Here's Johnny

- Passionate Developer

- Principal Software Consultant/Architect (.NET)

- Microsoft MVP, Developer Technologies

- Operational Manager at Involved

@djohnnieke

johnny.hooyberghs@involved.be

Johnny Hooyberghs

CSharpWars
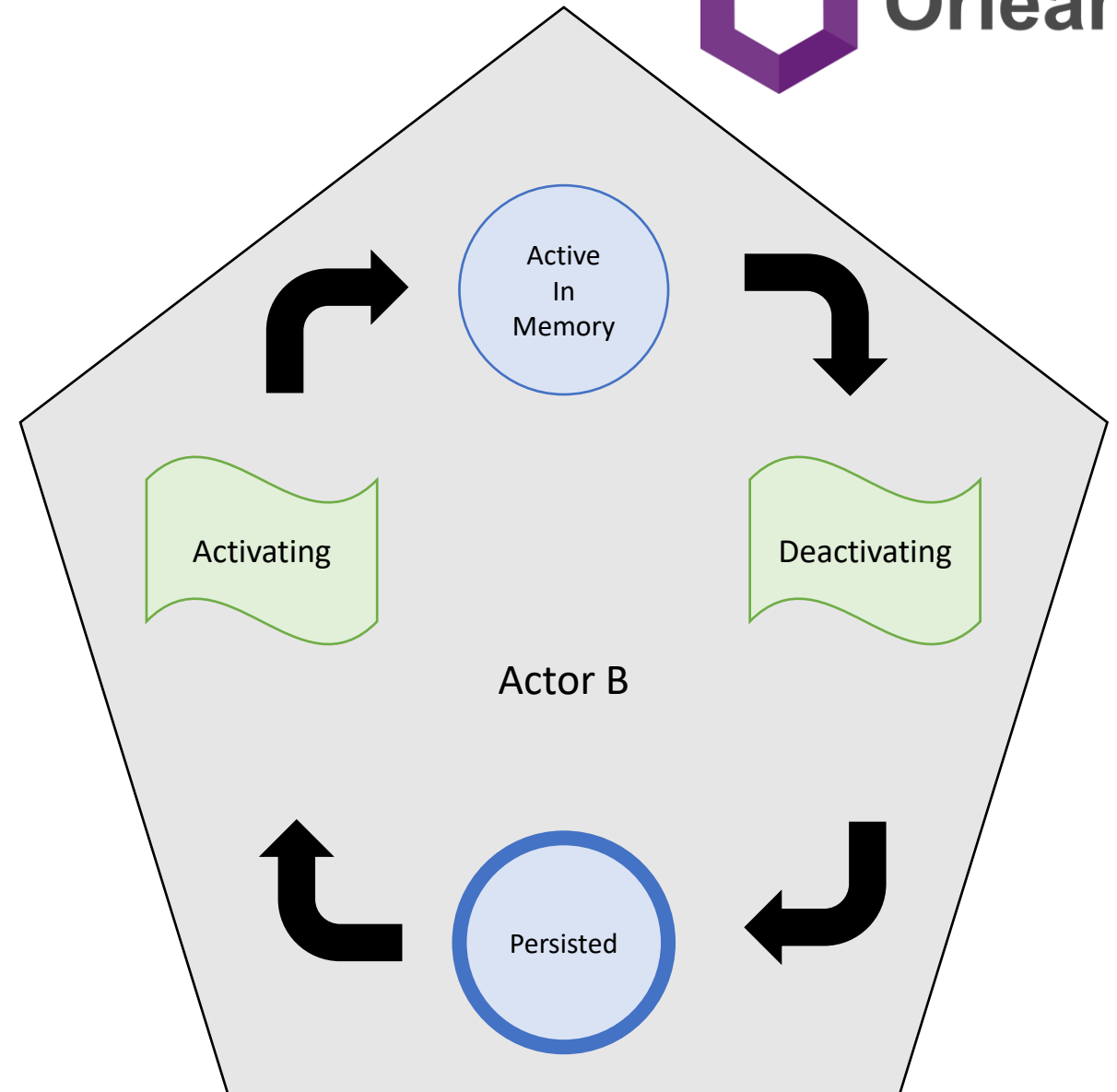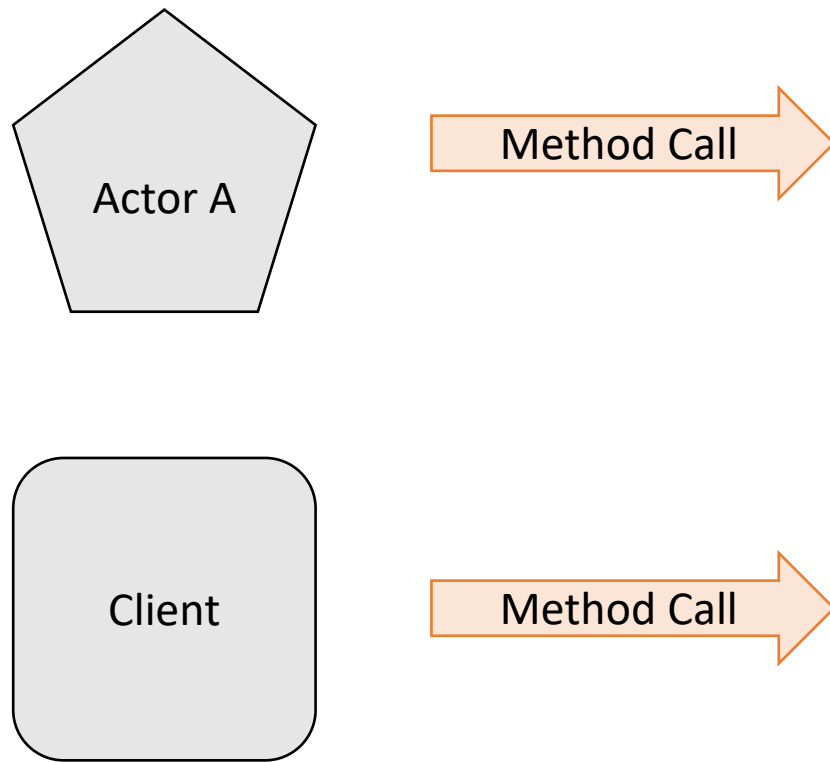
```csharp
var step = LoadFromMemory<Int32>("STEP");
if( step % 3 == 0 )
{

    TurnLeft();

}
else
{

    WalkForward();

}
step++;
StoreInMemory<Int32>("STEP", step);
```

https://github.com/Djohnnie/IntroductionToOrleans-ReFactor-2022

Virtual Actor Model

Actor A

Client

Method Call

Method Call

Orleans

Active In Memory

Activating

Deactivating

Actor B

Persisted

Grains

player/djohnnie

In-Memory or persisted

$$(Player)Grain = identity + behavior\ [+ state]$$

PlayerGrain : Grain, IPlayerGrain

Orleans

Silos

Orleans

| PlayerGrain |
| ArenaGrain |
| BotGrain |
| ScriptGrain |
| BotGrain |
| ScriptGrain |
| PlayerGrain |

| ArenaGrain |
| PlayerGrain |
| PlayerGrain |
| BotGrain |
| ScriptGrain |

| BotGrain |
| ScriptGrain |
| BotGrain |
| ScriptGrain |
| BotGrain |
| ScriptGrain |

| ValidationGrain |
| ValidationGrain |
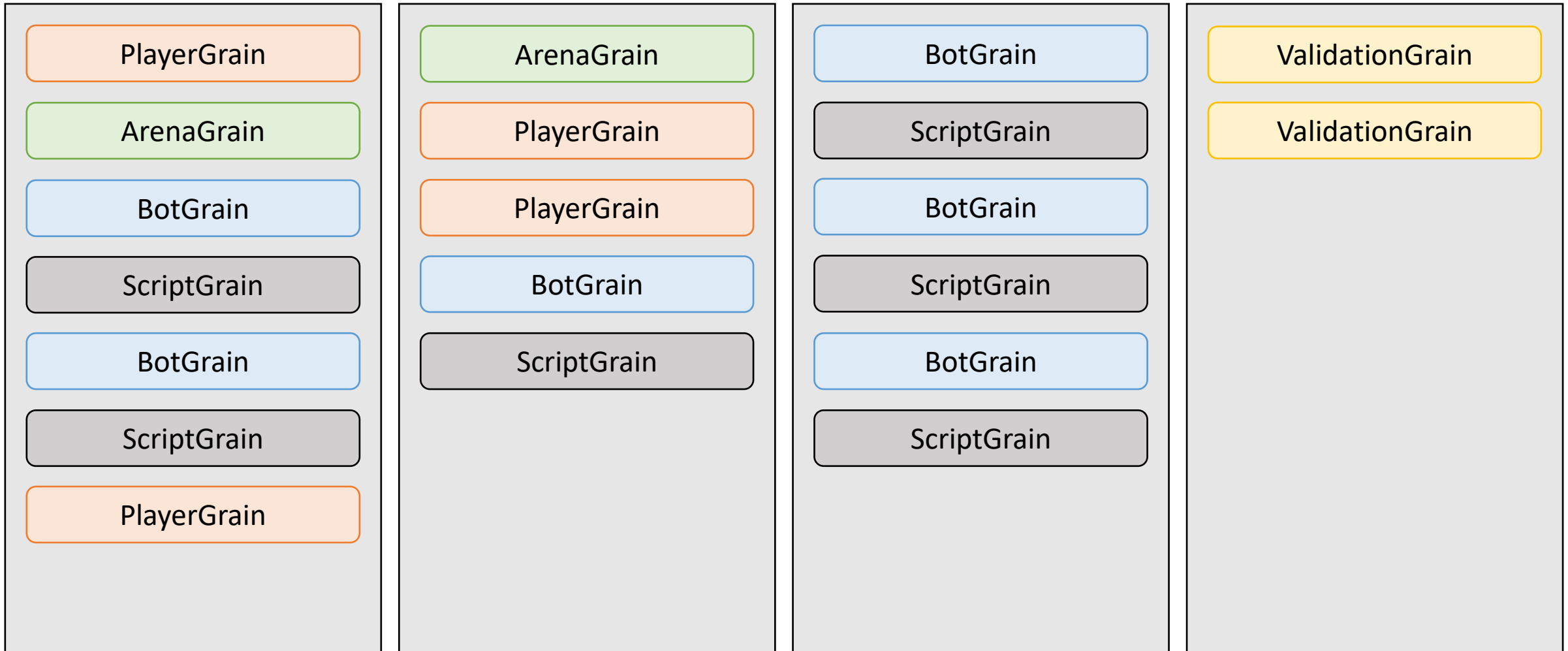
CSharpWars (first version)

Frontend (Unity)

Processor (Worker Service)

HTTP API (ASP.NET WebApi)

Web UI (ASP.NET MVC)

SQL Database (Azure SQL)

https://github.com/Djohnnie/IntroductionToOrleans-ReFactor-2022
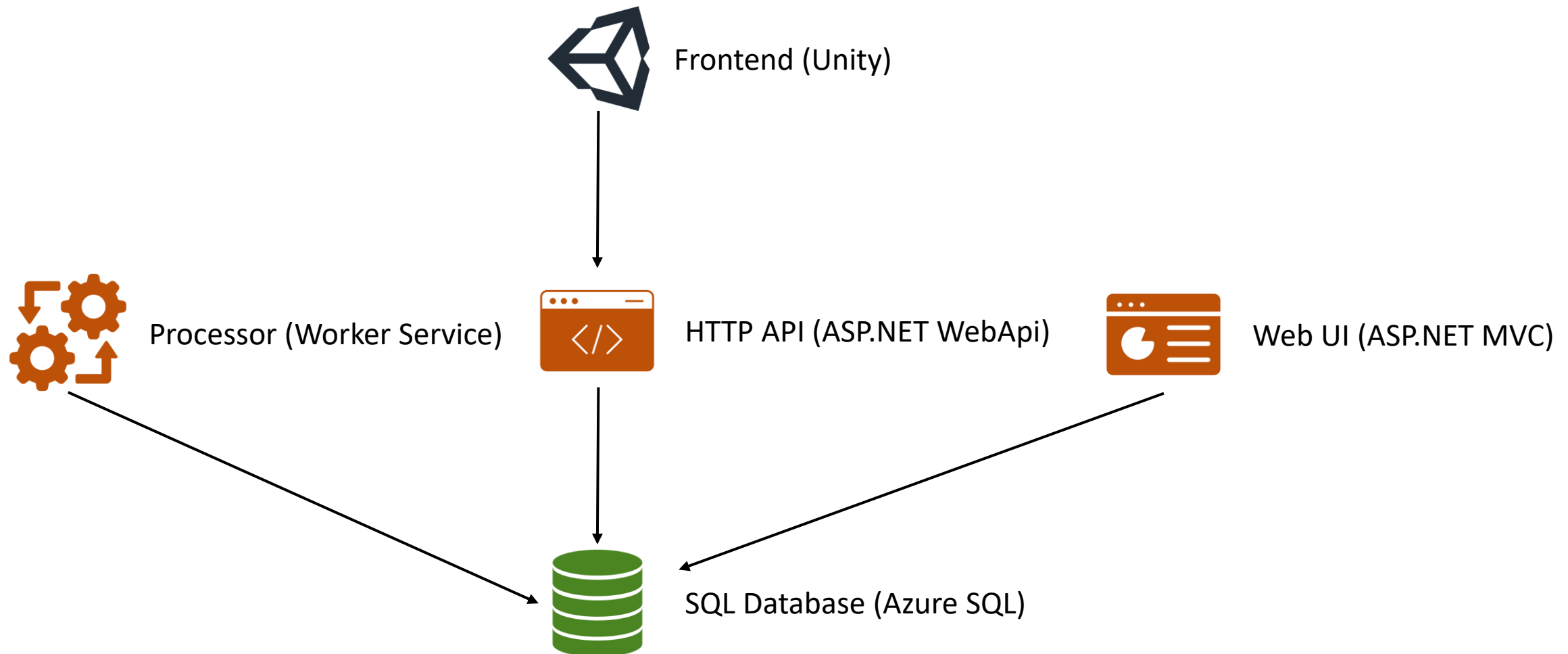
CSharpWars (second version)

Frontend (Unity)

Processor (Worker Service)

HTTP API (ASP.NET WebApi)

Web UI (ASP.NET MVC)

SQL Database (Azure SQL)

Validator (gRPC)

https://github.com/Djohnnie/IntroductionToOrleans-ReFactor-2022
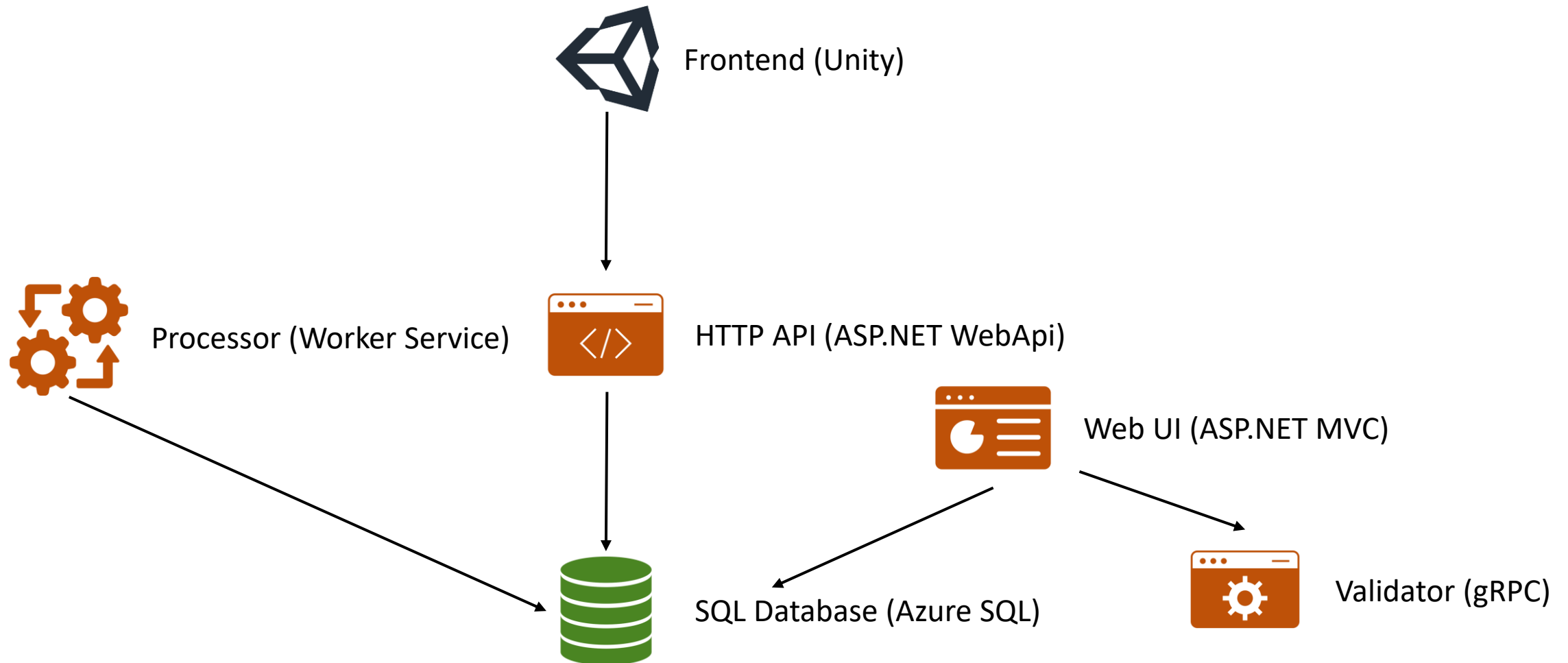
CSharpWars (Orleans version)

Frontend (Unity)

HTTP API (ASP.NET WebApi)

Web UI (ASP.NET MVC)

Orleans Silo

Azure Storage (Blob Storage)

Orleans Silo (validation)
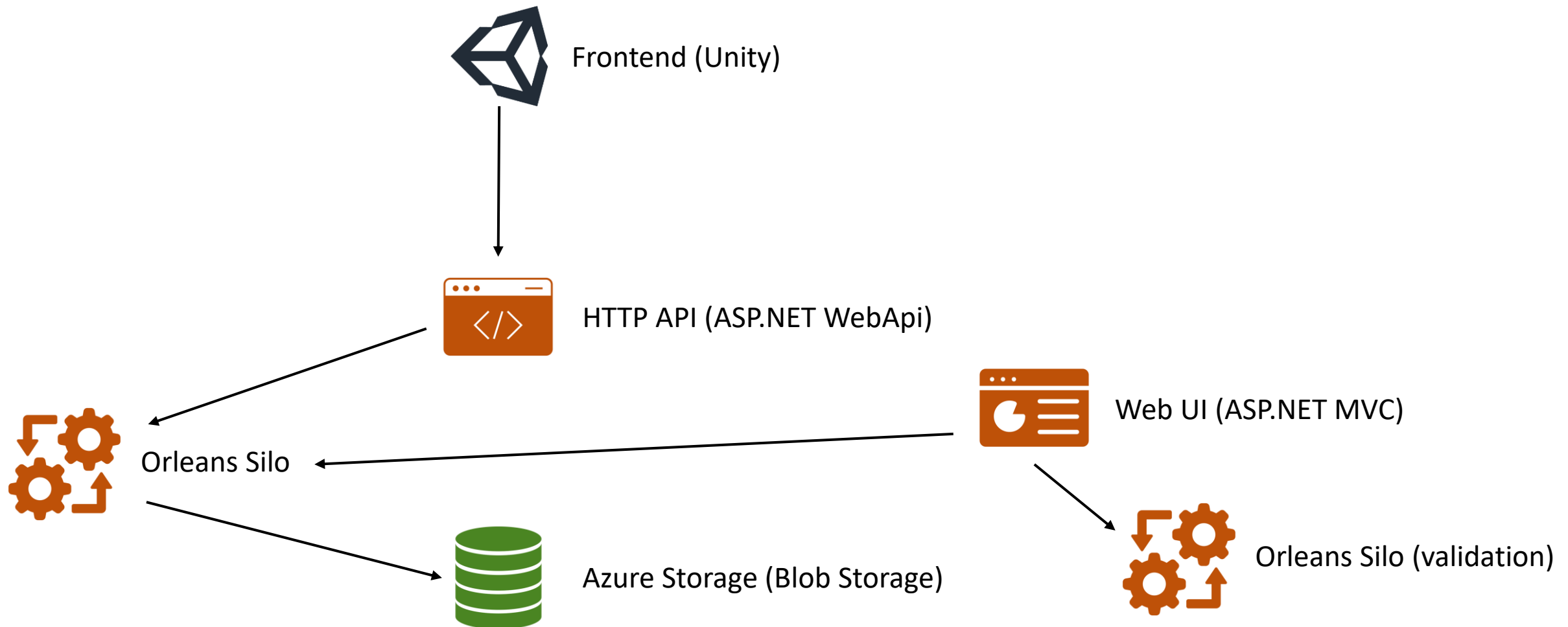
CSharpWars

Try it for yourself: http://web.csharpwars.com

Grains

player/djohnnie   In-Memory or persisted

(Player)Grain = identity + behavior [+ state]

PlayerGrain : Grain, IPlayerGrain

Grains

- Grain Identity

- Persistence & State

- Timers and Reminders

- Placement

- Activation GC

https://github.com/Djohnnie/IntroductionToOrleans-ReFactor-2022

Silos

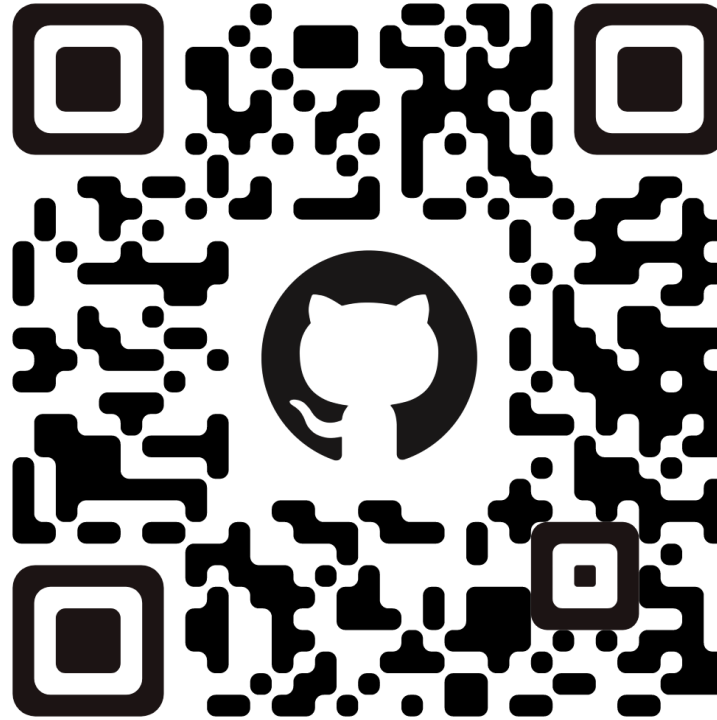https://github.com/Djohnnie/IntroductionToOrleans-ReFactor-2022
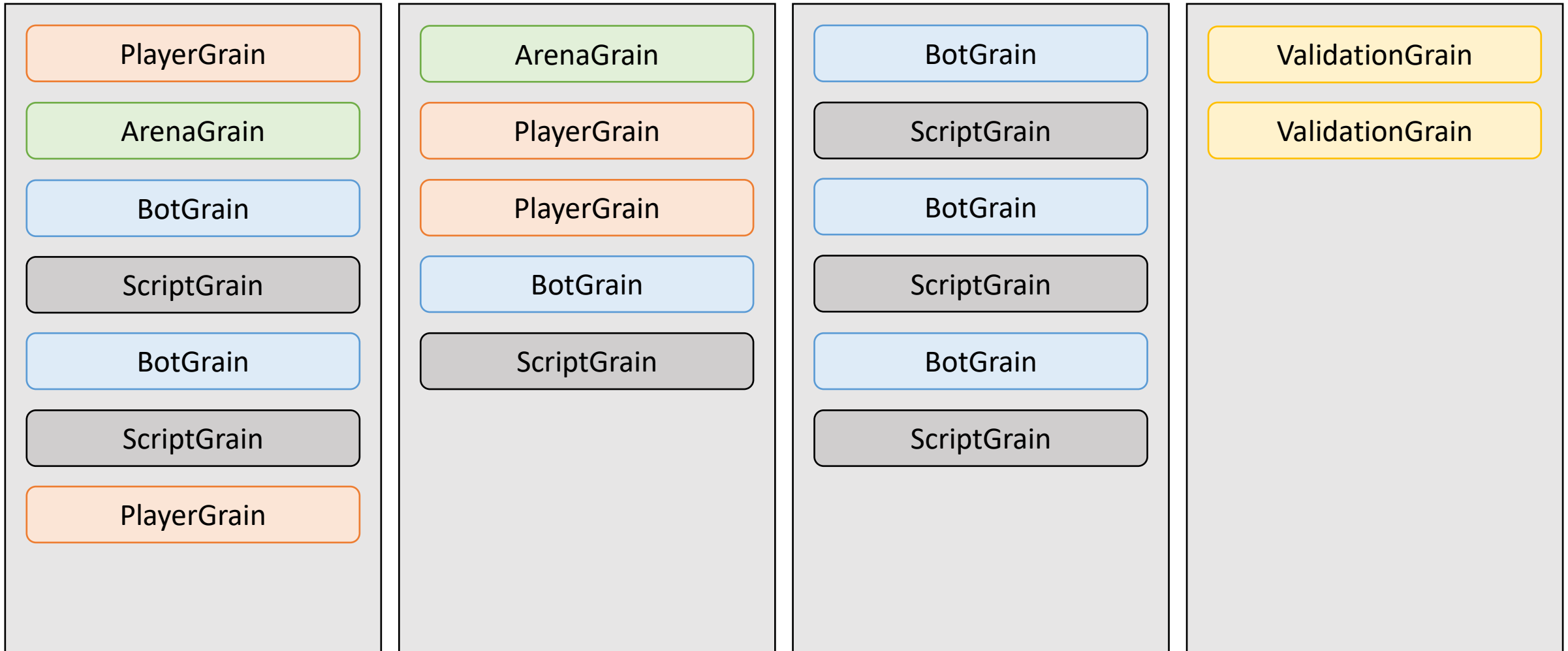
Silos

- Hosting
- Clients
- Heterogeneous silos

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Orleans

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