Common Patterns

Singleton (Unique)

Sometimes you need to get an instance of a certain Subject that has a globally unique combination of Traits. This can be thought of something like a *singleton* pattern within a classical OOP approach.

You can totally achieve that with the help of a simple method like this:

```
template < typename T, typename ...Ts >
T GetSingleton(AMechanism* const Mechanism)
{
    const auto Filter = FFilter::Make<T, Ts...>();
    const auto Chain = Mechanism->Enchain(Filter);

    auto Cursor = Chain->Iterate(0, 1);
    if (!Cursor.Provide())
    {
        checkNoEntry();
        return T();
    }
    const auto Trait = Cursor.GetTrait<T>();
    verifyf(!Cursor.Provide(), TEXT("Two singleton objects detected!"));
    return Trait;
}
```

You can then query for the unique trait like so:

```
auto EnemyBalance = GetSingleton<FGameBalance, FEnemy>(Mechanism);
```

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