

# PEMROGRAMAN LANJUT

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Shared Code Menggunakan Project Library

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<http://coding4ever.net/>

<https://github.com/rudi-krsoftware/open-retail>

# Proyek Calculator

**Solution Explorer**

Search Solution Explorer (Ctrl+;)

Solution 'CalculatorApp' (2 projects)

- CaclulatorConsoleApp
  - Properties
  - References
  - App.config
  - Program.cs
- CalculatorWindowsFormsApp
  - Properties
  - References
  - App.config
  - FrmCalculator.cs
  - Program.cs

Aplikasi Calculator Versi Console

```
Inputkan nilai a = 5
Inputkan nilai b = 2

Hasil Penambahan: 5 + 2 = 7
Hasil Pengurangan: 5 - 2 = 3
Hasil Perkalian: 5 x 2 = 10
Hasil Pembagian: 5 / 2 = 2
```

Aplikasi Calculator Versi Windows

Nilai A

Nilai B

[ Hasil ]

Hasil Penambahan: 5 + 2 = 7  
Hasil Pengurangan: 5 - 2 = 3  
Hasil Perkalian: 5 x 2 = 10  
Hasil Pembagian: 5 / 2 = 2

# Proyek Calculator (Lanjutan)

Solution 'CalculatorApp' (2 projects)

- CaclulatorConsoleApp
  - Properties
  - References
  - App.config
  - Program.cs
    - Program
      - Main(string[]) : void
      - Penambahan(int, int) : int
      - Pengurangan(int, int) : int
      - Perkalian(int, int) : int
      - Pembagian(int, int) : int
- CalculatorWindowsFormsApp
  - Properties
  - References
  - App.config
  - FrmCalculator.cs
    - FrmCalculator.Designer.cs
    - FrmCalculator.resx
    - FrmCalculator
      - FrmCalculator()
      - Penambahan(int, int) : int
      - Pengurangan(int, int) : int
      - Perkalian(int, int) : int
      - Pembagian(int, int) : int
      - btnHitung\_Click(object, EventArgs) : void

Red boxes highlight the method lists in Program.cs and FrmCalculator.cs, with red arrows pointing to the corresponding code blocks on the right.

```
static int Penambahan(int a, int b)
{
    return a + b;
}
```

```
static int Pengurangan(int a, int b)
{
    return a - b;
}
```

```
private int Penambahan(int a, int b)
{
    return a + b;
}
```

```
private int Pengurangan(int a, int b)
{
    return a - b;
}
```

# Refactoring Proyek Calculator

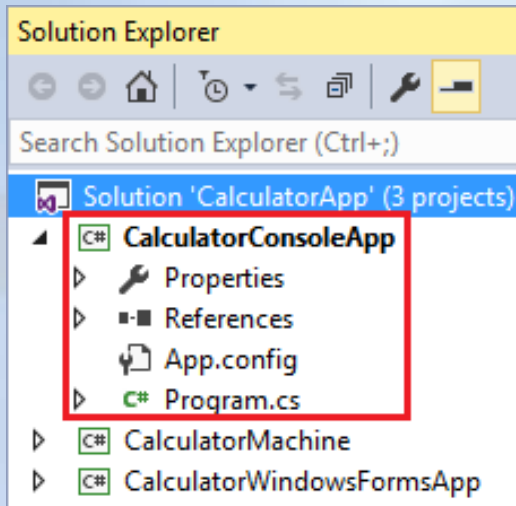
3

## Project Calculator Machine (Library)

Shared code

1

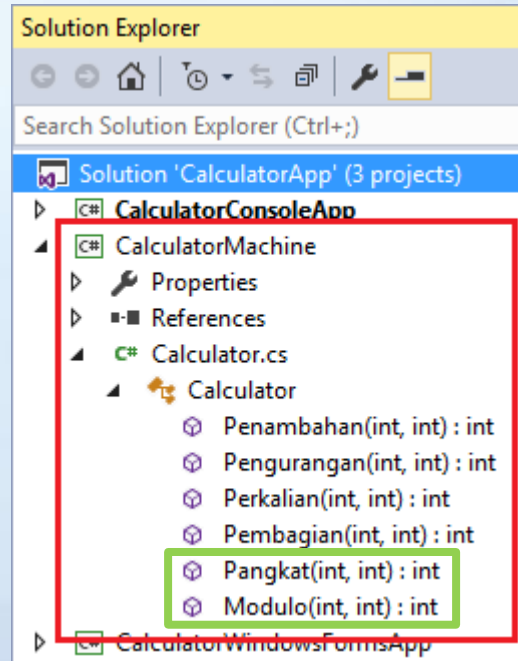
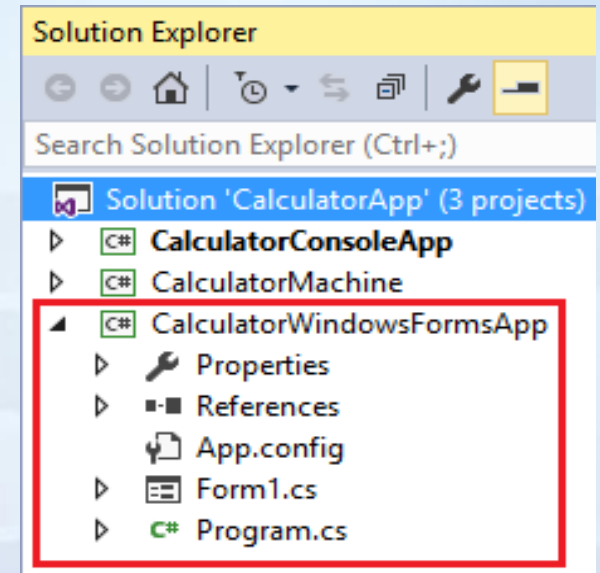
### Project Calculator Console



Shared code

2

### Project Calculator WinForm



# Hasil Akhir Proyek Calculator

```
Aplikasi Calculator Versi Console  
Inputkan nilai a = 6  
Inputkan nilai b = 4  
  
Hasil Penambahan: 6 + 4 = 10  
Hasil Pengurangan: 6 - 4 = 2  
Hasil Perkalian: 6 x 4 = 24  
Hasil Pembagian: 6 / 4 = 1  
Hasil Pangkat: 6 ^ 4 = 1296  
Hasil Module: 6 % 4 = 2
```

Aplikasi Calculator Versi Windows

Nilai A

Nilai B

[ Hasil ]

Hasil Penambahan: 6 + 4 = 10  
Hasil Pengurangan: 6 - 4 = 2  
Hasil Perkalian: 6 x 4 = 24  
Hasil Pembagian: 6 / 4 = 1  
Hasil Pangkat: 6 ^ 4 = 1296  
Hasil Module: 6 % 4 = 2