

**PRAKTIKUM KONSTRUKSI PERANGKAT LUNAK
TUGAS JURNAL 05**

Generics



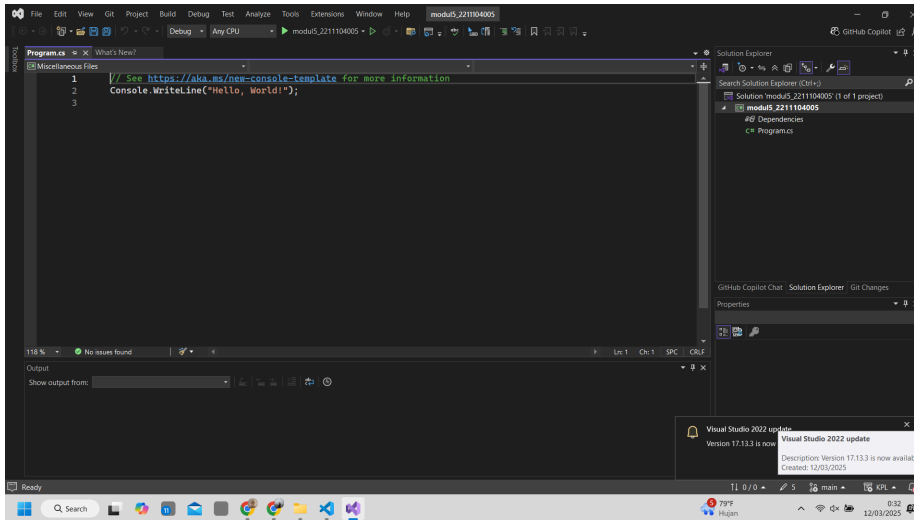
**Telkom
University**

disusun Oleh:
Nita Fitrotul Mar'ah
2211104005

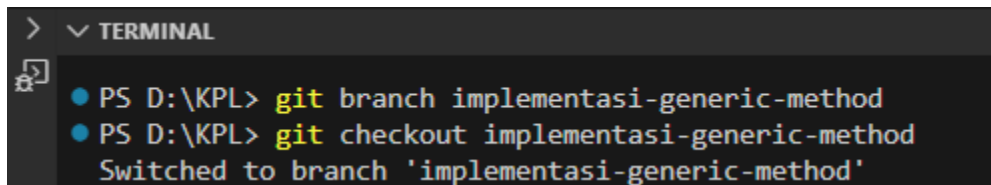
SE0601

**S1 REKAYASA PERANGKAT LUNAK
FAKULTAS INFORMATIKA
TELKOM UNIVERSITY
2025**

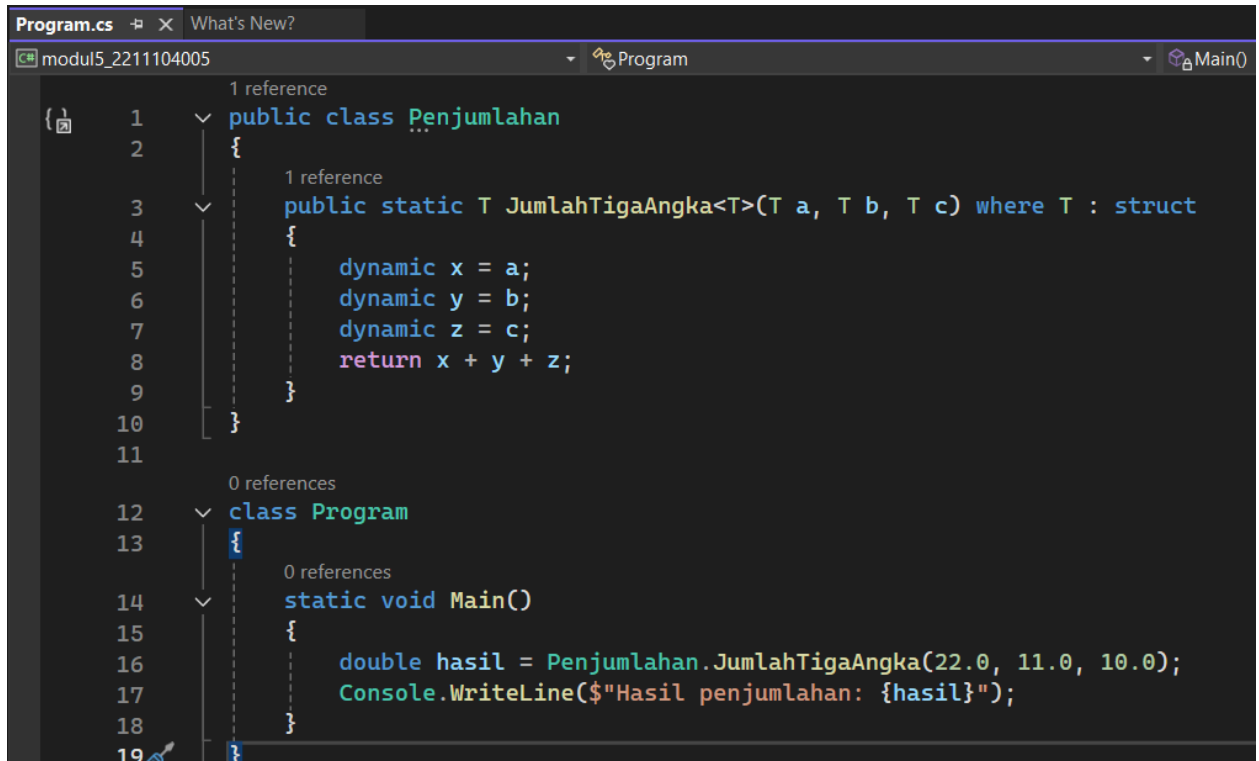
1. Membuat Project Console/Tanpa Gui



2. Membuat Branch Baru Pada Git Project



3. Menambahkan Method Dengan Generic

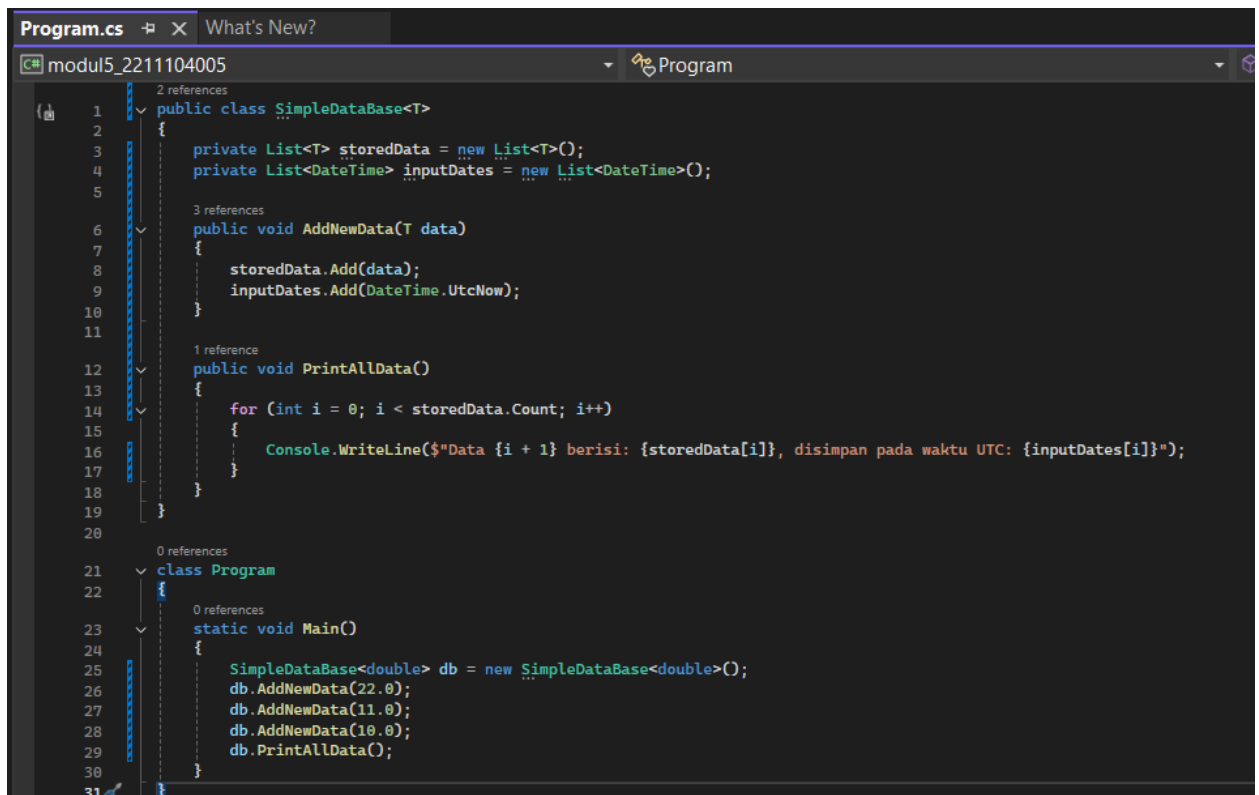


```

• PS D:\KPL> git add 05_Generics/modul5_2211104005/modul5_2211104005/Program.cs
• PS D:\KPL> git commit -m "Menambahkan class Penjumlahan dengan method JumlahTigaAngka"
[implementasi-generic-method bd458bf] Menambahkan class Penjumlahan dengan method JumlahTigaAngka
1 file changed, 19 insertions(+)
create mode 100644 05_Generics/modul5_2211104005/modul5_2211104005/Program.cs
• PS D:\KPL> git push origin implementasi-generic-method
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 2 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 726 bytes | 22.00 KiB/s, done.
Total 6 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Nitaa1904/KPL_NitaFitrotulMar-ah_2211104005_S1SE0601.git
fa29847..bd458bf implementasi-generic-method -> implementasi-generic-method
• PS D:\KPL> git branch implementasi-generic-class
• PS D:\KPL> git checkout implementasi-generic-class
Switched to branch 'implementasi-generic-class'
○ PS D:\KPL>

```

4. Menambahkan Class Generic "SimpleDataBase"



```

Program.cs  What's New?
modul5_2211104005  Program
2 references
1  public class SimpleDataBase<T>
2  {
3      private List<T> storedData = new List<T>();
4      private List<DateTime> inputDates = new List<DateTime>();
5
6      3 references
7      public void AddNewData(T data)
8      {
9          storedData.Add(data);
10         inputDates.Add(DateTime.UtcNow);
11     }
12
13     1 reference
14     public void PrintAllData()
15     {
16         for (int i = 0; i < storedData.Count; i++)
17         {
18             Console.WriteLine($"Data {i + 1} berisi: {storedData[i]}, disimpan pada waktu UTC: {inputDates[i]}");
19         }
20     }
21
22     0 references
23     class Program
24     {
25         0 references
26         static void Main()
27         {
28             SimpleDataBase<double> db = new SimpleDataBase<double>();
29             db.AddNewData(22.0);
30             db.AddNewData(11.0);
31             db.AddNewData(10.0);
32             db.PrintAllData();
33         }
34     }

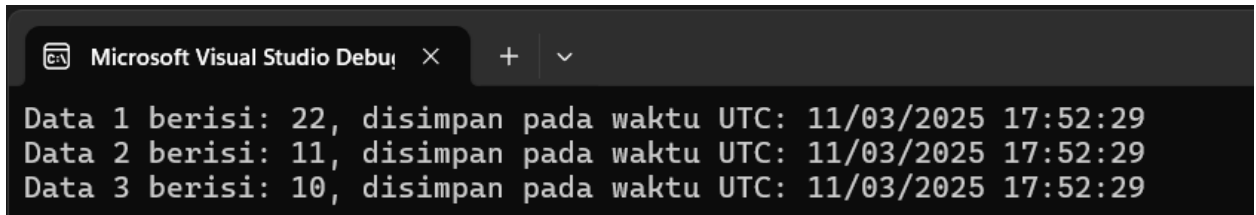
```

```

PS D:\KPL> git add 05_Generics/modul5_2211104005/modul5_2211104005/Program.cs
PS D:\KPL> git commit -m "Menambahkan class SimpleDataBase"
[implementasi-generic-class 48cb6e4] Menambahkan class SimpleDataBase
1 file changed, 20 insertions(+), 8 deletions(-)
PS D:\KPL> git push origin implementasi-generic-class
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 2 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (6/6), 802 bytes | 401.00 KiB/s, done.
Total 6 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'implementasi-generic-class' on GitHub by visiting:
remote:   https://github.com/Nitaa1904/KPL_NitaFitrotulMar-ah_2211104005_S1SE0601/pull/new/implementasi-generic-class
remote:
To https://github.com/Nitaa1904/KPL_NitaFitrotulMar-ah_2211104005_S1SE0601.git
 * [new branch]      implementasi-generic-class -> implementasi-generic-class
PS D:\KPL> git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
PS D:\KPL> git merge implementasi-generic-method
Updating 6656b48..bd458bf
Fast-forward
 .../modul5_2211104005/modul5_2211104005/Program.cs    | 19 ++++++++
1 file changed, 19 insertions(+)
 create mode 100644 05_Generics/modul5_2211104005/modul5_2211104005/Program.cs
PS D:\KPL> git merge implementasi-generic-class
Updating bd458bf..48cb6e4
Fast-forward
 .../modul5_2211104005/modul5_2211104005/Program.cs | 28 ++++++++
1 file changed, 20 insertions(+), 8 deletions(-)
PS D:\KPL> git push origin main
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/Nitaa1904/KPL_NitaFitrotulMar-ah_2211104005_S1SE0601.git
6656b48..48cb6e4  main -> main
PS D:\KPL>

```

5. Screenshot Hasil Run & Link Repository



```

Microsoft Visual Studio Debug Console
Data 1 berisi: 22, disimpan pada waktu UTC: 11/03/2025 17:52:29
Data 2 berisi: 11, disimpan pada waktu UTC: 11/03/2025 17:52:29
Data 3 berisi: 10, disimpan pada waktu UTC: 11/03/2025 17:52:29

```

6. Penjelasan Implementasi

- a. Class Penjumlahan
 - Menggunakan generic method JumlahTigaAngka.
 - Parameter bertipe T untuk fleksibilitas.
 - Memanfaatkan dynamic untuk penjumlahan.
- b. Class SimpleDataBase
 - Menggunakan List untuk menyimpan data.
 - AddNewData(T) menambahkan data sekaligus menyimpan waktu input.
 - PrintAllData() mencetak semua data dengan timestamp.