

# Język C#

Co mogę w nim zrobić?



Desktop

Windows Forms / WPF



Web

MVC / Razor Pages / Blazor



Mobile

Xamarin / MAUI

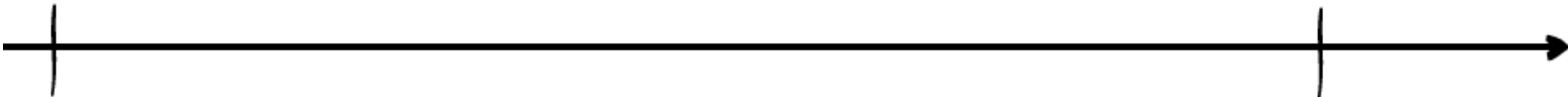


Command Line

C#



Games



C# 1.0

C# 11



.NET Framework



.NET Core

>\_ dotnet CLI



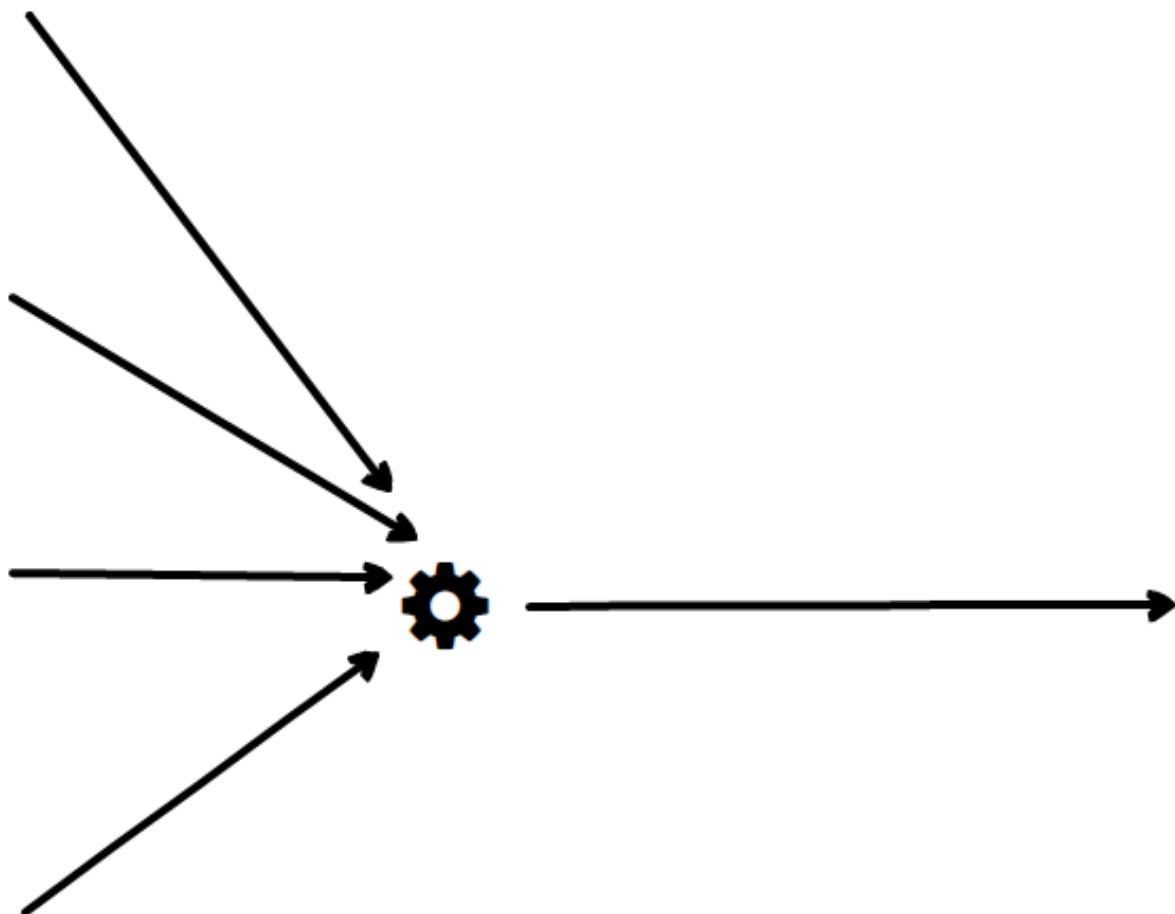
Visual Studio



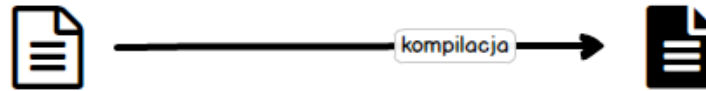
Visual Studio Code



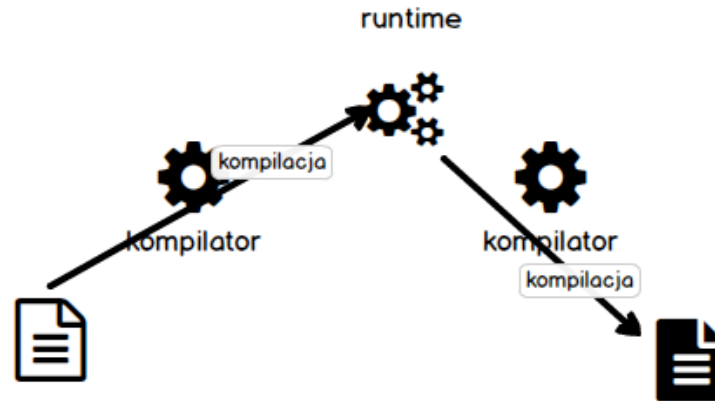
Rider



C++ / Pascal

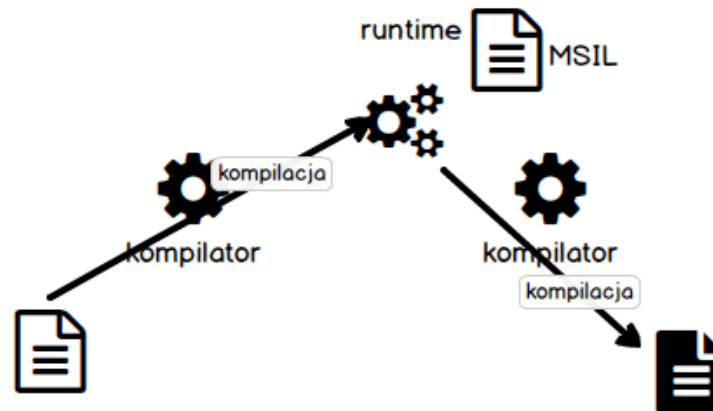


Java



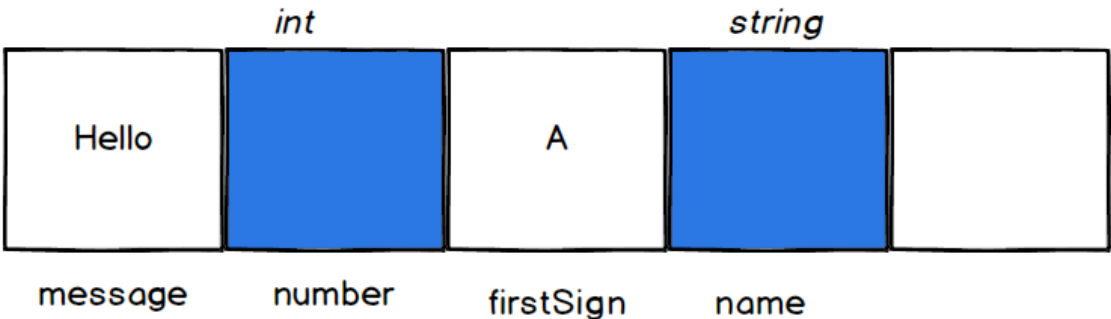
.....

C#  
VB  
F#



.NET Framework / .NET Core

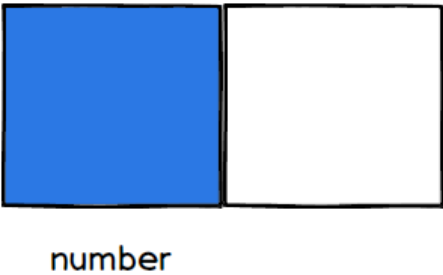
static typing (C#)



```
int number = 1;  
number = "ABC";
```

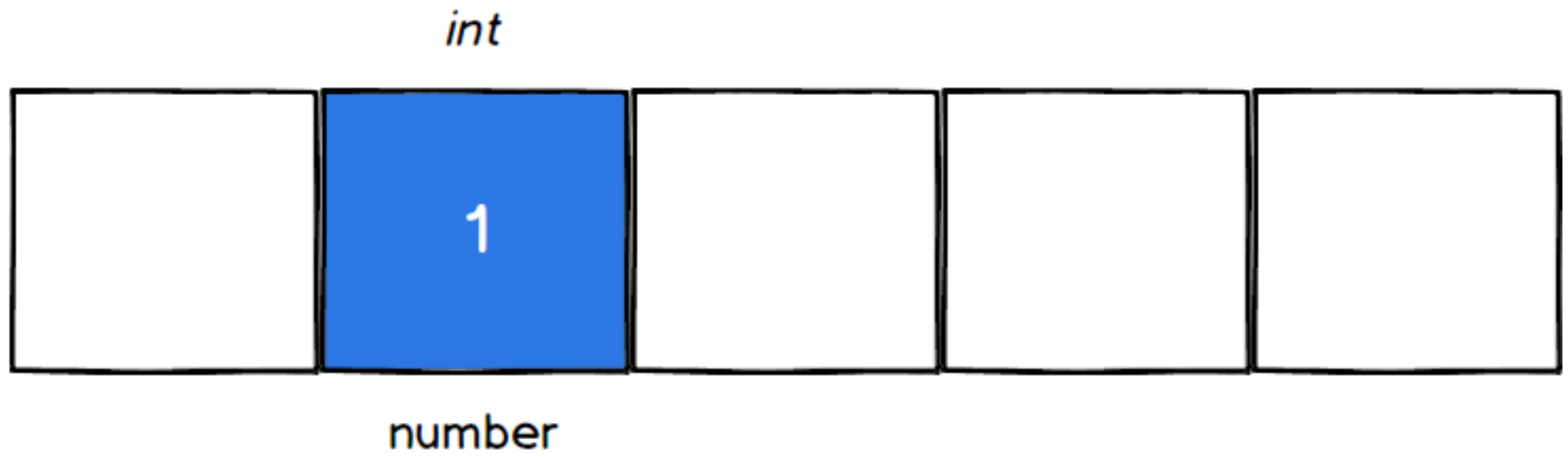
dynamic typing (JavaScript)

*string / number*



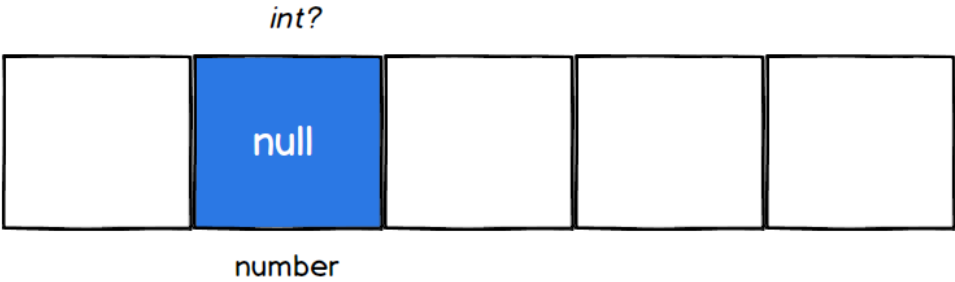
```
var number = 1;  
number = "ABC";
```

## Constants

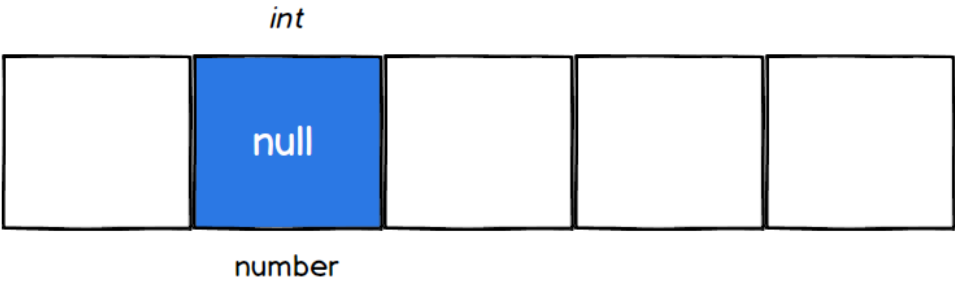


```
const int number = 1;  
number = 2; .
```

Nullable Value Types



```
int? number = null;  
if (number.HasValue) ...
```



```
*int number = null*;
```

$1 + 1 = 2$

$0 + 1 = 1$

$\text{NULL} + 1 = \text{NULL}$

$\text{NULL} * \text{NULL} = \text{NULL}$

$! \text{NULL} = \text{NULL}$

*WHERE salary IS NULL*

*SQL: SELECT SUM(salary) FROM Employees*

*SQL: SELECT AVG(ISNULL(salary, 0)) FROM Employees*



*string[5]*



index

0

1

2

3

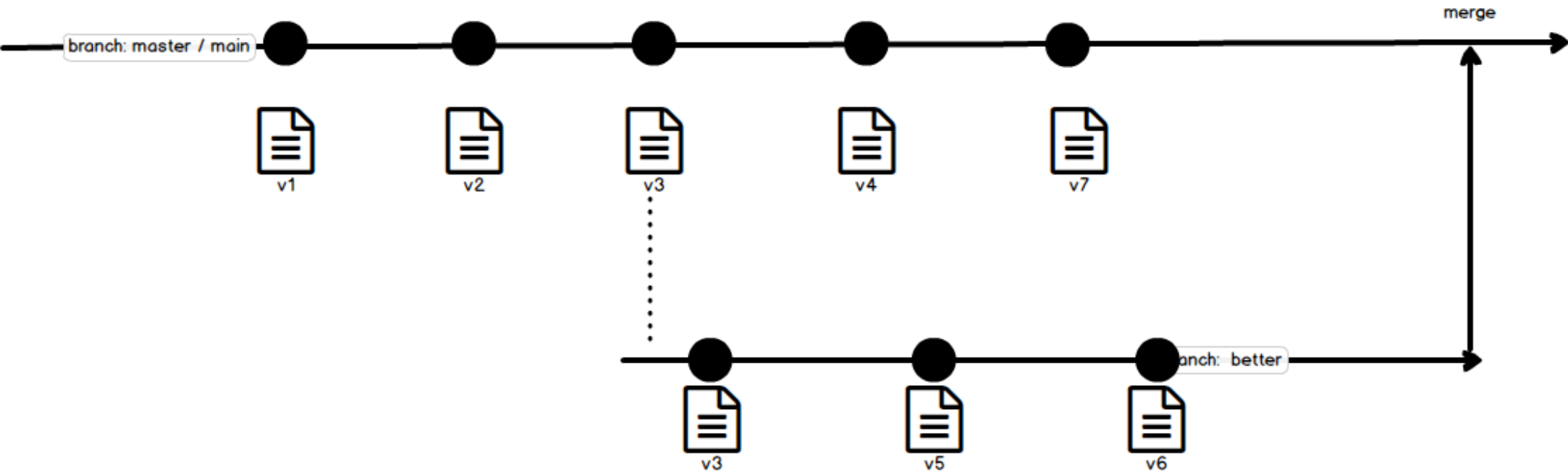
4



board[wiersz, kolumna]


# GIT

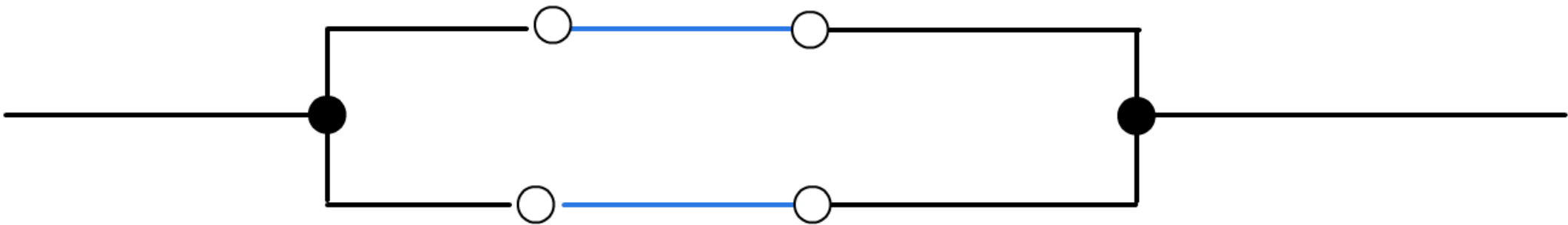
GitHub / GitLab



AND



OR



8

4

2

1

Read

 $=4$ 

Write

 $=2$ 

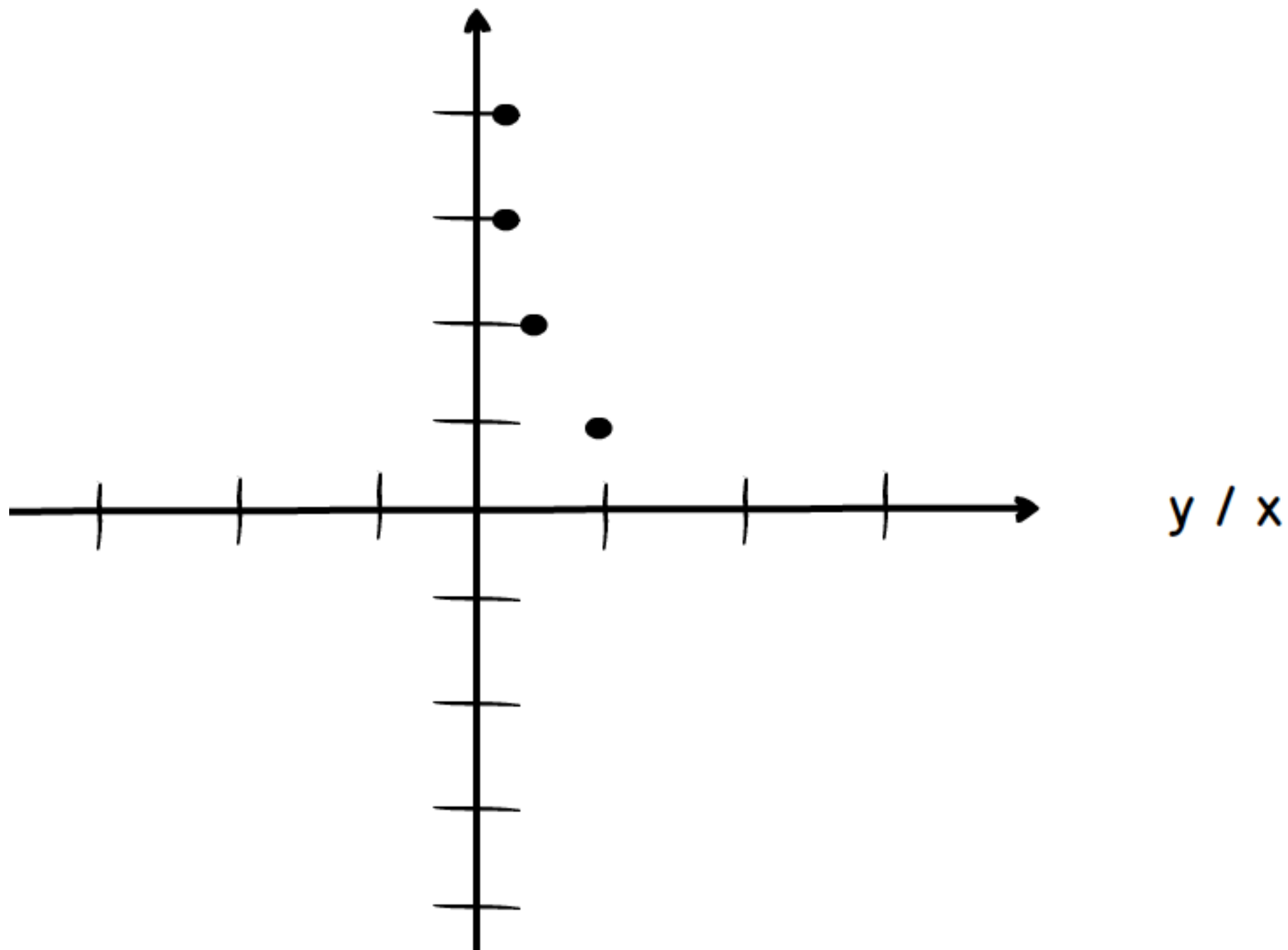
.....

OR

 $=6$ 

AND

 $== \text{READ}$



Person

---

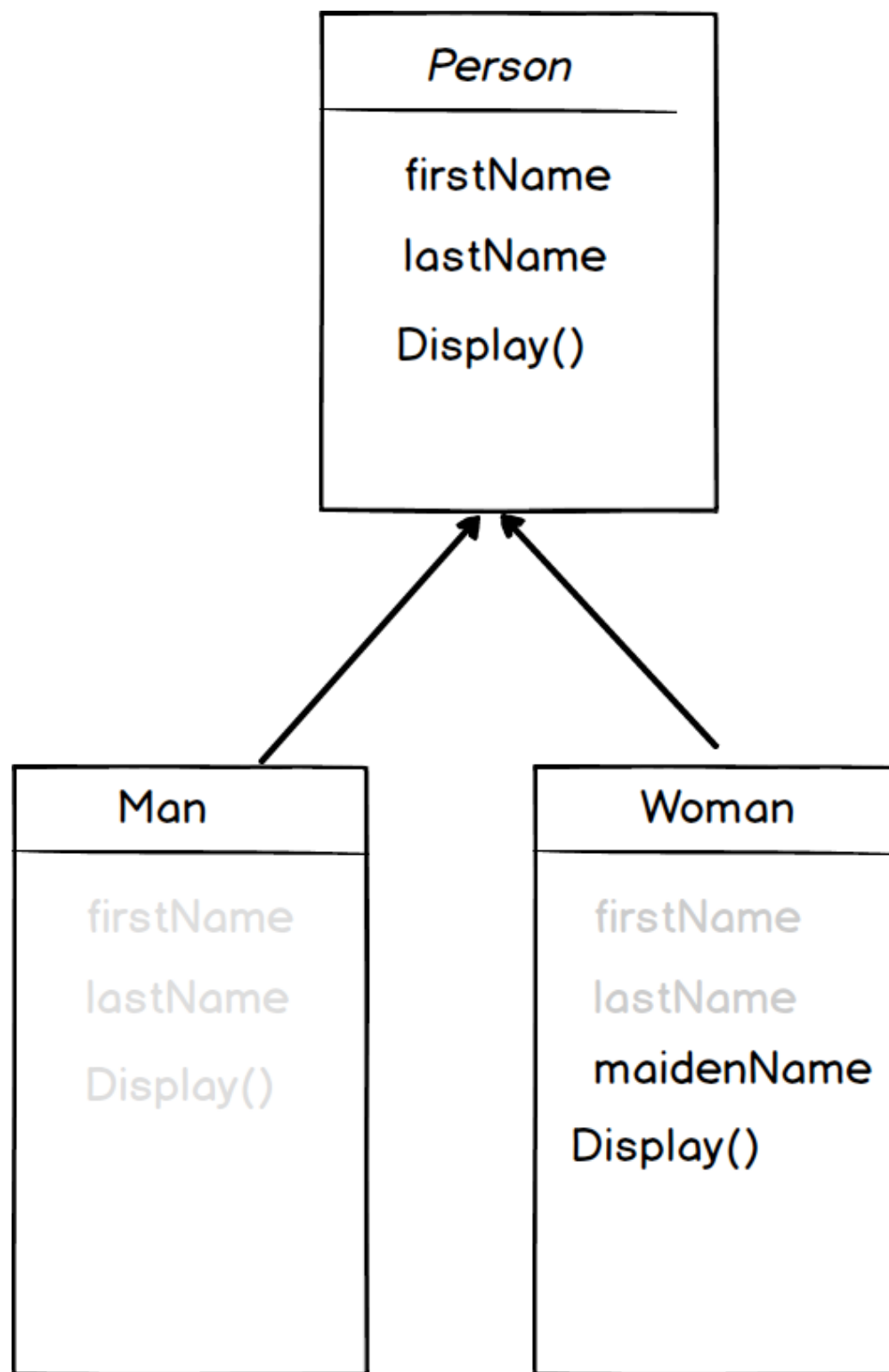
firstName

lastName

Display()

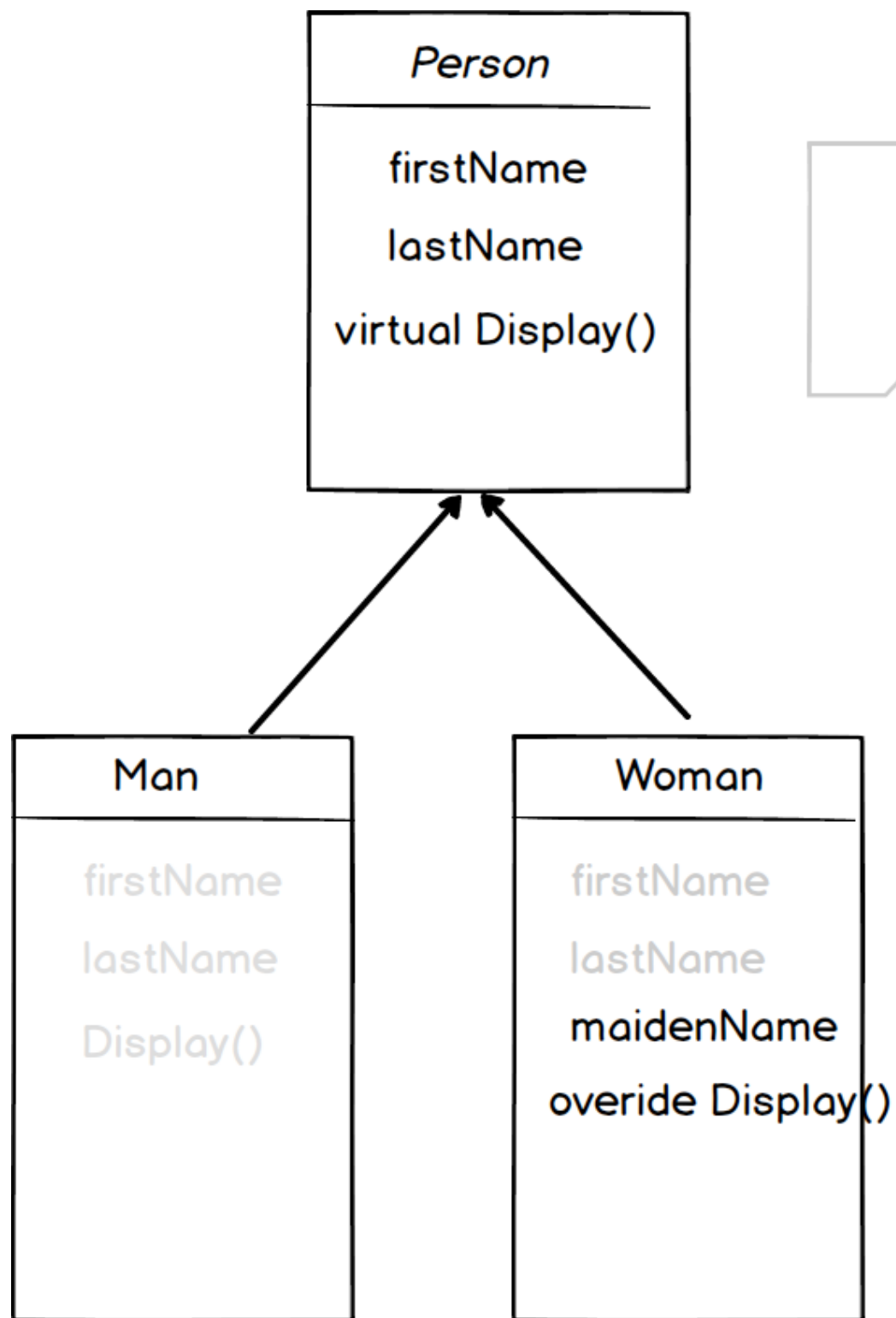
CalculateSalary()

```
Person person = new Person();  
person.FirstName = "John";  
person.LastName = "Smith";  
person.Display();
```

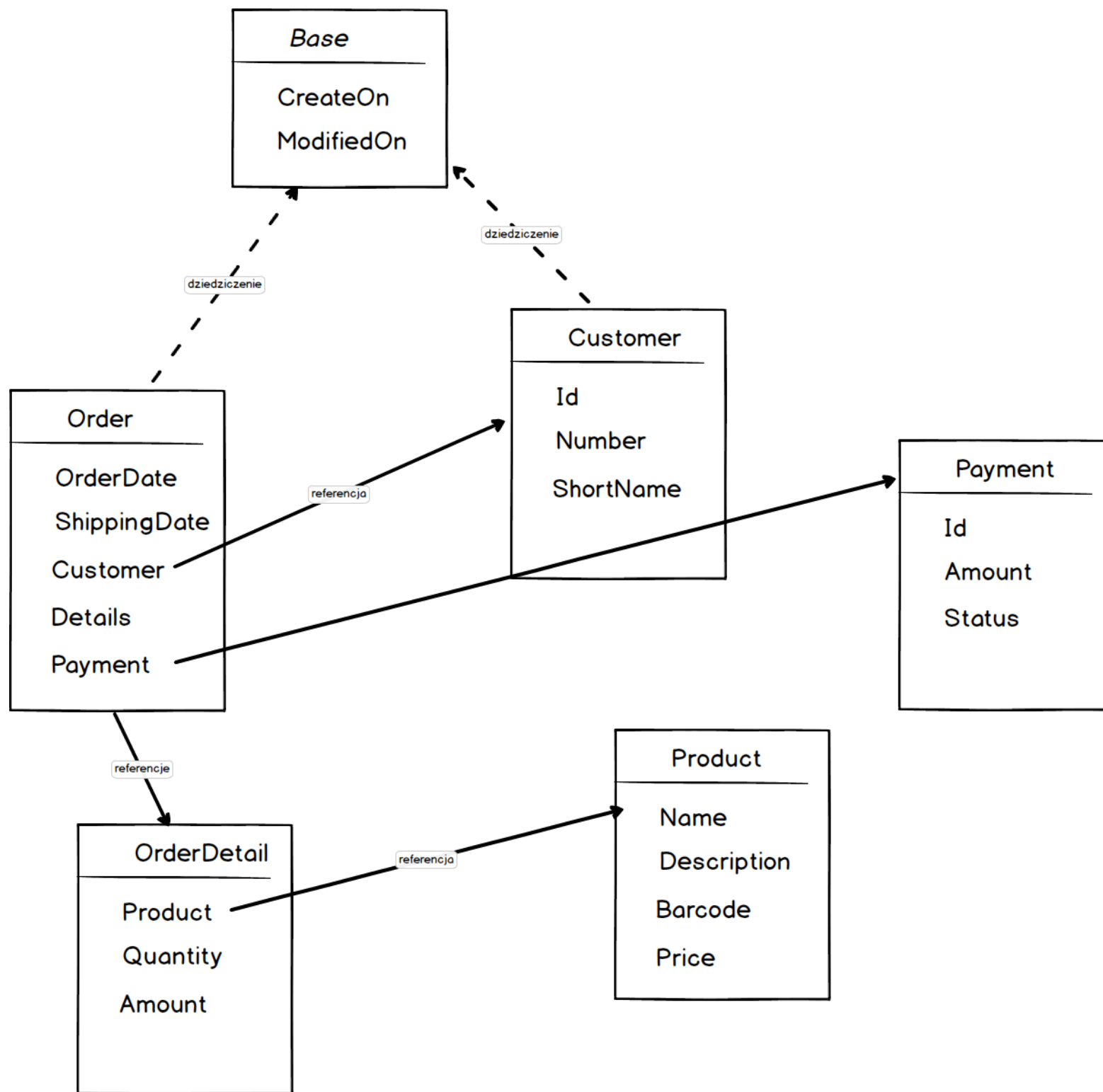


```
Woman person = new Woman();
person.Display();
```





```
Person person = new Woman();
person.Display();
```



Client

Server



SQL



ODBC



OleDb



Native



TSQL



SQL Server



PL/pgSQL

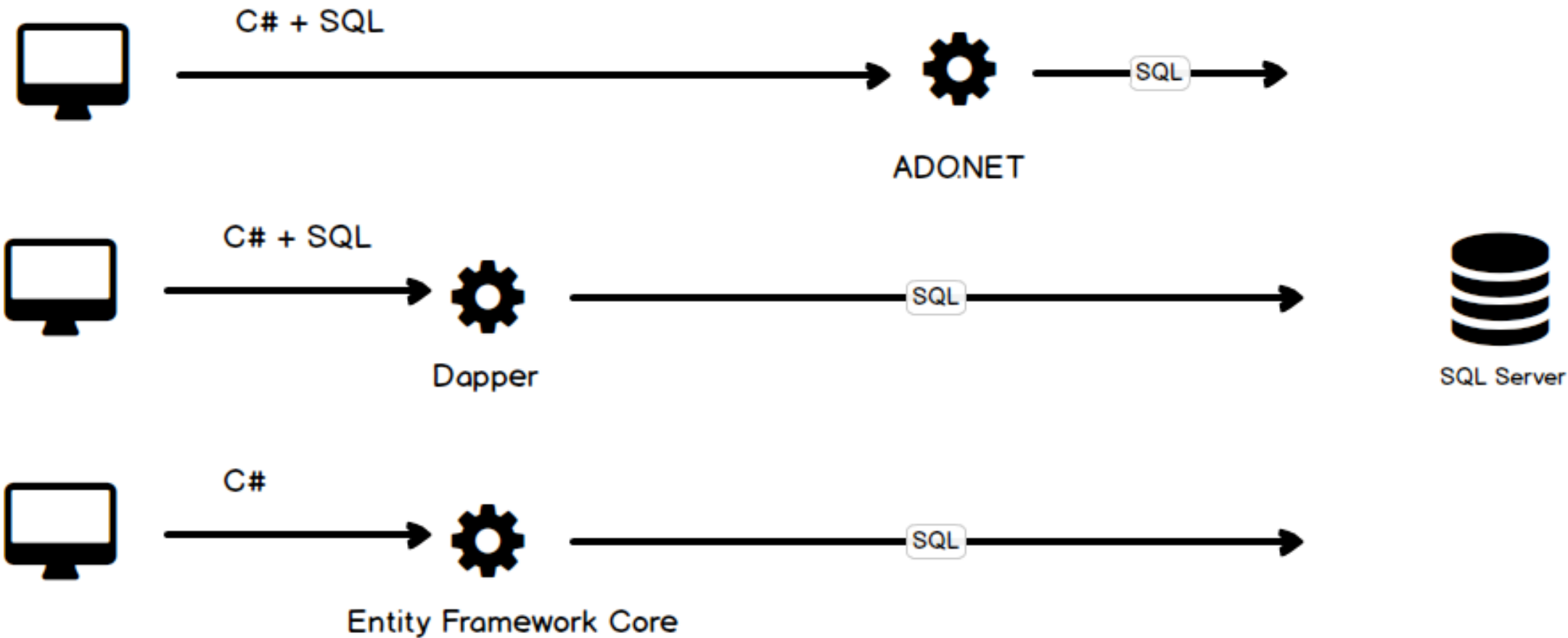
Postgress



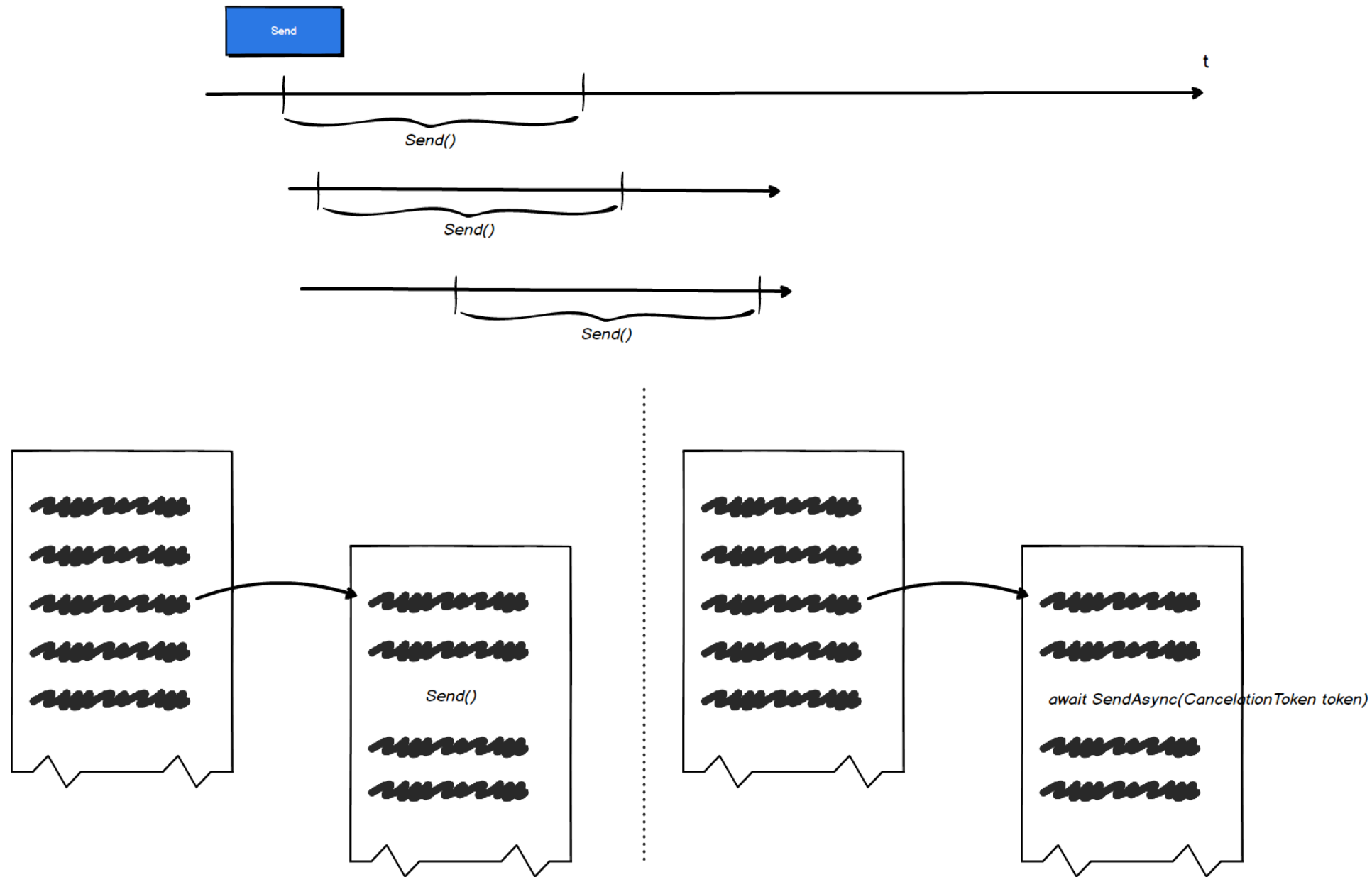
Access

Client

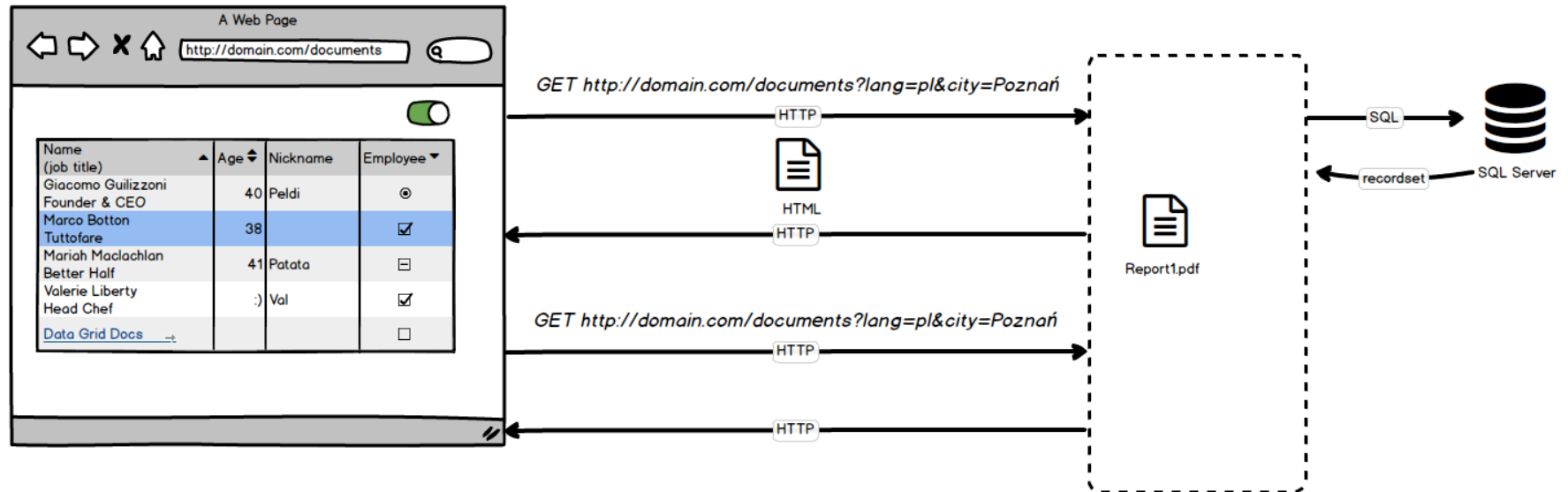
Server



Name (job title)	Age	Nickname	Employee
Giacomo Guilizzoni Founder & CEO	40	Peldi	☉
Marco Botton Tuttofare	38		☑
Mariah MacLachlan Better Half	41	Patata	☐
Valerie Liberty Head Chef	:)	Val	☑
<a href="#">Data Grid Docs</a> →			☐



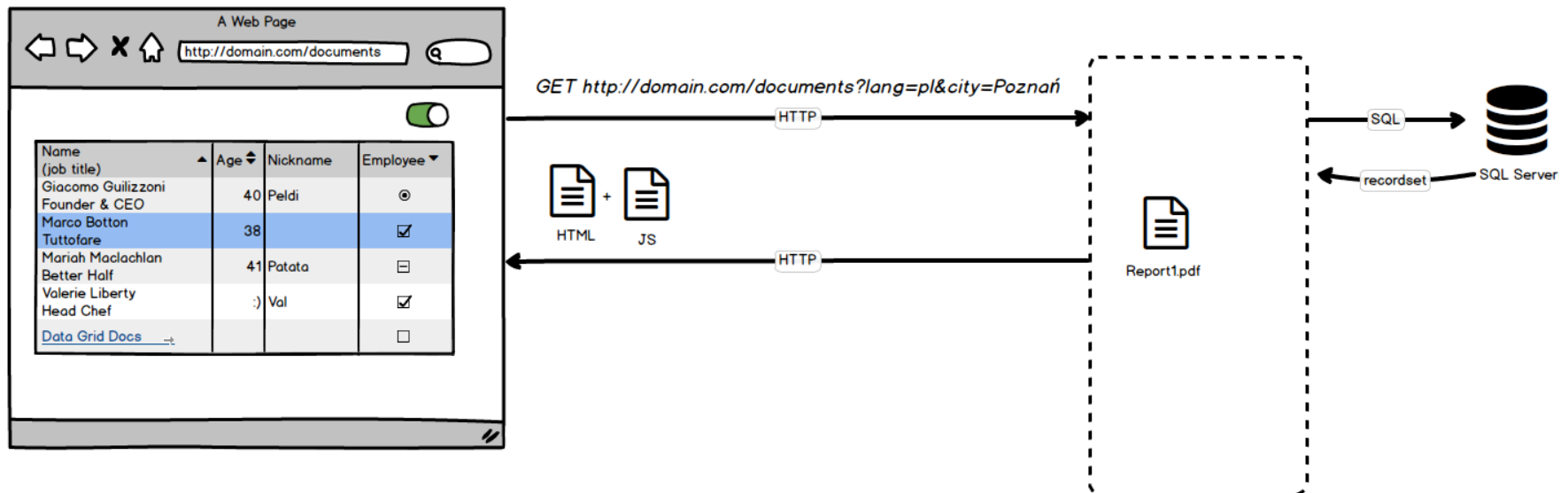
## Server Side

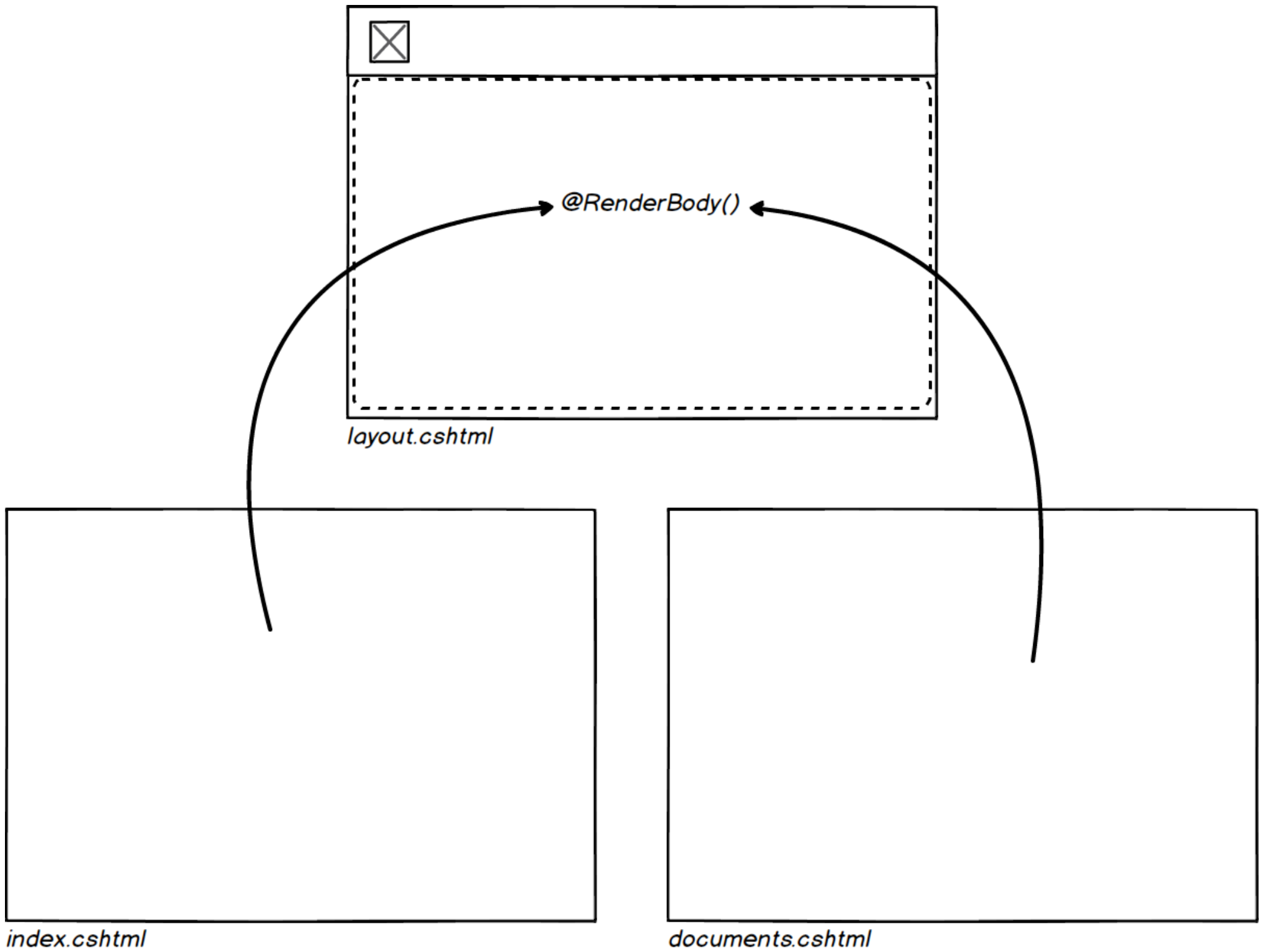


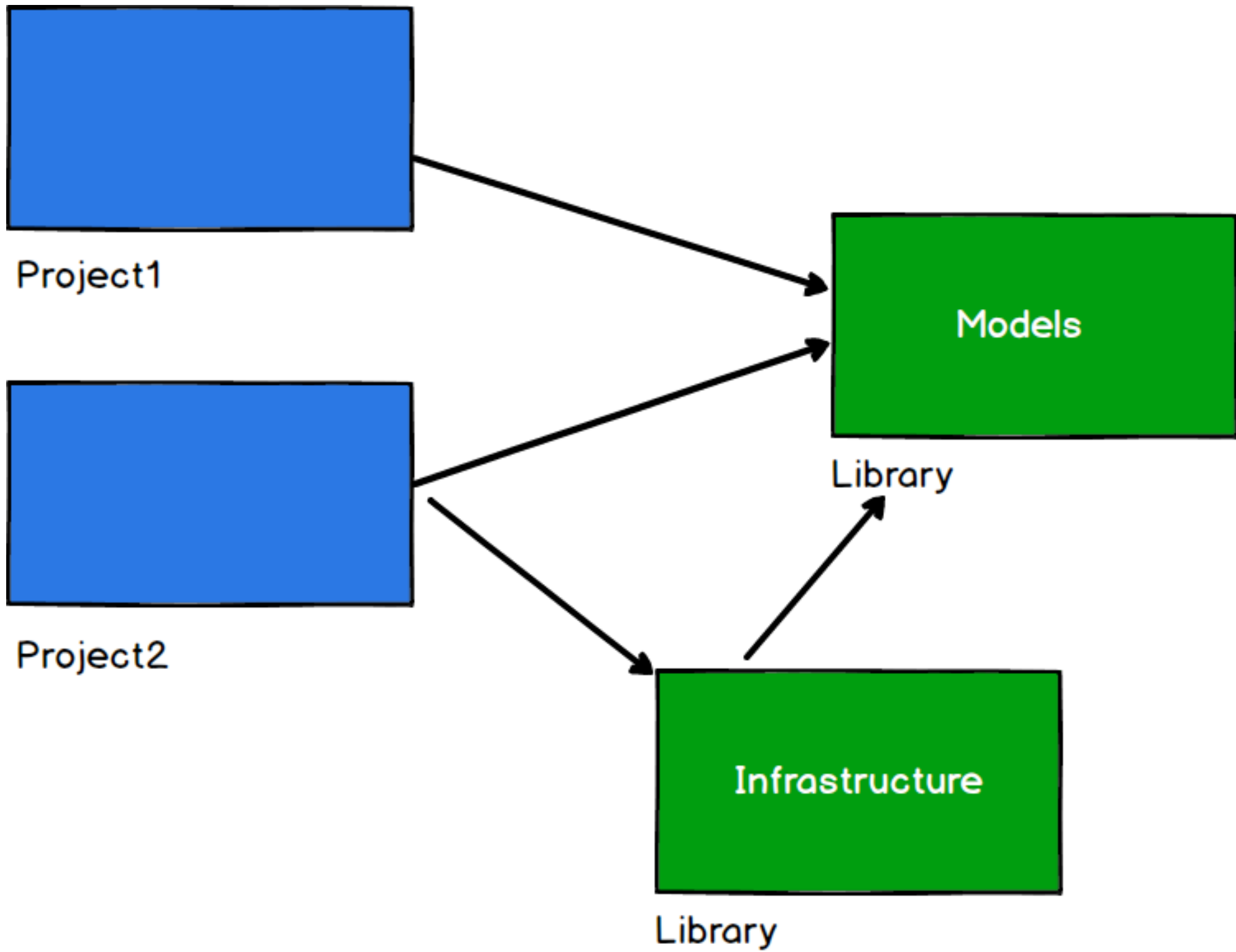
ASP.NET Core MVC / Razor Pages

@Razor Syntax

## Client Side











```
int x = 0;
```

```
x++;
```

Uwierzytelnianie



kim jesteś?

Autoryzacja



do czego masz dostęp?

