

**TUGAS PENDAHULUAN**  
**KONSTRUKSI PERANGKAT LUNAK**  
**PERTEMUAN 5**  
**Runtime Configuration dan Internationalization**  
**Modul 8**



**Oleh :**

**Muhammad Idham Cholid**

**2211104016**

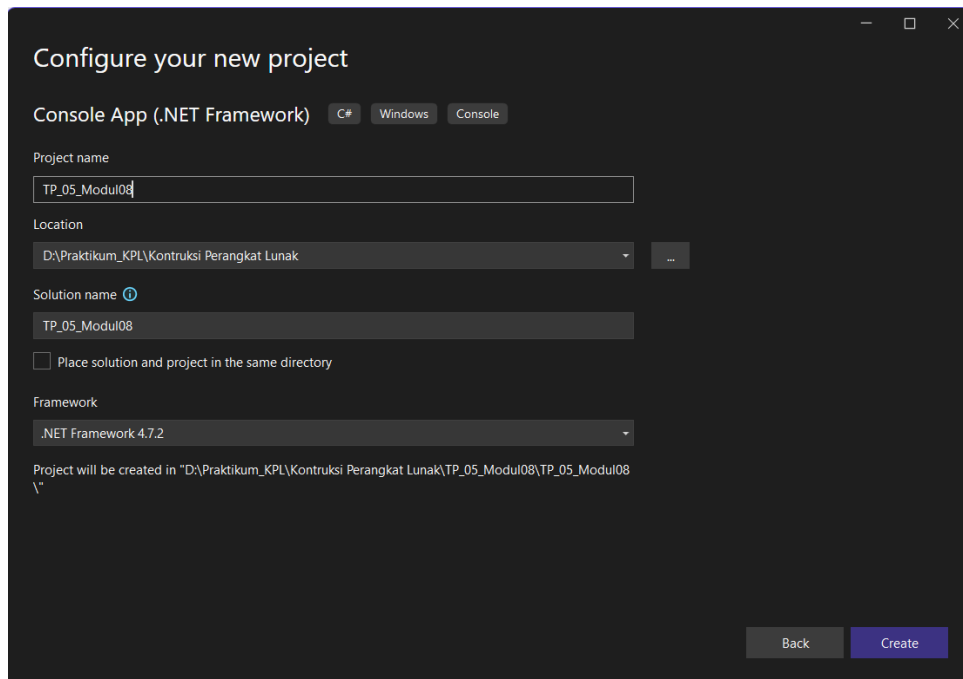
**SE0601**

**PROGRAM STUDI S1 SOFTWARE ENGINEERING**  
**FAKULTAS INFORMATIKA**  
**TELKOM UNIVERSITY PURWOKERTO**

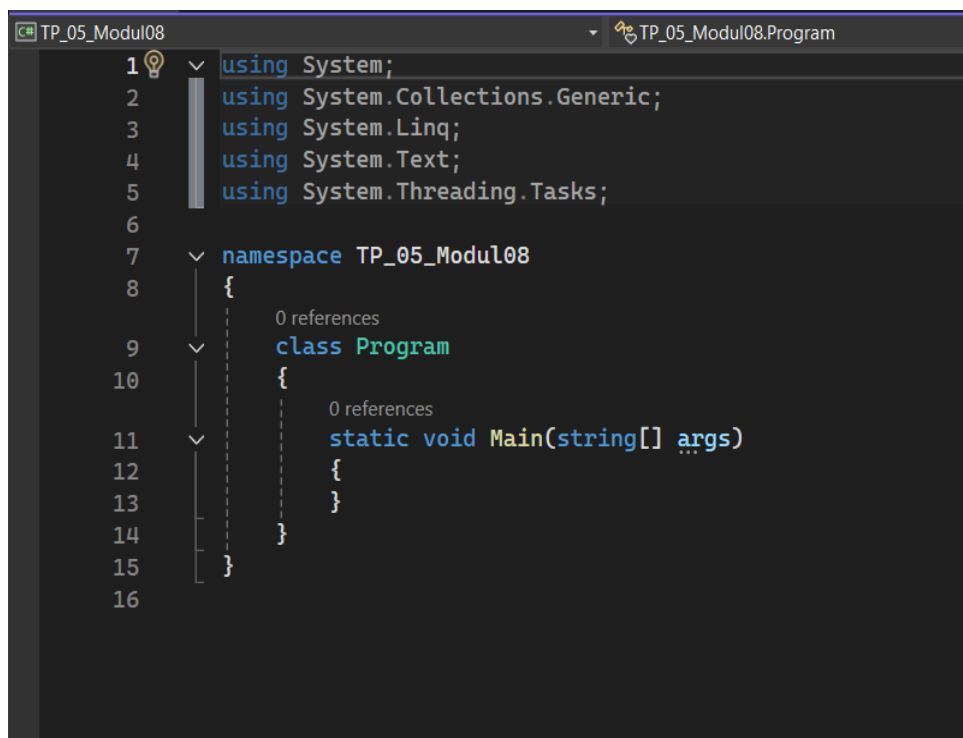
**2025**

## 1. MEMBUAT PROJECT CONSOLE/TANPA GUI

- Membuat Project Baru



- Project yang dibuat



## 2. MELAKUKAN GIT COMMIT PADA PROJECT YANG DIBUAT

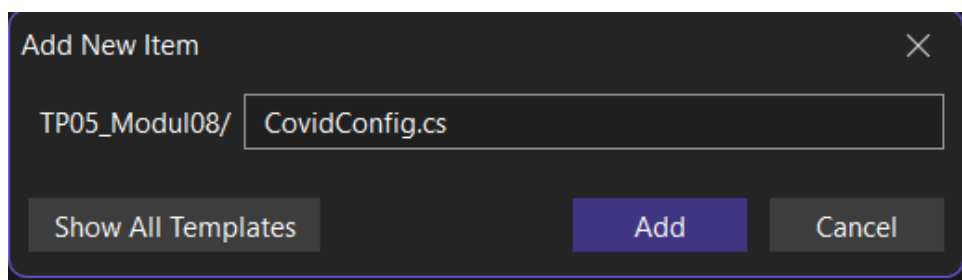
```
Idham@LAPTOP-9DA4K8Q8 MINGW64 /d/Praktikum_KPL/Praktikum_KPL (main)
$ git add .
warning: in the working copy of 'Jurnal07/.gitignore', LF will be replaced by CR
LF the next time Git touches it
warning: in the working copy of 'Jurnal07/Jurnal07/App.config', LF will be repla
ced by CRLF the next time Git touches it
warning: in the working copy of 'Jurnal07/Jurnal07/Program.cs', LF will be repla
ced by CRLF the next time Git touches it
warning: in the working copy of 'Jurnal07/Jurnal07/Properties/AssemblyInfo.cs',
LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'Jurnal07/Jurnal07/jurnal7_1_2211104016.json', L
F will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'Jurnal07/Jurnal07/packages.config', LF will be
replaced by CRLF the next time Git touches it

Idham@LAPTOP-9DA4K8Q8 MINGW64 /d/Praktikum_KPL/Praktikum_KPL (main)
$ git commit -m "frist commit bebas"
[main (root-commit) 5e31868] frist commit bebas
20 files changed, 861 insertions(+)
create mode 100644 Jurnal07/.gitignore
create mode 100644 Jurnal07/Jurnal07.sln
create mode 100644 Jurnal07/Jurnal07/App.config
create mode 100644 Jurnal07/Jurnal07/Jurnal07.csproj
create mode 100644 Jurnal07/Jurnal07/Program.cs
create mode 100644 Jurnal07/Jurnal07/Properties/AssemblyInfo.cs
create mode 100644 Jurnal07/Jurnal07/jurnal7_1_2211104016.json
create mode 100644 Jurnal07/Jurnal07/packages.config
create mode 100644 TP_05_Modul08/.vs/TP_05_Modul08/FileContentIndex/28c499fa-8f
20-4f27-ae68-12d9487d37d5.vsix
create mode 100644 TP_05_Modul08/.vs/TP_05_Modul08/v17/.suo
create mode 100644 TP_05_Modul08/.vs/TP_05_Modul08/v17/DocumentLayout.backup.js
on
create mode 100644 TP_05_Modul08/.vs/TP_05_Modul08/v17/DocumentLayout.json
create mode 100644 TP_05_Modul08/TP_05_Modul08.sln
create mode 100644 TP_05_Modul08/TP_05_Modul08/App.config
create mode 100644 TP_05_Modul08/TP_05_Modul08/Program.cs
create mode 100644 TP_05_Modul08/TP_05_Modul08/Properties/AssemblyInfo.cs
create mode 100644 TP_05_Modul08/TP_05_Modul08/TP_05_Modul08.csproj
create mode 100644 TP_05_Modul08/TP_05_Modul08/obj/Debug/.NETFramework,Version=
v4.7.2.AssemblyAttributes.cs
create mode 100644 TP_05_Modul08/TP_05_Modul08/obj/Debug/DesignTimeResolveAssem
```

## 3. IMPLEMENTASI RUNTIME CONFIGURATION

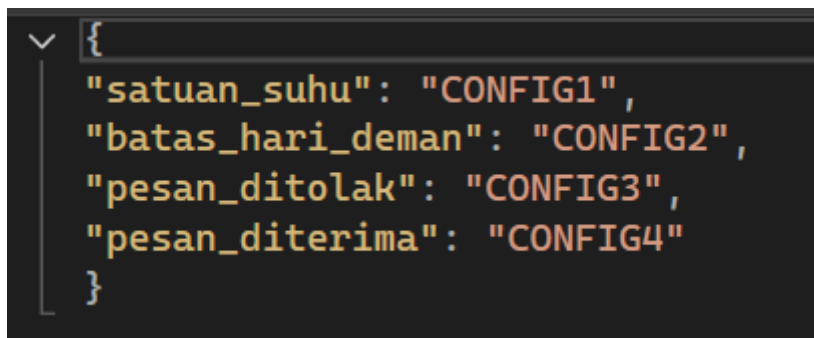
- Tambahkan class baru untuk memproses file konfigurasi

dengan nama “CovidConfig”.



- File konfigurasi yang digunakan adalah “covid\_config.json” dengan format sebagai berikut:

```
{  
  "satuan_suhu": "CONFIG1",  
  "batas_hari_deman": "CONFIG2",  
  "pesan_ditolak": "CONFIG3",  
  "pesan_diterima": "CONFIG4"  
}
```



```
{  
  "satuan_suhu": "CONFIG1",  
  "batas_hari_deman": "CONFIG2",  
  "pesan_ditolak": "CONFIG3",  
  "pesan_diterima": "CONFIG4"  
}
```

- CovidConfig.cs

```

TP_05_Modul08 CovidConfig
1  using System;
2  using System.Collections.Generic;
3  using System.IO;
4  using System.Linq;
5  using System.Text;
6  using System.Threading.Tasks;
7  using Newtonsoft.Json;
8
9  public class CovidConfig
10 {
11     private const string FilePath = "covid_config.json";
12
13     public string SatuanSuhu { get; set; }
14     public int BatasHariDemam { get; set; }
15     public string PesanDitolak { get; set; }
16     public string PesanDiterima { get; set; }
17
18     public CovidConfig()
19     {
20         SatuanSuhu = "celcius";
21         BatasHariDemam = 14;
22         PesanDitolak = "Anda tidak diperbolehkan masuk ke dalam gedung ini";
23         PesanDiterima = "Anda dipersilahkan untuk masuk ke dalam gedung ini";
24     }
25
26     public void LoadConfig()
27     {
28         if (File.Exists(FilePath))
29         {
30             string jsonData = File.ReadAllText(FilePath);
31             var config = JsonConvert.DeserializeObject<CovidConfig>(jsonData);
32             SatuanSuhu = config.SatuanSuhu;
33             BatasHariDemam = config.BatasHariDemam;
34             PesanDitolak = config.PesanDitolak;
35             PesanDiterima = config.PesanDiterima;
36         }
37         else
38         {
39             SaveConfig();
40         }
41     }
42
43     public void SaveConfig()
44     {
45         string jsonData = JsonConvert.SerializeObject(this, Formatting.Indented);
46         File.WriteAllText(FilePath, jsonData);
47     }
48
49     public void UbahSatuan()
50     {
51         SatuanSuhu = (SatuanSuhu == "celcius") ? "fahrenheit" : "celcius";
52         SaveConfig();
53     }
54 }

```

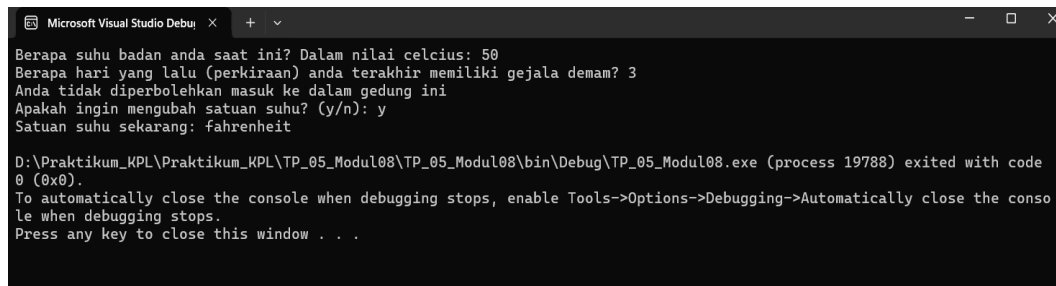
- Program.cs

```

TP_05_Modul08 Program Main()
1  using System;
2  using System.IO;
3  using Newtonsoft.Json;
4
5  class Program
6  {
7      static void Main()
8      {
9          CovidConfig config = new CovidConfig();
10         config.LoadConfig();
11
12         Console.WriteLine($"Berapa suhu badan anda saat ini? Dalam nilai {config.SatuanSuhu}: ");
13         double suhu = Convert.ToDouble(Console.ReadLine());
14
15         Console.WriteLine("Berapa hari yang lalu (perkiraan) anda terakhir memiliki gejala demam? ");
16         int hariDemam = Convert.ToInt32(Console.ReadLine());
17
18         bool suhuNormal = (config.SatuanSuhu == "celcius" && suhu >= 36.5 && suhu <= 37.5) ||
19             (config.SatuanSuhu == "fahrenheit" && suhu >= 97.7 && suhu <= 99.5);
20
21         bool hariDemamNormal = hariDemam < config.BatasHariDemam;
22
23         if (suhuNormal && hariDemamNormal)
24         {
25             Console.WriteLine(config.PesanDiterima);
26         }
27         else
28         {
29             Console.WriteLine(config.PesanDitolak);
30         }
31
32         Console.WriteLine("Apakah ingin mengubah satuan suhu? (y/n): ");
33         string ubah = Console.ReadLine().ToLower();
34         if (ubah == "y")
35         {
36             config.UbahSatuan();
37             config.SaveConfig();
38             Console.WriteLine($"Satuan suhu sekarang: {config.SatuanSuhu}");
39         }
40     }
41 }

```

- Output

A screenshot of the Microsoft Visual Studio Debug console window. The window title is "Microsoft Visual Studio Debug". The console output shows the following text:

```

Berapa suhu badan anda saat ini? Dalam nilai celcius: 50
Berapa hari yang lalu (perkiraan) anda terakhir memiliki gejala demam? 3
Anda tidak diperbolehkan masuk ke dalam gedung ini
Apakah ingin mengubah satuan suhu? (y/n): y
Satuan suhu sekarang: fahrenheit

D:\Praktikum_KPL\Praktikum_KPL\TP_05_Modul08\TP_05_Modul08\bin\Debug\TP_05_Modul08.exe (process 19788) exited with code
0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window . . .

```

## Penjelasan

Program C# ini mengelola konfigurasi suhu tubuh dan gejala demam menggunakan file JSON dengan Newtonsoft.Json. Kelas CovidConfig menyimpan pengaturan seperti satuan suhu, batas hari demam, dan pesan akses, serta memiliki metode untuk memuat, menyimpan, dan mengubah satuan suhu. Pengguna diminta memasukkan suhu tubuh dan hari sejak terakhir demam, lalu program menentukan apakah mereka diizinkan masuk berdasarkan konfigurasi. Jika suhu dan hari demam sesuai aturan, akses diberikan, jika tidak, ditolak. Pengguna juga bisa mengubah satuan suhu, dan perubahan ini akan disimpan untuk digunakan kembali.

#### 4. MELAKUKAN COMMIT

Pada branch master/main:

- Lakukan commit dengan pesan “menyelesaikan program dengan runtime configuration”.

```
MINGW64:/d/Praktikum_KPL/Praktikum_KPL

Idham@LAPTOP-9DA4K8Q8 MINGW64 /d/Praktikum_KPL/Praktikum_KPL (main)
$ git commit -m "menyelesaikan program dengan runtime configuration"
[main (root-commit) 10205de] menyelesaikan program dengan runtime configuration
58 files changed, 98456 insertions(+)
 create mode 100644 Jurnal07/.gitignore
 create mode 100644 Jurnal07/Jurnal07.sln
 create mode 100644 Jurnal07/Jurnal07/App.config
 create mode 100644 Jurnal07/Jurnal07/Jurnal07.csproj
 create mode 100644 Jurnal07/Jurnal07/Program.cs
 create mode 100644 Jurnal07/Jurnal07/Properties/AssemblyInfo.cs
 create mode 100644 Jurnal07/Jurnal07/jurnal7_1_2211104016.json
 create mode 100644 Jurnal07/Jurnal07/packages.config
 create mode 100644 TP_05_Modul08/.vs/TP_05_Modul08/FileContentIndex/06f2799d-f2e0-4571-9084-3388f9560674.vsidx
 create mode 100644 TP_05_Modul08/.vs/TP_05_Modul08/FileContentIndex/21ea0f8c-ee52-43a4-ac85-d71e65f1376f.vsidx
 create mode 100644 TP_05_Modul08/.vs/TP_05_Modul08/FileContentIndex/c33751ff-3b0d-45bc-b87a-15f0c7cae607.vsidx
 create mode 100644 TP_05_Modul08/.vs/TP_05_Modul08/FileContentIndex/c886adef-d29d-4b2e-bbb0-9f9da4a31d79.vsidx
 create mode 100644 TP_05_Modul08/.vs/TP_05_Modul08/v17/.suo
 create mode 100644 TP_05_Modul08/.vs/TP_05_Modul08/v17/DocumentLayout.backup.js
 on
```

- Lakukan push ke github ke branch yang dibuat di bagian sebelumnya.

```
Idham@LAPTOP-9DA4K8Q8 MINGW64 /d/Praktikum_KPL/Praktikum_KPL (main)
$ git push origin main
Enumerating objects: 79, done.
Counting objects: 100% (79/79), done.
Delta compression using up to 4 threads
Compressing objects: 100% (71/71), done.
Writing objects: 100% (78/78), 4.32 MiB | 178.00 KiB/s, done.
Total 78 (delta 15), reused 2 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (15/15), completed with 1 local object.
To https://github.com/Ridham2345/Praktikum_KPL.git
 c90a8f7..fc74894 main -> main

Idham@LAPTOP-9DA4K8Q8 MINGW64 /d/Praktikum_KPL/Praktikum_KPL (main)
$
Idham@LAPTOP-9DA4K8Q8 MINGW64 /d/Praktikum_KPL/Praktikum_KPL (main)
$ git pull origin main --allow-unrelated-histories
From https://github.com/Ridham2345/Praktikum_KPL
 * branch          main          -> FETCH_HEAD
Already up to date.

Idham@LAPTOP-9DA4K8Q8 MINGW64 /d/Praktikum_KPL/Praktikum_KPL (main)
$ git push origin main
Everything up-to-date

Idham@LAPTOP-9DA4K8Q8 MINGW64 /d/Praktikum_KPL/Praktikum_KPL (main)
$
```