

# Calculator

## Test Driven Development (TDD)

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# Purpose

Create a solution with two projects: one class library and a unit test;

# Commands

## 1. Create a solution:

```
dotnet new sln -n Calculator
```

## 2. Create two projects: one class library and a unit test (xunit):

```
dotnet new classlib -o CalculatorLib  
dotnet new xunit -o CalculatorUnitTest
```

### 3. Add projects to the solution:

```
dotnet sln add CalculatorLib/CalculatorLib.csproj  
  
dotnet sln add  
CalculatorUnitTest/CalculatorUnitTest.csproj
```

### 4. Add a reference

CalculatorUnitTest uses CalculatorLib:

```
dotnet add CalculatorUnitTest/CalculatorUnitTest.csproj  
reference CalculatorLib/CalculatorLib.csproj
```

## 5. TDD - Red-Green-Refactor

```
dotnet test
```

## 6. TDD - Red

```
Delete Class1.cs and UnitTest1.cs
```

```
Copy CalculatorUnitTest.cs to CalculatorUnitTest  
and Calculator.cs to CalculatorLib
```

```
dotnet test
```

## 7. TDD - Green

```
Modify Add method in Calculator to calculate the sum:  
return a + b;
```

```
dotnet test
```

## 8. Refactor