Jurnal Modul 10
Konstruksi Perangkat Lunak
PRODI REKAYASA PERANGKAT LUNAK
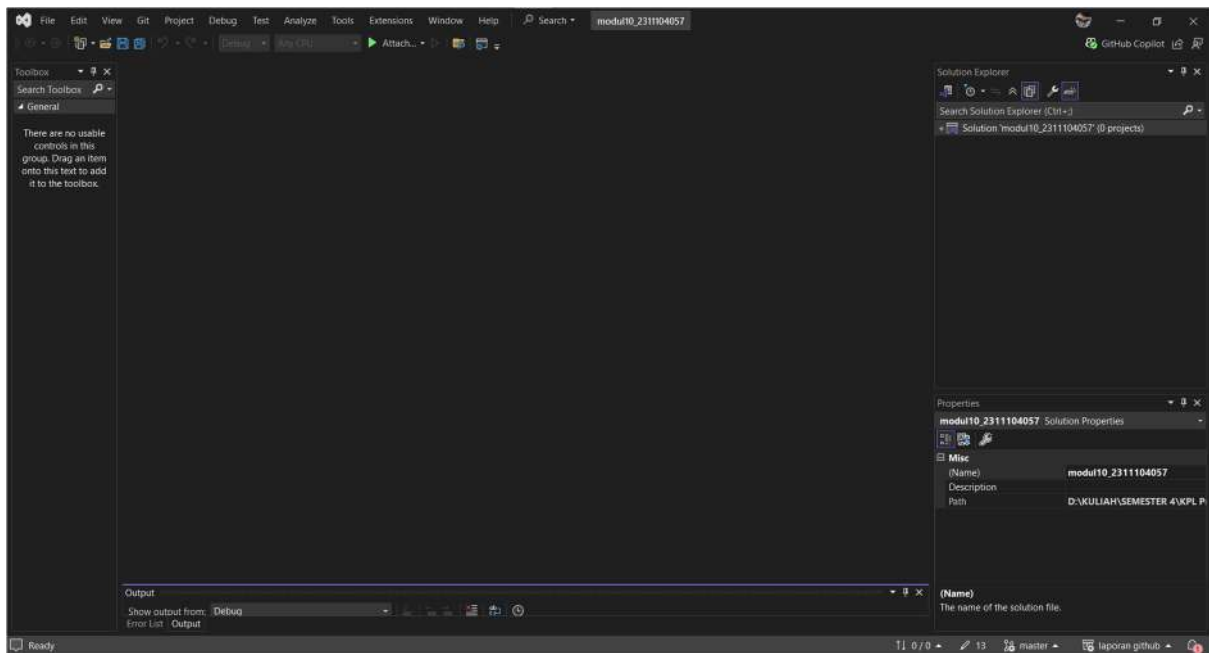

Nama :

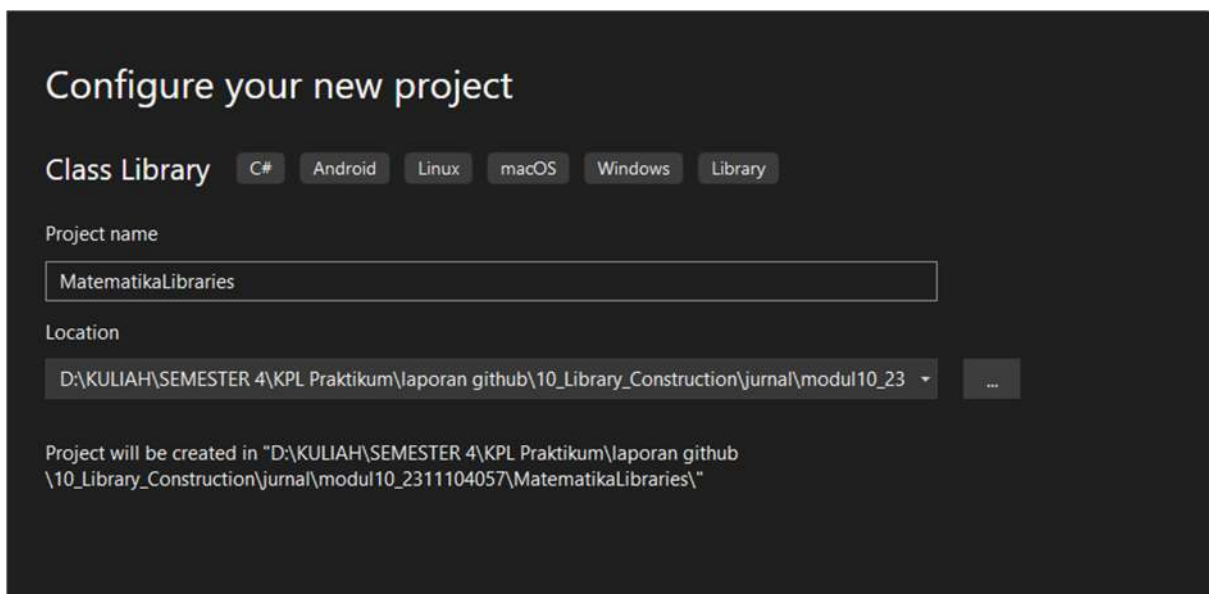**Reyner Atira Prasetyo**

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S1SE-07-02

DIREKTORAT TELKOM UNIVERSITY
PURWOKERTO

Jurnal Modul 10

1. Initialize project dan push

2. Membuat class library

```csharp
        public int FPB(int a, int b)
        {
            while (b != 0)
            {
                int temp = b;
                b = a % b;
                a = temp;
            }
            return a;
        }

        public int KPK(int a, int b)
        {
            return (a * b) / FPB(a, b);
        }
```

```csharp
    public string Turunan(int[] persamaan)
    {
        string result = "";
        int derajat = persamaan.Length - 1;

        for (int i = 0; i < persamaan.Length - 1; i++)
        {
            int koef = persamaan[i] * (derajat - i);
            int pangkat = derajat - i - 1;

            if (koef == 0) continue;

            if (result.Length > 0 && koef > 0)
                result += " + ";
            else if (koef < 0)
                result += " - ";

            result += $"{Math.Abs(koef)}";

            if (pangkat > 0)
                result += $"x{(pangkat > 1 ? pangkat.ToString() : "")}";
        }

        return result;
    }
```

```
0 references
public string Integral(int[] persamaan)
{
    string result = "";
    int derajat = persamaan.Length - 1;

    for (int i = 0; i < persamaan.Length; i++)
    {
        int pangkat = derajat - i + 1;
        double koef = (double)persamaan[i] / pangkat;

        if (persamaan[i] == 0) continue;

        if (result.Length > 0 && koef > 0)
            result += " + ";
        else if (koef < 0)
            result += " - ";

        result += $"{Math.Abs(koef)}x{(pangkat > 1 ? pangkat.ToString() : "")}";
    }

    result += " + C";
    return result;
}
```

3. Membuat project utama

Configure your new project

Console App   C#   Linux   macOS   Windows   Console
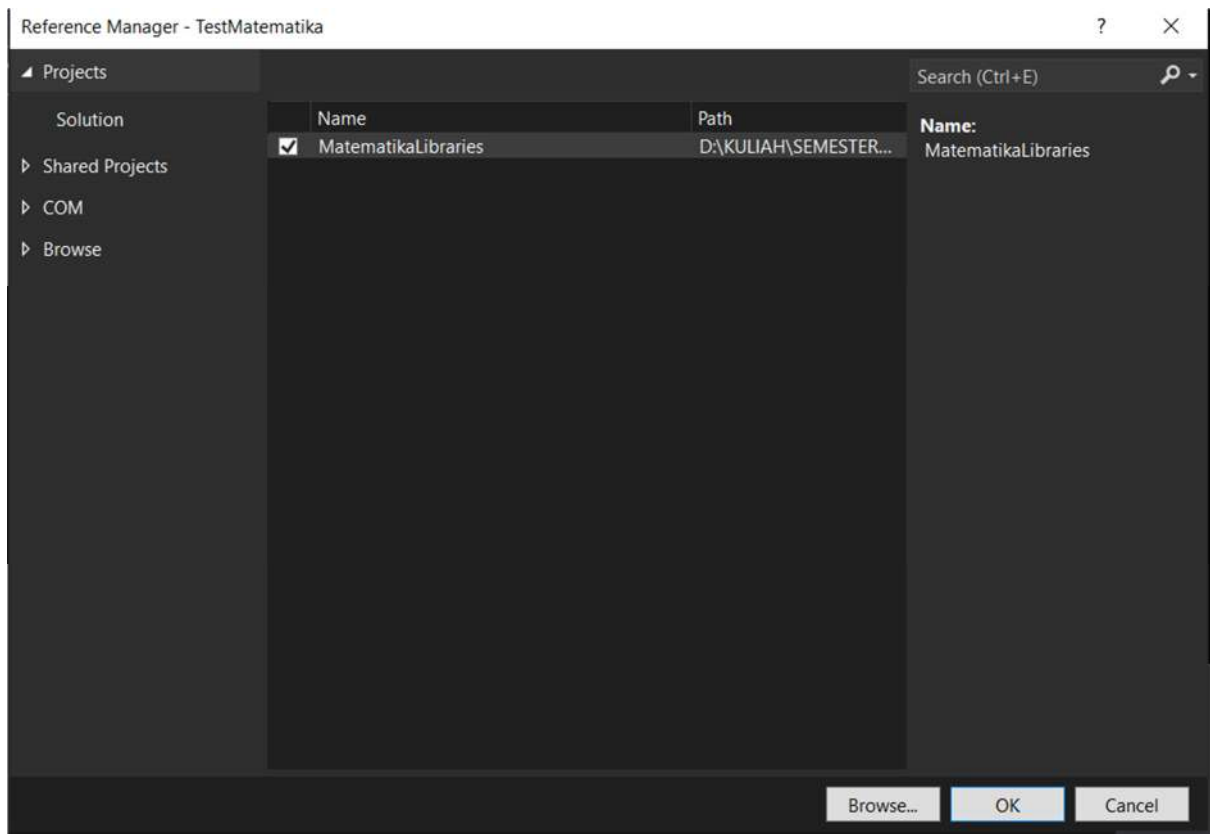
Project name
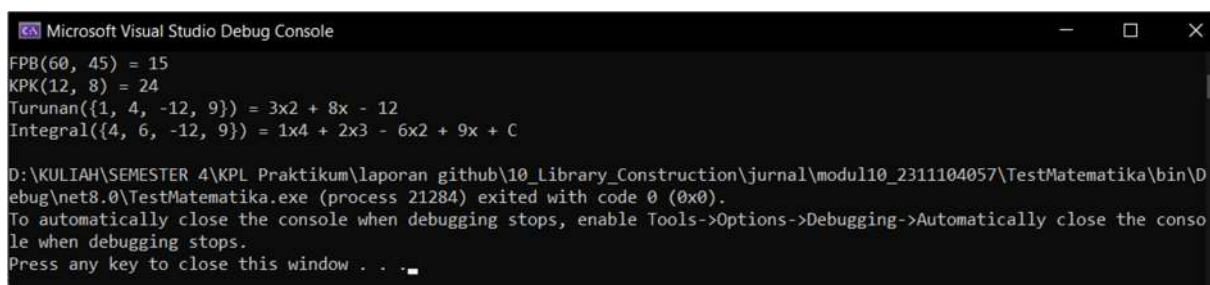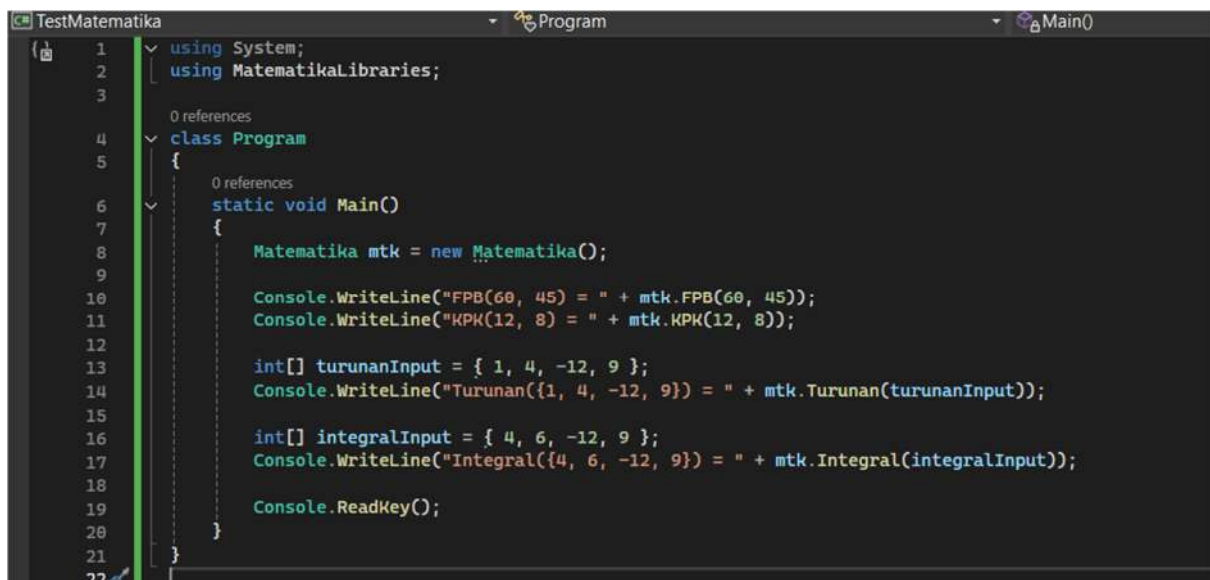
TestMatematika

Location

D:\KULIAH\SEMESTER 4\KPL Praktikum\laporan github\10_Library_Construction\jurnal\modul10_23 ▾

Project will be created in "D:\KULIAH\SEMESTER 4\KPL Praktikum\laporan github
\10_Library_Construction\jurnal\modul10_2311104057\TestMatematika\"

4. Menambahkan project reference

5. Implementasi di Program.cs


```csharp
using System;
using MatematikaLibraries;

class Program
{
    static void Main()
    {
        Matematika mtk = new Matematika();

        Console.WriteLine("FPB(60, 45) = " + mtk.FPB(60, 45));
        Console.WriteLine("KPK(12, 8) = " + mtk.KPK(12, 8));

        int[] turunanInput = { 1, 4, -12, 9 };
        Console.WriteLine("Turunan({1, 4, -12, 9}) = " + mtk.Turunan(turunanInput));

        int[] integralInput = { 4, 6, -12, 9 };
        Console.WriteLine("Integral({4, 6, -12, 9}) = " + mtk.Integral(integralInput));

        Console.ReadKey();
    }
}
```



```
FPB(60, 45) = 15
KPK(12, 8) = 24
Turunan({1, 4, -12, 9}) = 3x2 + 8x - 12
Integral({4, 6, -12, 9}) = 1x4 + 2x3 - 6x2 + 9x + C

D:\KULIAH\SEMESTER 4\KPL Praktikum\laporan github\10_Library_Construction\jurnal\modul10_2311104057\TestMatematika\bin\D
ebug\net8.0\TestMatematika.exe (process 21284) 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 . . ._
```

6. Push

```
D:\KULIAH\SEMESTER 4\KPL Praktikum\laporan github git:(master)±3 (0.146s)
git add 10_Library_Construction/jurnal/

D:\KULIAH\SEMESTER 4\KPL Praktikum\laporan github git:(master)±7 (0.207s)
git commit -m "jurnal 10: membuat matematika libraries"

[master 9651b75] jurnal 10: membuat matematika libraries
 5 files changed, 146 insertions(+)
 create mode 100644 10_Library_Construction/jurnal/modul10_2311104057/MatematikaLibraries/Matematika.cs
 create mode 100644 10_Library_Construction/jurnal/modul10_2311104057/MatematikaLibraries/MatematikaLibraries.csproj
 create mode 100644 10_Library_Construction/jurnal/modul10_2311104057/TestMatematika/Program.cs
 create mode 100644 10_Library_Construction/jurnal/modul10_2311104057/TestMatematika/TestMatematika.csproj
 create mode 100644 10_Library_Construction/jurnal/modul10_2311104057/modul10_2311104057.sln

D:\KULIAH\SEMESTER 4\KPL Praktikum\laporan github git:(master)±2 (3.013s)
git push

Enumerating objects: 14, done.
Counting objects: 100% (14/14), done.
Delta compression using up to 8 threads
Compressing objects: 100% (11/11), done.
Writing objects: 100% (12/12), 2.29 KiB | 1.14 MiB/s, done.
Total 12 (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/reyneratira/KPL_REYNER-ATIRA-PRASETYO_2311104057_S1SE-07-02.git
   46c80e0..9651b75  master -> master
```