



TUGAS JURNAL
KONSTRUKSI PERANGKAT LUNAK
MODUL 7

D
I
S
U
S
U
N

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

Dosen :
YIS

Prodi S1 Rekaya Perangkat Lunak
Direktorat Kampus Purwokerto

1. PEMBUATAN GITHUB REPO UNTUK KELOMPOK

Link github kelompok : https://github.com/tiurmagrace/modul7_kelompok_4.git

2. MENAMBAHKAN JSON DESERIALIZATION 1

Branch 1:

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

C:\Users\USER\source\repos\modul7_kelompok_4>git branch
* main

C:\Users\USER\source\repos\modul7_kelompok_4>git checkout -b tiur1
Switched to a new branch 'tiur1'

C:\Users\USER\source\repos\modul7_kelompok_4>git branch
  main
* tiur1

C:\Users\USER\source\repos\modul7_kelompok_4>_
```

Code Class :

1. jurnal7_1_2311104042.json

```
{
  "firstName": "Tiurma Grace",
  "lastName": "Angelina",
  "gender": "female",
  "age": 19,
  "address": {
    "streetAddress": "Arcawinangun",
    "city": "Purwokerto",
    "state": "Central Java"
  },
  "courses": [
    { "code": "CRI2C4", "name": "Konstruksi Perangkat Lunak" },
    { "code": "CRI2C3", "name": "Pemodelan Perangkat Lunak" }
  ]
}
```

2. DataMahasiswa2311104042.cs

```

using System;
using System.Collections.Generic;
using System.IO;
using System.Text.Json;

public class DataMahasiswa2311104042
{
    public class Address
    {
        public string streetAddress { get; set; }
        public string city { get; set; }
        public string state { get; set; }
    }

    public class Course
    {
        public string code { get; set; }
        public string name { get; set; }
    }

    public class Mahasiswa
    {
        public string firstName { get; set; }
        public string lastName { get; set; }
        public string gender { get; set; }
        public int age { get; set; }
        public Address address { get; set; }
        public List<Course> courses { get; set; }
    }

    public static void ReadJSON()
    {
        string filePath = "jurnal7_1_2311104042.json";
        string jsonString = File.ReadAllText(filePath);

        Mahasiswa mhs = JsonSerializer.Deserialize<Mahasiswa>(jsonString);

        Console.WriteLine("===== DATA MAHASISWA =====");
        Console.WriteLine($"Nama: {mhs.firstName} {mhs.lastName}");
        Console.WriteLine($"Jenis Kelamin: {mhs.gender}");
        Console.WriteLine($"Umur: {mhs.age}");
        Console.WriteLine($"Alamat: {mhs.address.streetAddress}, {mhs.address.city}, {mhs.address.state}");
        Console.WriteLine("\nMata Kuliah yang Diambil:");

        int i = 1;
    }
}

```

```

foreach (var course in mhs.courses)
{
    Console.WriteLine($"MK {i++}: {course.code} - {course.name}");
}

Console.ReadLine();
}
}

```

3. Program.cs

```

class Program
{
    static void Main(string[] args)
    {
        DataMahasiswa2311104042.ReadJSON();
    }
}

```

Output :

The screenshot shows the Microsoft Visual Studio IDE. The main window displays the 'Program.cs' file with the following code:

```

class Program
{
    static void Main(string[] args)
    {
        DataMahasiswa2311104042.ReadJSON();
    }
}

```

The 'Output' window at the bottom shows the following text:

```

==== DATA MAHASISWA ====
Name: Tiurma Grace Angelina
Jenis Kelamin: female
Umur: 19
Alamat: Arcawinangun, Purwokerto, Central Java

Mata Kuliah yang Diambil:
MK 1: CRI2C4 - Konstruksi Perangkat Lunak
MK 2: CRI2C3 - Pemodelan Perangkat Lunak

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4\bin\Debug\net8.0\modul7_kelompok_4.exe (process 15644) 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 . . .

```

The 'Solution Explorer' on the right shows the project structure for 'modul7_kelompok_4' (1 of 1 project):

- modul7_kelompok_4
 - Dependencies
 - .gitignore
 - DataMahasiswa2311104042.cs
 - jurnal7_1_2311104042.json
 - Program.cs

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\modul7_kelompok_4>git branch
* main

C:\Users\USER\source\repos\modul7_kelompok_4>git checkout -b tiur1
Switched to a new branch 'tiur1'

C:\Users\USER\source\repos\modul7_kelompok_4>git branch
main
* tiur1

C:\Users\USER\source\repos\modul7_kelompok_4>git add modul7_kelompok_4
warning: in the working copy of 'modul7_kelompok_4/jurnal7_1_2311104042.json', LF will be replaced by CRLF the next time Git touches it

C:\Users\USER\source\repos\modul7_kelompok_4>git commit -m "menambahkan class DataMahasiswa2311104042"
[tiur1 dbb4180] menambahkan class DataMahasiswa2311104042
4 files changed, 81 insertions(+), 2 deletions(-)
create mode 100644 modul7_kelompok_4/DataMahasiswa2311104042.cs
create mode 100644 modul7_kelompok_4/jurnal7_1_2311104042.json

C:\Users\USER\source\repos\modul7_kelompok_4>git push origin tiur1
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 12 threads
Compressing objects: 100% (7/7), 1.48 KiB | 505.00 KiB/s, done.
Writing objects: 100% (7/7), 1.48 KiB | 505.00 KiB/s, done.
Total 7 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
remote:
remote: Create a pull request for 'tiur1' on GitHub by visiting:
remote:   https://github.com/tiurmagrace/modul7_kelompok_4/pull/new/tiur1
remote:
To https://github.com/tiurmagrace/modul7_kelompok_4.git
 * [new branch] tiur1 -> tiur1

C:\Users\USER\source\repos\modul7_kelompok_4>
```

Pull dan Merge

github.com/tiurmagrace/modul7_kelompok_4/compare/tiur1?expand=1

Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#). [Learn more about diff comparisons here.](#)

base: main ← compare: tiur1 ✓ Able to merge. These branches can be automatically merged.

Add a title

menambahkan class DataMahasiswa2311104042

Add a description

Write Preview

Add your description here...

Markdown is supported Paste, drop, or click to add files

Create pull request

Remember, contributions to this repository should follow our [GitHub Community Guidelines](#).

Reviewers: No reviews

Assignees: No one—assign yourself

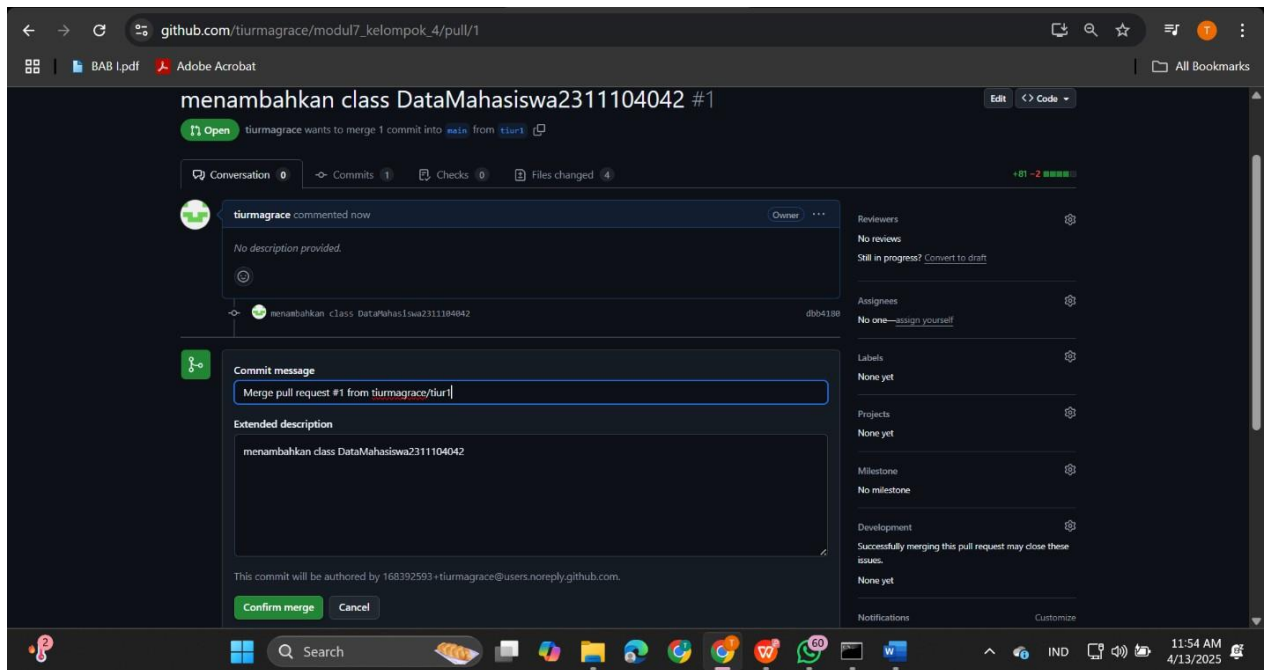
Labels: None yet

Projects: None yet

Milestone: No milestone

Development: Use [Closing keywords](#) in the description to automatically close issues

Helpful resources: [GitHub Community Guidelines](#)



3. MENAMBAHKAN JSON DESERIALIZATION 2

Branch 2

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

C:\Users\USER\source\repos\modul7_kelompok_4>git checkout -b tiur2
Switched to a new branch 'tiur2'

C:\Users\USER\source\repos\modul7_kelompok_4>git branch
main
tiur1
* tiur2
```

Code Class :

1. jurnal7_2_2311104042.json

```
{
  "members": [
    {
      "firstName": "Tiorma Grace Angelina",
      "lastName": "Sihaloho",
      "gender": "female",
      "age": 19,
      "nim": "2311104042"
    },
    {
      "firstName": "farhan",
      "lastName": "kurniawan",
      "gender": "male",
      "age": 19,
      "nim": "2311104073"
    }
  ]
}
```

```

    },
    {
        "firstName": "marvel",
        "lastName": "Sanjaya",
        "gender": "male",
        "age": 19,
        "nim": "2311104053"
    },
    {
        "firstName": "candra",
        "lastName": "dinata",
        "gender": "male",
        "age": 19,
        "nim": "2311104061"
    },
    {
        "firstName": "riyo",
        "lastName": "valentino",
        "gender": "male",
        "age": 19,
        "nim": "456754674"
    }
]
}

```

2. TeamMembers2311104042.cs

```

using System;
using System.Collections.Generic;
using System.IO;
using System.Text.Json;

public class TeamMembers2311104042
{
    public class Member
    {
        public string firstName { get; set; }
        public string lastName { get; set; }
        public string gender { get; set; }
        public int age { get; set; }
        public string nim { get; set; }
    }

    public class MembersData
    {
        public List<Member> members { get; set; }
    }
}

```

```

public static void ReadJSON()
{
    try
    {
        string filePath = "jurnal7_2_2311104042.json";
        string jsonString = File.ReadAllText(filePath);

        MembersData data =
        JsonSerializer.Deserialize<MembersData>(jsonString);

        Console.WriteLine("Team member list:");
        foreach (var m in data.members)
        {
            Console.WriteLine($"{m.nim} {m.firstName} {m.lastName} ({m.age}
{m.gender})");
        }
    }
    catch (Exception ex)
    {
        Console.WriteLine("Gagal membaca file JSON: " + ex.Message);
    }

    Console.ReadLine();
}
}

```

3. Program.cs

```

class Program
{
    static void Main(string[] args)
    {
        DataMahasiswa2311104042.ReadJSON();
        TeamMembers2311104042.ReadJSON();
    }
}

```

Output :


```
Microsoft Visual Studio Debug Console

===== DATA MAHASISWA =====
Nama: Tiurma Grace Angelina
Jenis Kelamin: female
Umur: 19
Alamat: Arcawinangun, Purwokerto, Central Java

Mata Kuliah yang Diambil:
MK 1: CRI2C4 - Konstruksi Perangkat Lunak
MK 2: CRI2C3 - Pemodelan Perangkat Lunak

Team member list:
2311104042 Tiurma Grace Angelina Sihalohe (19 female)
2311104073 farhan kurniawan (19 male)
2311104053 marvel Sanjaya (19 male)
2311104061 candra dinata (19 male)
456754674 riyo valentino (19 male)

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4\bin\Debug\net8.0\modul7_kelompok_4.exe (process 4648) 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 . . .
```

Commit :

```
C:\WINDOWS\system32\cmd.exe
C:\Users\USER\source\repos\modul7_kelompok_4>git branch
  main
* tiur1
+ tiur2

C:\Users\USER\source\repos\modul7_kelompok_4>git add jurnal7_2_2311104042.json TeamMembers2311104042.cs Program.cs
fatal: pathspec 'jurnal7_2_2311104042.json' did not match any files

C:\Users\USER\source\repos\modul7_kelompok_4>cd modul7_kelompok_4

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4>git add jurnal7_2_2311104042.json TeamMembers2311104042.cs Program.cs
warning: in the working copy of 'modul7_kelompok_4/jurnal7_2_2311104042.json', LF will be replaced by CRLF the next time Git touches it

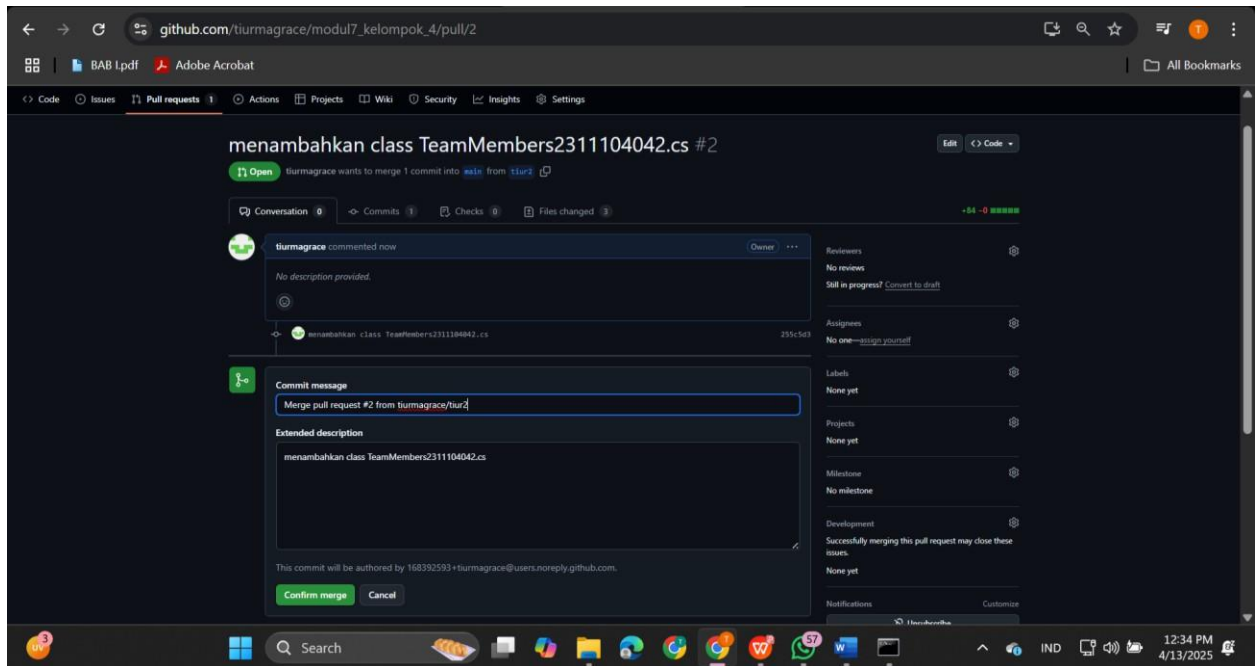
C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4>git commit -m "menambahkan class TeamMembers2311104042.cs"
[totur2 255c5d3] menambahkan class TeamMembers2311104042.cs
3 files changed, 84 insertions(+)
create mode 100644 modul7_kelompok_4/TeamMembers2311104042.cs
create mode 100644 modul7_kelompok_4/jurnal7_2_2311104042.json

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4>git push origin tiur 2
error: src refspec tiur does not match any
error: src refspec 2 does not match any
error: failed to push some refs to 'https://github.com/tiurmagrace/modul7_kelompok_4.git'

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4>git push origin tiur2
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 12 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 1.27 KiB | 433.00 KiB/s, done.
Total 6 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
remote:
remote: Create a pull request for 'tiur2' on GitHub by visiting:
remote:   https://github.com/tiurmagrace/modul7_kelompok_4/pull/new/tiur2
remote:
To https://github.com/tiurmagrace/modul7_kelompok_4.git
 * [new branch]      tiur2 -> tiur2

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4>
```

Pull dan Merge :



4. MENAMBAHKAN JSON DESERIALIZATION 3 Branch

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

C:\Users\USER\source\repos\modul7_kelompok_4>git checkout -b tiur3
Switched to a new branch 'tiur3'
```

Code Class

1. jurnal7_2_2311104042.json

```
{
  "glossary": {
    "title": "example glossary",
    "GlossDiv": {
      "title": "S",
      "GlossList": {
        "GlossEntry": {
          "ID": "SGML",
          "SortAs": "SGML",
          "GlossTerm": "Standard Generalized Markup
Language",
          "Acronym": "SGML",
          "Abbrev": "ISO 8879:1986",
          "GlossDef": {
            "para": "A meta-markup language, used to create markup languages
such as DocBook.",
            "GlossSeeAlso": ["GML", "XML"]
          },
          "GlossSee": "markup"
        }
      }
    }
  }
}
```

```
    }  
    }  
}
```

2. GlossaryItem2311104042.cs

```
using System;  
using System.Collections.Generic;  
using System.IO;  
using System.Text.Json;  
  
public class GlossaryItem2311104042  
{  
    public class GlossDef  
    {  
        public string para { get; set; }  
        public List<string> GlossSeeAlso { get; set; }  
    }  
  
    public class GlossEntry  
    {  
        public string ID { get; set; }  
        public string SortAs { get; set; }  
        public string GlossTerm { get; set; }  
        public string Acronym { get; set; }  
        public string Abbrev { get; set; }  
        public GlossDef GlossDef { get; set; }  
        public string GlossSee { get; set; }  
    }  
  
    public class GlossList  
    {  
        public GlossEntry GlossEntry { get; set; }  
    }  
  
    public class GlossDiv  
    {  
        public string title { get; set; }  
        public GlossList GlossList { get; set; }  
    }  
  
    public class Glossary  
    {  
        public string title { get; set; }  
        public GlossDiv GlossDiv { get; set; }  
    }  
  
    public class Root  
    {  
        public Glossary glossary { get; set; }  
    }  
}
```

```

public static void ReadJSON()
{
    try
    {
        string filePath = "jurnal7_3_2311104042.json";
        string jsonString = File.ReadAllText(filePath);
        Root data = JsonSerializer.Deserialize<Root>(jsonString);

        var entry = data.glossary.GlossDiv.GlossList.GlossEntry;

        Console.WriteLine("=== GLOSS ENTRY ===");
        Console.WriteLine($"ID      : {entry.ID}");
        Console.WriteLine($"SortAs   : {entry.SortAs}");
        Console.WriteLine($"Term     : {entry.GlossTerm}");
        Console.WriteLine($"Acronym  : {entry.Acronym}");
        Console.WriteLine($"Abbrev   : {entry.Abbrev}");
        Console.WriteLine($"Def      : {entry.GlossDef.para}");
        Console.WriteLine("See Also : " + string.Join(", ",
entry.GlossDef.GlossSeeAlso));
        Console.WriteLine($"See      : {entry.GlossSee}");
    }
    catch (Exception ex)
    {
        Console.WriteLine("Gagal membaca file JSON: " + ex.Message);
    }

    Console.ReadLine();
}
}

```

3. Program.cs

```

class Program
{
    static void Main(string[] args)
    {
        DataMahasiswa2311104042.ReadJSON();
        TeamMembers2311104042.ReadJSON();
        GlossaryItem2311104042.ReadJSON();
    }
}

```

Output :

```
Microsoft Visual Studio Debug Console

=== GLOSS ENTRY ===
ID      : SGML
SortAs  : SGML
Term    : Standard Generalized Markup Language
Acronym : SGML
Abbrev  : ISO 8879:1986
Def     : A meta-markup language, used to create markup languages such as DocBook.
See Also : GML, XML
See     : markup

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4\bin\Debug\net8.0\modul7_kelompok_4.exe (process 26304) 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

===== DATA MAHASISWA =====
Name: Tiurma Grace Angelina
Jenis Kelamin: female
Umur: 19
Alamat: Arcawinangun, Purwokerto, Central Java

Mata Kuliah yang Diambil:
MK 1: CRI2C4 - Konstruksi Perangkat Lunak
MK 2: CRI2C3 - Pemodelan Perangkat Lunak

Team member list:
2311104042 Tiurma Grace Angelina Sihalohe (19 female)
2311104073 Farhan kurniawan (19 male)
2311104053 marvel Sanjaya (19 male)
2311104061 candra dinata (19 male)
456754674 riyo valentino (19 male)

=== GLOSS ENTRY ===
ID      : SGML
SortAs  : SGML
Term    : Standard Generalized Markup Language
Acronym : SGML
Abbrev  : ISO 8879:1986
Def     : A meta-markup language, used to create markup languages such as DocBook.
See Also : GML, XML
See     : markup

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4\bin\Debug\net8.0\modul7_kelompok_4.exe (process 26304) 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 . . .
```

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\modul7_kelompok_4>git checkout -b tiur3
Switched to a new branch 'tiur3'

C:\Users\USER\source\repos\modul7_kelompok_4>git add jurnal7_2_2311104042.json GlossaryItem2311104042.cs Program.cs
fatal: pathspec 'jurnal7_2_2311104042.json' did not match any files

C:\Users\USER\source\repos\modul7_kelompok_4>cd modul7_kelompok_4

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4>git add jurnal7_2_2311104042.json GlossaryItem2311104042.cs Program.cs

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4>git commit -m "menambahkan class GlossaryItem2311104042.cs"
[tiur3 8094d32] menambahkan class GlossaryItem2311104042.cs
2 files changed, 75 insertions(+)
create mode 100644 modul7_kelompok_4/GlossaryItem2311104042.cs

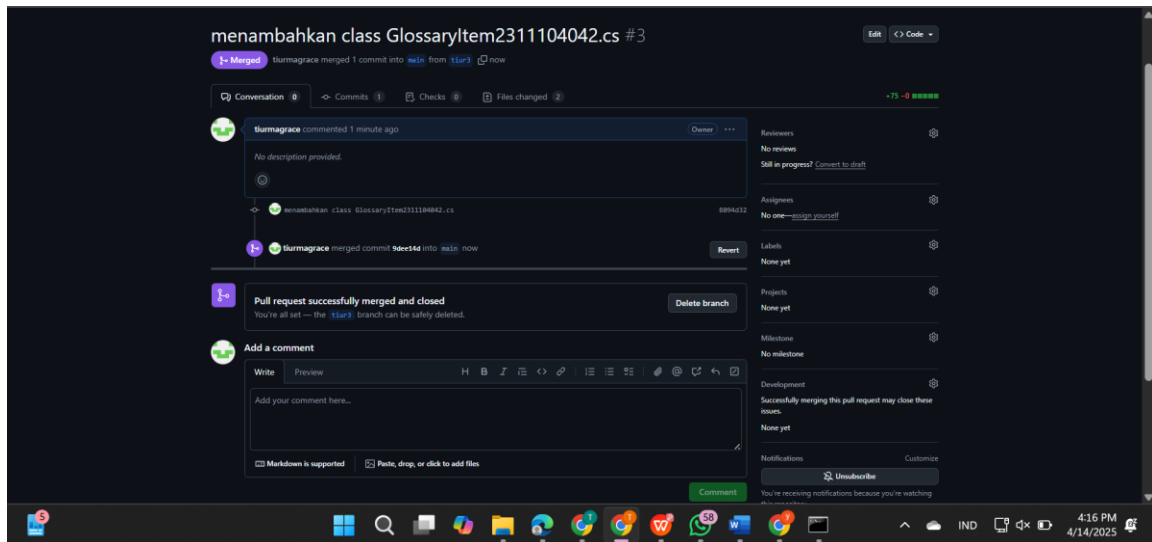
C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4>git push origin tiur3
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 12 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 1.03 KiB | 263.00 KiB/s, done.
Total 5 (delta 3), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
remote:
remote: Create a pull request for 'tiur3' on GitHub by visiting:
remote:   https://github.com/tiurmagrace/modul7_kelompok_4/pull/new/tiur3
remote:
remote: To https://github.com/tiurmagrace/modul7_kelompok_4.git
 * [new branch]      tiur3 -> tiur3

C:\Users\USER\source\repos\modul7_kelompok_4\modul7_kelompok_4>
```

Pull & Merge :

The screenshot shows the GitHub web interface for creating a pull request. The repository is 'tiurmagrace / modul7_kelompok_4'. The 'Open a pull request' section is active, showing a comparison between 'base: main' and 'compare: tiur3'. A green checkmark indicates 'Able to merge'. The 'Add a title' field contains 'menambahkan class GlossaryItem2311104042.cs'. The 'Add a description' section has a text area with 'Add your description here...'. On the right, there are settings for reviewers, assignments, labels, projects, milestones, and development. A 'Create pull request' button is at the bottom right.

The screenshot shows the GitHub pull request page for 'menambahkan class GlossaryItem2311104042.cs #3'. The pull request is open and ready for review. The 'Conversation' tab is selected, showing a comment from 'tiurmagrace' with the text 'No description provided.' and a status of 'Still in progress? Convert to draft'. The 'Checks' tab shows 'No conflicts with base branch' and 'Merging can be performed automatically'. The 'Files changed' tab shows the changes made in the pull request. The 'Add a comment' section is at the bottom, with a text area for adding a comment. The 'Close pull request' and 'Comment' buttons are at the bottom right.



Penjelasan Keseluruhan :

1. DataMahasiswa2311104042.cs

Tujuan:

Untuk membaca dan menampilkan data mahasiswa dari file JSON pertama (jurnal7_1_2311104042.json).

Struktur Kelas:

- Address: Menyimpan informasi alamat mahasiswa.
- Course: Menyimpan data mata kuliah (kode dan nama).
- Mahasiswa: Representasi keseluruhan data mahasiswa (nama, umur, alamat, dan mata kuliah).
- ReadJSON(): Fungsi untuk membaca file JSON, mendeserialisasi menjadi objek Mahasiswa, lalu menampilkannya ke console.

Inti:

```
string jsonString = File.ReadAllText(filePath);
```

```
Mahasiswa mhs = JsonSerializer.Deserialize<Mahasiswa>(jsonString);
```

2. TeamMembers2311104042.cs

Tujuan:

Untuk menampilkan daftar anggota kelompok dari file JSON kedua (jurnal7_2_2311104042.json).

Struktur Kelas:

- Member: Representasi satu anggota (nama, umur, gender, NIM).
- MembersData: Representasi seluruh data yang memiliki properti members (list of Member).
- ReadJSON(): Fungsi untuk membaca file JSON, mendeserialisasi ke objek MembersData, lalu menampilkannya ke console.

Inti:

```
MembersData data = JsonSerializer.Deserialize<MembersData>(jsonString);
```

```
foreach (var m in data.members) { ... }
```

Fitur tambahan:

- Menggunakan blok try-catch untuk menangani error jika file tidak ditemukan atau rusak.

3. GlossaryItem2311104042.cs

Tujuan:

Untuk membaca dan menampilkan data GlossEntry dari file JSON jurnal7_3_2311104042.json.

Struktur Kelas:

- GlossDef: Menyimpan penjelasan (para) dan daftar istilah terkait (GlossSeeAlso).
- GlossEntry: Berisi detail istilah teknis seperti:
 - ID, GlossTerm, Acronym, Abbrev, GlossSee, dan GlossDef.
- GlossList, GlossDiv, dan Glossary: Membentuk hirarki dari struktur glosarium.
- Root: Class utama yang mewakili struktur paling luar JSON (glossary).

Inti:

```
Root data = JsonSerializer.Deserialize<Root>(jsonString);
```

```
var entry = data.glossary.GlossDiv.GlossList.GlossEntry;
```

Ini akan mengambil objek GlossEntry dari dalam JSON secara bertingkat.

4. Program.cs

Tujuan:

Sebagai titik masuk utama (entry point) program.

Fungsi:

- Menjalankan ReadJSON() dari kedua class:

```
DataMahasiswa2311104042.ReadJSON();
```

```
TeamMembers2311104042.ReadJSON();
```

5. jurnal7_1_2311104042.json

JSON ini merepresentasikan data satu mahasiswa lengkap dengan alamat dan daftar mata kuliah yang diambil.

Struktur:

```
{  
  "firstName": "Tiurma Grace",
```

```
"lastName": "Angelina",
"gender": "female",
"age": 19,
"address": {
  "streetAddress": "Arcawinangun",
  "city": "Purwokerto",
  "state": "Central Java"
},
"courses": [
  { "code": "CRI2C4", "name": "Konstruksi Perangkat Lunak" },
  { "code": "CRI2C3", "name": "Pemodelan Perangkat Lunak" }
]
```

Penjelasan:

- firstName, lastName, gender, age → data dasar mahasiswa.
- address → nested object yang berisi:
 - streetAddress, city, state → detail alamat.
- courses → array yang berisi daftar mata kuliah yang diambil:
 - Setiap elemen punya code dan name.

6. jurnal7_2_2311104042.json

JSON ini berisi daftar anggota kelompok, masing-masing dengan data pribadi.

Struktur:

```
{
  "members": [
    {
      "firstName": "Tiurma Grace Angelina",
```

```

    "lastName": "Sihaloho",
    "gender": "female",
    "age": 19,
    "nim": "2311104042"
  },
  {
    "firstName": "farhan",
    "lastName": "kurniawan",
    "gender": "male",
    "age": 19,
    "nim": "2311104073"
  },
  ...
]
}

```

Penjelasan:

- members → array yang menyimpan data tiap anggota.
- Setiap anggota punya:
 - firstName, lastName, gender, age, dan nim.

7. jurnal7_3_2311104042.json

JSON ini merepresentasikan sebuah glosarium (glossary) — sebuah struktur data bertingkat yang menyimpan istilah teknis beserta penjelasannya.

Struktur Singkat:

```

{
  "glossary": {
    "title": "example glossary",
    "GlossDiv": {
      "title": "S",
      "GlossList": {
        "GlossEntry": {
          "ID": "SGML",
          "SortAs": "SGML",
          "GlossTerm": "Standard Generalized Markup Language",
          "Acronym": "SGML",
          "Abbrev": "ISO 8879:1986",
          "GlossDef": {
            "para": "A meta-markup language, used to create markup languages such as DocBook.",

```

```

    "GlossSeeAlso": ["GML", "XML"]
  },
  "GlossSee": "markup"
}
}
}
}
}
}
}

```

Penjelasan:

- glossary → objek utama, berisi seluruh konten glosarium.
- GlossDiv → bagian dari glosarium yang dikategorikan (dalam contoh ini, judulnya “S”).
- GlossList → daftar istilah teknis.
- GlossEntry → entri tunggal, berisi informasi tentang istilah seperti ID, istilah, singkatan, penjelasan, dan referensi terkait.

Kesimpulan:

- DataMahasiswa2311104042.cs → menampilkan data pribadi + kuliah seorang mahasiswa.
- TeamMembers2311104042.cs → menampilkan data semua anggota kelompok.
- GlossaryItem2311104042.cs → Menampilkan detail entri glosarium dari file JSON bertingkat
- Program.cs → menggabungkan dan menampilkan hasil dari ketiga class di atas.