

JURNAL MODUL 7
GRAMMAR BASED INPUT PROCESSING PARSING



Nama :

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PROGRAM STUDI S1 REKAYASA PERANGKAT LUNAK
TELKOM UNIVERSITY PURWOKERTO
2025

1. Link github kelompok

https://github.com/zclimaxsp/modul7_kelompok_7.git

2. Menambahkan JSON Deserialization 1

Membuat branch baru dan menambahkan kodingan untuk print hasil deserialisasi dari object yang dibuat.

The screenshot shows the Visual Studio 2022 interface. The top window is a Command Prompt with the following commands and output:

```
C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git branch
* main

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git checkout -b alya
Switched to a new branch 'alya'

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git branch
* alya
  main

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>
```

The main window shows the C# code in `Program.cs`:

```
1 using System;
2 using System.Collections.Generic;
3 using System.IO;
4 using Newtonsoft.Json;
5
6 public class Address
7 {
8     public string streetAddress { get; set; }
9     public string city { get; set; }
10    public string state { get; set; }
11 }
12
13 public class Course
14 {
15     public string code { get; set; }
16     public string name { get; set; }
17 }
18
19 public class Mahasiswa
20 {
21     public string firstName { get; set; }
22     public string lastName { get; set; }
23     public string gender { get; set; }
24     public int age { get; set; }
25     public Address address { get; set; }
26     public List<Course> courses { get; set; }
27 }
28
29 public class DataMahasiswa231110XXXX // Ganti dengan NIM kamu
30 {
31     public void ReadJSON()
```

The Solution Explorer on the right shows the project structure:

- modul7_kelompok_7 (C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7)
 - bin
 - obj
 - Jurnal7_1_2311104076.json
 - modul7_kelompok_7.csproj
 - Program.cs

Output dari program:

The screenshot shows the Microsoft Visual Studio Debug Console with the following output:

```
=== Data Mahasiswa ===
Nama      : Alya Rabani
Gender    : female
Usia      : 20
Alamat    : Jl. Veteran, Palu, Sulawesi Tengah
Mata Kuliah:
- CCK2KAB4: Konstruksi Perangkat Lunak
- CCK2JAC2: Basis Data

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7\modul7_kelompok_7\bin\Debug\net8.0\modul7_kelompok_7.exe (process 19424) 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 . . .
```

Melakukan commit ke github

```
C:\Windows\system32\cmd.exe

*****
** Visual Studio 2022 Developer Command Prompt v17.13.0
** Copyright (c) 2022 Microsoft Corporation
*****

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git add .
warning: in the working copy of 'modul7_kelompok_7/bin/Debug/net7.0/jurnal7_1_2311104076.json', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'modul7_kelompok_7/bin/Debug/net8.0/jurnal7_1_2311104076.json', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'modul7_kelompok_7/jurnal7_1_2311104076.json', LF will be replaced by CRLF the next time Git touches it

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git commit -m "menambahkan class DataMahasiswa
a2311104076"
[Alia f2e1d83] menambahkan class DataMahasiswa2311104076
76 files changed, 719 insertions(+), 35 deletions(-)
create mode 100644 .vs/ProjectEvaluation/modul7_kelompok_7.metadata.v9.bin
create mode 100644 .vs/ProjectEvaluation/modul7_kelompok_7.projects.v9.bin
create mode 100644 .vs/ProjectEvaluation/modul7_kelompok_7.strings.v9.bin
create mode 100644 .vs/VSWorkspaceState.json
create mode 100644 .vs/modul7_kelompok_7/DesignTimeBuild/.dtbcache.v2
create mode 100644 .vs/modul7_kelompok_7/FileContentIndex/9d180581-b4c5-4692-a8c9-225ecc3138d2.vsixdx
create mode 100644 .vs/modul7_kelompok_7/FileContentIndex/7587c9d0-9d5a-4c56-938f-0910521aa98d.vsixdx
create mode 100644 .vs/modul7_kelompok_7/FileContentIndex/03b1ec49-6d6c-4a31-b1c5-8c468d91731f.vsixdx
create mode 100644 .vs/modul7_kelompok_7/FileContentIndex/df2ce8cb-aaff-48f4-a6f8-7fac542d6e8f.vsixdx
delete mode 100644 .vs/modul7_kelompok_7/FileContentIndex/f11168f-8f4e-4437-8051-0dfe884ed9e4.vsixdx
create mode 100644 .vs/modul7_kelompok_7/v17/.fudcache.v2
create mode 100644 .vs/modul7_kelompok_7/v17/.msuo
create mode 100644 .vs/modul7_kelompok_7/v17/DocumentLayout.backup.json
create mode 100644 .vs/modul7_kelompok_7/v17/DocumentLayout.json
create mode 100644 .vs/slnx.sqlite
create mode 100644 modul7_kelompok_7/.vs/VSWorkspaceState.json
create mode 100644 modul7_kelompok_7/.vs/modul7_kelompok_7/FileContentIndex/52f15da5-e76a-42ec-a2c2-b28520e946c4.vsixdx
create mode 100644 modul7_kelompok_7/.vs/modul7_kelompok_7/v17/.wsuo
create mode 100644 modul7_kelompok_7/.vs/modul7_kelompok_7/v17/DocumentLayout.backup.json

create mode 100644 modul7_kelompok_7/obj/Release/net7.0/modul7_kelompok_7.AssemblyInfo.cs
create mode 100644 modul7_kelompok_7/obj/Release/net7.0/modul7_kelompok_7.AssemblyInfoInputs.cache
create mode 100644 modul7_kelompok_7/obj/Release/net7.0/modul7_kelompok_7.GeneratedMSBuildEditorConfig.editorconfig
create mode 100644 modul7_kelompok_7/obj/Release/net7.0/modul7_kelompok_7.GlobalUsings.g.cs
create mode 100644 modul7_kelompok_7/obj/Release/net7.0/modul7_kelompok_7.assets.cache

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git push origin alia
Enumerating objects: 162, done.
Counting objects: 100% (162/162), done.
Delta compression using up to 12 threads
Compressing objects: 100% (77/77), done.
Writing objects: 100% (83/83), 261.67 KiB | 3.15 MiB/s, done.
Total 83 (delta 24), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (24/24), completed with 5 local objects.
remote:
remote: Create a pull request for 'اليا' on GitHub by visiting:
remote:   https://github.com/zclinxsp/modul7_kelompok_7/pull/new/اليا
remote:
To https://github.com/zclinxsp/modul7_kelompok_7.git
 * [new branch]   alia -> alia

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>
```

3. Menambahkan JSON Deserialization 2

Kemudian saya membuat branch baru lagi dengan nama alia2 dan menambahkan kodingan sesuai dengan perintah pada jurnal.



rabanialya menambahkan TeamMembers2311104076

Code

Blame

50 lines (43 loc) · 1.25 KB



Code 55% faster with GitHub Copilot

```
1  using System;
2  using System.IO;
3  using System.Text.Json;
4  using System.Collections.Generic;
5  public class TeamMember
6  {
7      public string? nim { get; set; }
8      public string? firstName { get; set; }
9      public string? lastName { get; set; }
10     public string? gender { get; set; }
11     public int age { get; set; }
12 }
13
14 public class TeamMembers2311104076
15 {
16     public List<TeamMember>? members { get; set; }
17
18     public static void ReadJSON()
19     {
20         string filePath = "jurnal7_2_2311104076.json";
21
22         if (!File.Exists(filePath))
23         {
24             Console.WriteLine($"File '{filePath}' tidak ditemukan.");
25             return;
26         }
27
28         string jsonData = File.ReadAllText(filePath);
29         var options = new JsonSerializerOptions { PropertyNameCaseInsensitive = true };
30
31         var data = JsonSerializer.Deserialize<TeamMembers2311104076>(jsonData, options);
32     }
```

Output yang dihasilkan:

```
Microsoft Visual Studio Debu x + v

Team member List:
2311104076 Alya Rabani (20 female)
2311104046 Dhiemas Tulus Ikhsan (19 male)
2311104059 Zhafir Zaidan Avail (20 male)

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7\modul7_k
elompok_7\bin\Debug\net8.0\modul7_kelompok_7.exe (process 3210) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debug
ging stops.
Press any key to close this window . . .
```

Melakukan commit ke github

```
C:\Windows\system32\cmd.e x + v

*****
** Visual Studio 2022 Developer Command Prompt v17.13.0
** Copyright (c) 2022 Microsoft Corporation
*****

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git add
warning: in the working copy of 'modul7_kelompok_7\bin\Debug\net8.0\jurnal7_2_2311104076.json', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'modul7_kelompok_7\jurnal7_2_2311104076.json', LF will be replaced by CRLF the next time Git touches it

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git commit -m "menambahkan TeamMembers2311104076"
[alya2 556bbd2] menambahkan TeamMembers2311104076
29 files changed, 141 insertions(+), 109 deletions(-)
create mode 1086644 .vs/modul7_kelompok_7/FileContentIndex/1404ab4c-4641-4c1e-9831-a8b5647dab81.vsixdx
create mode 1086644 .vs/modul7_kelompok_7/FileContentIndex/4b0357dc-dba4-4be8-8a8c-3737aed2011d.vsixdx
delete mode 1086644 .vs/modul7_kelompok_7/FileContentIndex/7597c9d4-9d5a-4c56-938f-8910521aa98d.vsixdx
rename .vs/modul7_kelompok_7/FileContentIndex/df2ce8cb-aaff-4bf4-a6f8-7fac542d6e8f.vsixdx => 76540eef-0389-4fec-albb-4c93eea978dd.vsixdx (100%)
create mode 1086644 modul7_kelompok_7\bin\Debug\net8.0\jurnal7_2_2311104076.json
create mode 1086644 modul7_kelompok_7\jurnal7_2_2311104076.json
create mode 1086644 modul7_kelompok_7\obj\Debug\net8.0\modul7_kelompok_7.csproj.BuildWithSkipAnalyzers

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git push origin main
Everything up-to-date

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git log --oneline
556bbd2 (HEAD -> alya2) menambahkan TeamMembers2311104076
f1e1d83 (origin/alya, alya) menambahkan class DataMahasiswa2311104076
8c8398f (origin/main, origin/HEAD, main) first commit

C:\Users\Lenovo\source\repos\KPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git push origin alya2
Enumerating objects: 69, done.
Counting objects: 100% (69/69), done.
Delta compression using up to 12 threads
Compressing objects: 100% (34/34), done.
Writing objects: 100% (38/38), 34.04 KiB | 1.89 MiB/s, done.
Total 38 (delta 19), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (19/19), completed with 17 local objects.
remote:
remote: Create a pull request for 'alya2' on GitHub by visiting:
remote: https://github.com/zclimaxp/modul7_kelompok_7/pull/new/alya2
remote:
To https://github.com/zclimaxp/modul7_kelompok_7.git
 * [new branch] alya2 -> alya2
```

4. Menambahkan JSON Deserialization 3

Melakukan pembuatan branch baru terlebih dahulu dengan nama alya3 dan membuat kodingan print hasil deserialisasi dari object yang dibuat dengan format bebas untuk bagian “GlossEntry”

```
rabanialya menambahkan class GlossaryItem2311104076

Code Blame 80 lines (69 loc) · 2.03 KB Code 55% faster with GitHub Copilot

1 using System;
2 using System.IO;
3 using System.Text.Json;
4 using System.Text.Json.Serialization;
5
6 public class GlossaryItem2311104076
7 {
8     public class GlossDef
9     {
10         public string para { get; set; }
11         public string[] GlossSeeAlso { get; set; }
12     }
13
14     public class GlossEntry
15     {
16         public string ID { get; set; }
17         public string SortAs { get; set; }
18         public string GlossTerm { get; set; }
19         public string Acronym { get; set; }
20         public string Abbrev { get; set; }
21         public GlossDef GlossDef { get; set; }
22         public string GlossSee { get; set; }
23     }
24
25     public class GlossList
26     {
27         public GlossEntry GlossEntry { get; set; }
28     }
29
30     public class GlossDiv
31     {
32         public string title { get; set; }
33         public GlossList Glosslist { get; set; }
34     }
```

Outputnya

```
Microsoft Visual Studio Debu  X  +  -  [icon]  X

=== GlossEntry ===
ID: SGML
Term: Standard Generalized Markup Language
Acronym: SGML
Definition: A meta-markup language, used to create markup languages such as DocBook.
GlossSee: markup
GlossSeeAlso: GML, XML

C:\Users\Lenovo\source\repos\WPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7\modul7_k
elompok_7\bin\Debug\net8.0\modul7_kelompok_7.exe (process 15560) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debug
ging stops.
Press any key to close this window . . .
```

Melakukan commit ke github

```
C:\Windows\system32\cmd.exe  X  +  -  [icon]  X

*****
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*****

C:\Users\Lenovo\source\repos\WPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git add .
warning: in the working copy of 'modul7_kelompok_7\bin\Debug\net8.0\jurnal7.2.2311104076.json', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'modul7_kelompok_7\bin\Debug\net8.0\jurnal7.3.2311104076.json', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'modul7_kelompok_7\jurnal7.3.2311104076.json', LF will be replaced by CRLF the next time Git touches it

C:\Users\Lenovo\source\repos\WPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git commit -m "menambahkan klas
s 'GlossaryItem2311104076'"
[alya3 23247cd] menambahkan class GlossaryItem2311104076
29 files changed, 148 insertions(+), 72 deletions(-)
 create mode 100644 .vs/modul7_kelompok_7/FileContentIndex/41e83878-4c41-4395-a5e7-9aa078b3d51a.vsixdx
 delete mode 100644 .vs/modul7_kelompok_7/FileContentIndex/4b6357dc-dba4-40e8-ba8c-3737aed2011d.vsixdx
 delete mode 100644 .vs/modul7_kelompok_7/FileContentIndex/765d08ef-9389-4fec-211b-4e92ee4970d6.vsixdx
 create mode 100644 .vs/modul7_kelompok_7/FileContentIndex/a64199cd-9bb6-4ff7-84e8-63cb4046f70e.vsixdx
 rename .vs/modul7_kelompok_7/FileContentIndex/{9d180581-b4c5-4692-a8c9-225ecc3138d2.vsixdx => ce2f2c18-150b-4e78-a6a2-cb3b86367016.vsixdx} (100%)
 create mode 100644 modul7_kelompok_7\bin\Debug\net8.0\jurnal7.3.2311104076.json
 create mode 100644 modul7_kelompok_7\jurnal7.3.2311104076.json

C:\Users\Lenovo\source\repos\WPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>git push origin alya3
Enumerating objects: 68, done.
Counting objects: 100% (68/68), done.
Delta compression using up to 12 threads
Compressing objects: 100% (34/34), done.
Writing objects: 100% (37/37), 27.63 MiB | 1.73 MiB/s, done.
Total 37 (delta 18), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (18/18), completed with 16 local objects.
remote:
remote: Create a pull request for 'alya3' on GitHub by visiting:
remote:   https://github.com/zclimaxsp/modul7_kelompok_7/pull/new/alya3
remote:
To https://github.com/zclimaxsp/modul7_kelompok_7.git
 * [new branch]   alya3 -> alya3

C:\Users\Lenovo\source\repos\WPL_ALYA_RABANI_2311104076_SE-07-02\07_Grammar-Based_Input_Processing_Parsing\modul7_kelompok_7>
```