file konfigurasi:

- LoadFromFile() adalah method untuk membaca file JSON. Jika file tidak ditemukan, maka akan menggunakan nilai default.
- Class TransferConfig dan ConfirmationConfig digunakan sebagai nested class untuk menyimpan struktur data JSON secara rapi.
- Nilai default diberikan langsung dalam properti, sesuai instruksi soal jika file belum ada.

### 3. Program.cs

```
using System;

class Program
{
    static void Main(string[] args)
    {
        var config =
BankTransferConfig.LoadFromFile("bank_transfer_config.json");

        Console.WriteLine(config.Lang == "id"
            ? "Masukkan jumlah uang yang akan di-transfer:"
            : "Please insert the amount of money to transfer:");

        int amount = int.Parse(Console.ReadLine());

        int fee = amount <= config.Transfer.Threshold
            ? config.Transfer.Low_fee
            : config.Transfer.High_fee;

        int total = amount + fee;

        if (config.Lang == "id")
        {
            Console.WriteLine($"Biaya transfer = {fee}");
            Console.WriteLine($"Total biaya = {total}");
            Console.WriteLine("Pilih metode transfer:");
        }
        else
        {
            Console.WriteLine($"Transfer fee = {fee}");
            Console.WriteLine($"Total amount = {total}");
            Console.WriteLine("Select transfer method:");
        }

        for (int i = 0; i < config.Methods.Length; i++)
        {
            Console.WriteLine($"{i + 1}. {config.Methods[i]}");
        }

        int methodChoice = int.Parse(Console.ReadLine());

        Console.WriteLine(config.Lang == "id"
            ? $"Ketik \"{config.Confirmation.Id}\" untuk
mengkonfirmasi transaksi:"
            : $"Please type \"{config.Confirmation.En}\" to
confirm the transaction:");

        string confirmation = Console.ReadLine();

        if ((config.Lang == "id" && confirmation ==
config.Confirmation.Id) ||
            (config.Lang == "en" && confirmation ==
config.Confirmation.En))
        {
            Console.WriteLine(config.Lang == "id"
                ? "Proses transfer berhasil"
```

```

        : "The transfer is completed");
    }
    else
    {
        Console.WriteLine(config.Lang == "id"
            ? "Transfer dibatalkan"
            : "Transfer is cancelled");
    }
}

```

Penjelasan :

Merupakan program utama yang menjalankan aplikasi berdasarkan konfigurasi:

- Menampilkan pesan awal berdasarkan lang untuk meminta nominal transfer dari user.
- Menghitung biaya transfer sesuai ketentuan threshold, lalu menampilkan total biaya.
- Menampilkan daftar metode transfer dari array methods.
- Meminta user melakukan konfirmasi dengan kata kunci dari confirmation.
- Menampilkan output berhasil atau dibatalkan sesuai input konfirmasi dan bahasa yang dipilih.

Output :

```
Microsoft Visual Studio Debug Console
Please insert the amount of money to transfer:
20000000
Transfer fee = 6500
Total amount = 20006500
Select transfer method:
1. RTO (real-time)
2. SKN
3. RTGS
4. BI FAST
2
Please type "yes" to confirm the transaction:
yes
The transfer is completed

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_51SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur\tjmod8_2311104042_tjur\bin\Debug\net8.0\tjmod8_2311104042_tjur.exe (process 7492) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

```
Microsoft Visual Studio Debug Console
Please insert the amount of money to transfer:
20000000
Transfer fee = 6500
Total amount = 20006500
Select transfer method:
1. RTO (real-time)
2. SKN
3. RTGS
4. BI FAST
2
Please type "yes" to confirm the transaction:
no
Transfer is cancelled

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_51SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur\tjmod8_2311104042_tjur\bin\Debug\net8.0\tjmod8_2311104042_tjur.exe (process 25096) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

### 3. MELAKUKAN COMMIT

```
C:\WINDOWS\system32\cmd.exe
*****
** Visual Studio 2022 Developer Command Prompt v17.13.0
** Copyright (c) 2022 Microsoft Corporation
*****

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_S1SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur>cd tjmod8_2311104042
The system cannot find the path specified.

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_S1SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur>cd tjmod8_2311104042_tjur

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_S1SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur\tjmod8_2311104042_tjur>git add ba
nk_transfer_config.json BankTransferConfig.cs Program.cs

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_S1SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur\tjmod8_2311104042_tjur>git commit
-m "aplikasi bank transfer dengan runtime configuration"
[main 3213b95] aplikasi bank transfer dengan runtime configuration
3 files changed, 115 insertions(+), 2 deletions(-)
create mode 100644 08_Runtime_Configuration_dan_Internationalization/tjmod8_2311104042_tjur/tjmod8_2311104042_tjur/BankTransferConfig.cs
create mode 100644 08_Runtime_Configuration_dan_Internationalization/tjmod8_2311104042_tjur/tjmod8_2311104042_tjur/bank_transfer_config.json

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_S1SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur\tjmod8_2311104042_tjur>git push o
rigin main
Enumerating objects: 12, done.
Counting objects: 100% (12/12), done.
Delta compression using up to 12 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (8/8), 1.00 KiB | 460.00 KiB/s, done.
Total 8 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/tiurmaGraceA_2311104042_S1SE-07-02.git
2a995e6..3213b95 main -> main

C:\Users\USER\source\repos\KPL_TiurmaGraceA_2311104042_S1SE-07-02\08_Runtime_Configuration_dan_Internationalization\tjmod8_2311104042_tjur\tjmod8_2311104042_tjur>
```

Battery status: 82% available (plugged in)

9:16 PM  
4/24/2025