

JURNAL MODUL 4



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PROGRAM STUDI S1 REKAYASA PERANGKAT LUNAK

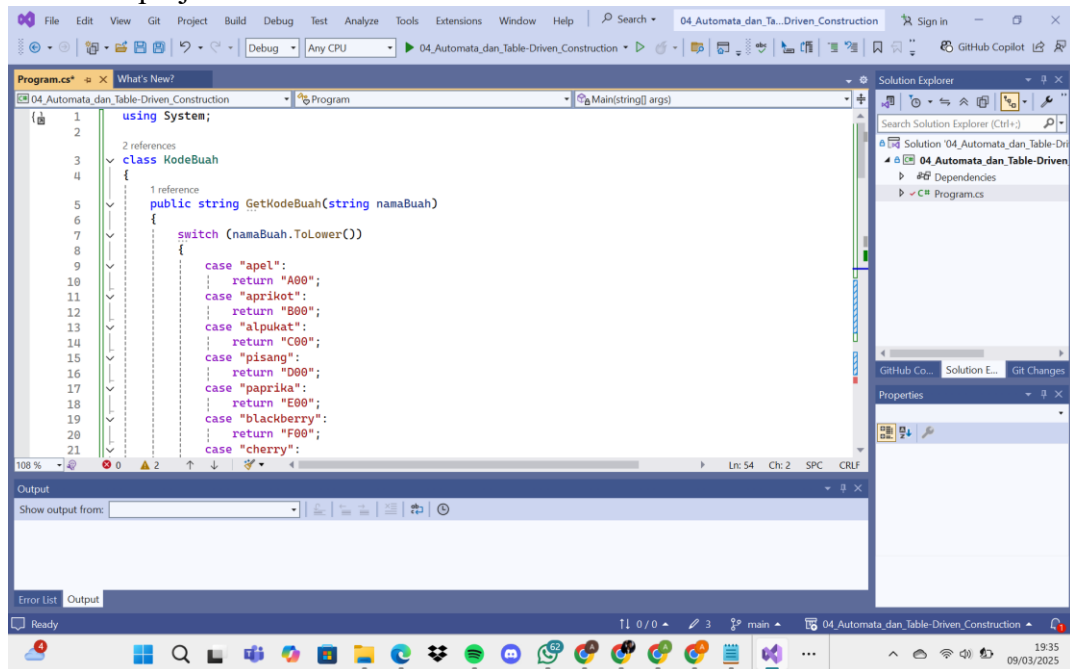
TELKOM UNIVERSITY PURWOKERTO

2025

1. Link repo github

https://github.com/rabaniahya/KPL_ALYA_RABANI_2311104076_SE-07-02.git

2. Membuat project console



3. Melakukan git commit pada project

```
*****
** Visual Studio 2022 Developer Command Prompt v17.13.0
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*****

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076>git add .

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076>git commit -m "commit jurnal bang"
[main a580a18] commit jurnal bang
23 files changed, 364 insertions(+)
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs/ProjectEvaluation\tjmodul4_2311104076.metadata.v9.bin
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs/ProjectEvaluation\tjmodul4_2311104076.projects.v9.bin
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs/ProjectEvaluation\tjmodul4_2311104076.strings.v9.bin
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs/tjmodul4_2311104076/DesignTimeBuild\dtb.cache.v2
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs/tjmodul4_2311104076/FileInfoIndex/9e214c44-7cc8-43b2-9ca2-1589b99b0642.vsidb
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs/tjmodul4_2311104076/v17/.futcachef.v2
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs/tjmodul4_2311104076/v17/.suo
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs/tjmodul4_2311104076/v17/DocumentLayout.backup.json
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs/tjmodul4_2311104076/v17/DocumentLayout.json
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076.sln
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\Program.cs
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\NETCoreApp,Version=v8.0.AssemblyAttributes.cs
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.AssemblyInfo.cs
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.AssemblyInfoInputs.cache
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.GeneratedMSBuildEditorConfig.editorconfig
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.GlobalUsings.g.cs
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.assets.cache
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.assets.json
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\project.nuget.cache
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\tjmodul4_2311104076.csproj.nuget.dgspec.json
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\tjmodul4_2311104076.csproj.nuget.g.props
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\tjmodul4_2311104076.csproj.nuget.g.targets
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076.csproj

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076>git push
sh origin main
Enumerating objects: 39, done.
Counting objects: 100% (39/39), done.
Delta compression using up to 12 threads
Compressing objects: 100% (35/35), done.
Writing objects: 100% (37/37), 55.39 KiB | 1.91 MiB/s, done.
Total 37 (delta 4), reused 5 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (4/4), completed with 1 local object.
To https://github.com/rabaniahya/KPL_ALYA_RABANI_2311104076_SE-07-02.git
ed0f515..a580a18 main -> main
```

4. Menambahkan kode dengan Teknik table driven

Program ini merupakan implementasi Table-Driven yang bertujuan untuk mengonversi nama buah menjadi kode buah yang telah ditentukan. Pada kelas kode buah memiliki sebuah metode bernama getkodebuah yang menerima input berupa nama buah dan mengembalikan kode buah yang sesuai menggunakan struktur switch-case. Nama buah yang dimasukkan akan diubah menjadi huruf kecil dengan

ToLower() agar pencocokan tidak bergantung pada huruf besar atau kecil. Jika nama buah ditemukan dalam daftar, metode ini akan mengembalikan kode yang sesuai, misalnya apel akan menghasilkan A00. Jika nama buah tidak ada dalam daftar, program akan mengembalikan pesan kode tidak ditemukan. Program akan meminta pengguna memasukkan nama buah melalui console, lalu meneruskan input tersebut ke metode getkodebuah untuk mendapatkan kode buah yang sesuai.

Kode program:

```
using System;

class KodeBuah

{

    public string GetKodeBuah(string namaBuah)

    {

        switch (namaBuah.ToLower())

        {

            case "apel":

                return "A00";

            case "aprikot":

                return "B00";

            case "alpukat":

                return "C00";

            case "pisang":

                return "D00";

            case "paprika":

                return "E00";

            case "blackberry":

                return "F00";

            case "cherry":

                return "H00";
```

```
        case "kelapa":  
            return "J00";  
  
        case "kurma":  
            return "K00";  
  
        case "durian":  
            return "L00";  
  
        case "anggur":  
            return "M00";  
  
        case "melon":  
            return "N00";  
  
        case "semangka":  
            return "O00";  
  
        default:  
            return "Kode tidak ditemukan";  
    }  
}  
  
}  
  
class Program  
{  
    static void Main(string[] args)  
    {  
        KodeBuah kodeBuah = new KodeBuah();  
  
        Console.WriteLine("Masukkan nama buah:");  
  
        string namaBuah = Console.ReadLine();
```

```

string kode = kodeBuah.GetKodeBuah(namaBuah);

Console.WriteLine($"Kode untuk {namaBuah} adalah: {kode}");

}

}

```

Hasil running:

```

Microsoft Visual Studio Debu: X + -
Masukkan nama buah:
cherry
Kode untuk cherry adalah: H00

D:\SEM 4\Praktikum KPL\04_Automata_dan_Table-Driven_Construction\04_Automata_dan_Table-Driven_Construction\bin\Debug\net
8.0\04_Automata_dan_Table-Driven_Construction.exe (process 25772) 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 . . .|

```

5. Melakukan commit kedua

```

*****
** Visual Studio 2022 Developer Command Prompt v17.13.0
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C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076>git add .

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076>git commit -m "menambahkan class KodeBuah"
[main b1ae11b] menambahkan class KodeBuah
24 files changed, 107 insertions(+), 6 deletions(-)
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs\tjmodul4_2311104076/FileContentIndex/27966f7a-9985-4887-850e-ad449fa6286d.vsixd
delete mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs\tjmodul4_2311104076/FileContentIndex/9e214c44-7cc8-43b2-9ca2-1589b99b0642.vsixd
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\bin\Debug\net8.0\tjmodul4_2311104076.deps.json
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\bin\Debug\net8.0\tjmodul4_2311104076.dll
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\bin\Debug\net8.0\tjmodul4_2311104076.exe
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\bin\Debug\net8.0\tjmodul4_2311104076.pdb
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\bin\Debug\net8.0\tjmodul4_2311104076.runtimeconfig.json
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\apphost.exe
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\ref\tjmodul4_2311104076.dll
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\refint\tjmodul4_2311104076.dll
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.csproj.BuildWithSkipAnalyzers
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.csproj.CoreCompileInputs.cache
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.csproj.FileListAbsolute.txt
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.dll
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.genruntimeconfig.cache
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.pdb
create mode 100644 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076\tjmodul4_2311104076\obj\Debug\net8.0\tjmodul4_2311104076.sourceLink.json

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076>git pu
sh origin main
Enumerating objects: 51, done.
Counting objects: 100% (51/51), done.
Delta compression using up to 12 threads
Compressing objects: 100% (31/31), done.
Writing objects: 100% (35/35), 80.52 KiB | 2.78 MiB/s, done.
Total 35 (delta 9), reused 2 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (9/9), completed with 8 local objects.
To https://github.com/rabani_alya/KPL_ALYA_RABANI_2311104076_SE-07-02.git
 a580a18..b1ae11b main -> main

```

6. Menambahkan kode dengan Teknik state-based construction

Program ini menggunakan State-Based Construction dalam C# untuk mensimulasikan perubahan posisi karakter dalam game. Kelas PosisiKarakterGame memiliki atribut state yang merepresentasikan posisi karakter, dengan state awal "Berdiri". Metode UbahState(string stateBaru) digunakan untuk mengubah state karakter dan mencetak pesan sesuai aturan:

Jika "Berdiri", output: "posisi standby".

Jika "Tengkurap", output: "posisi istirahat".

Di kelas Program, objek karakter dibuat dan menjalankan metode UbahState() untuk mensimulasikan perubahan posisi. Program ini dapat diperluas dengan lebih banyak state dan aturan transisi untuk keperluan game.

Kode program:

```
using System;

class PosisiKarakterGame
{
    private string state;

    public PosisiKarakterGame()
    {
        state = "Berdiri"; // State awal
    }

    public void UbahState(string stateBaru)
    {
        if (stateBaru == "Berdiri")
        {
            Console.WriteLine("posisi standby");
        }
        else if (stateBaru == "Tengkurap")
        {
            Console.WriteLine("posisi istirahat");
        }

        state = stateBaru; // Perbarui state karakter
    }
}

class Program
{
    static void Main()
    {
        PosisiKarakterGame karakter = new PosisiKarakterGame();

        // Simulasi perubahan state sesuai aturan NIM % 3 == 1
        karakter.UbahState("Berdiri"); // Output: posisi standby
        karakter.UbahState("Tengkurap"); // Output: posisi istirahat
    }
}
```

Hasil running:

```
Microsoft Visual Studio Debu: X + v - □ X

posisi standby
posisi istirahat

D:\SEM 4\Praktikum KPL\04_Automata_dan_Table-Driven_Construction\04_Automata_dan_Table-Driven_Construction\bin\Debug\net
8.0\04_Automata_dan_Table-Driven_Construction.exe (process 15468) 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 . . .|
```

7. Melakukan commit akhir

```
*****
** Visual Studio 2022 Developer Command Prompt v17.13.0
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*****

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076>git add .

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076>git commit -m "menambahkan class PosisiKarakterGame"
[main a2d9491] menambahkan class PosisiKarakterGame
18 files changed, 82 insertions(+), 43 deletions(-)
create mode 1086400 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs\tjmodul4_2311104076/FileContentIndex/1775da74-7d21-409d-91c5-5c0a6c91ee81.vsix
delete mode 1086400 04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076/.vs\tjmodul4_2311104076/FileContentIndex/27966f7a-9985-4887-850e-ad449fa6286d.vsix

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\04_Automata_dan_Table-Driven_Construction\tjmodul4_2311104076>git push origin main
Enumerating objects: 53, done.
Counting objects: 100% (53/53), done.
Delta compression using up to 12 threads
Compressing objects: 100% (26/26), done.
Writing objects: 100% (29/29), 9.32 KiB | 1.17 MiB/s, done.
Total 29 (delta 15), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (15/15), completed with 14 local objects.
To https://github.com/rabani_alya/KPL_ALYA_RABANI_2311104076_SE-07-02.git
    blaellb..a2d9491  main -> main
```