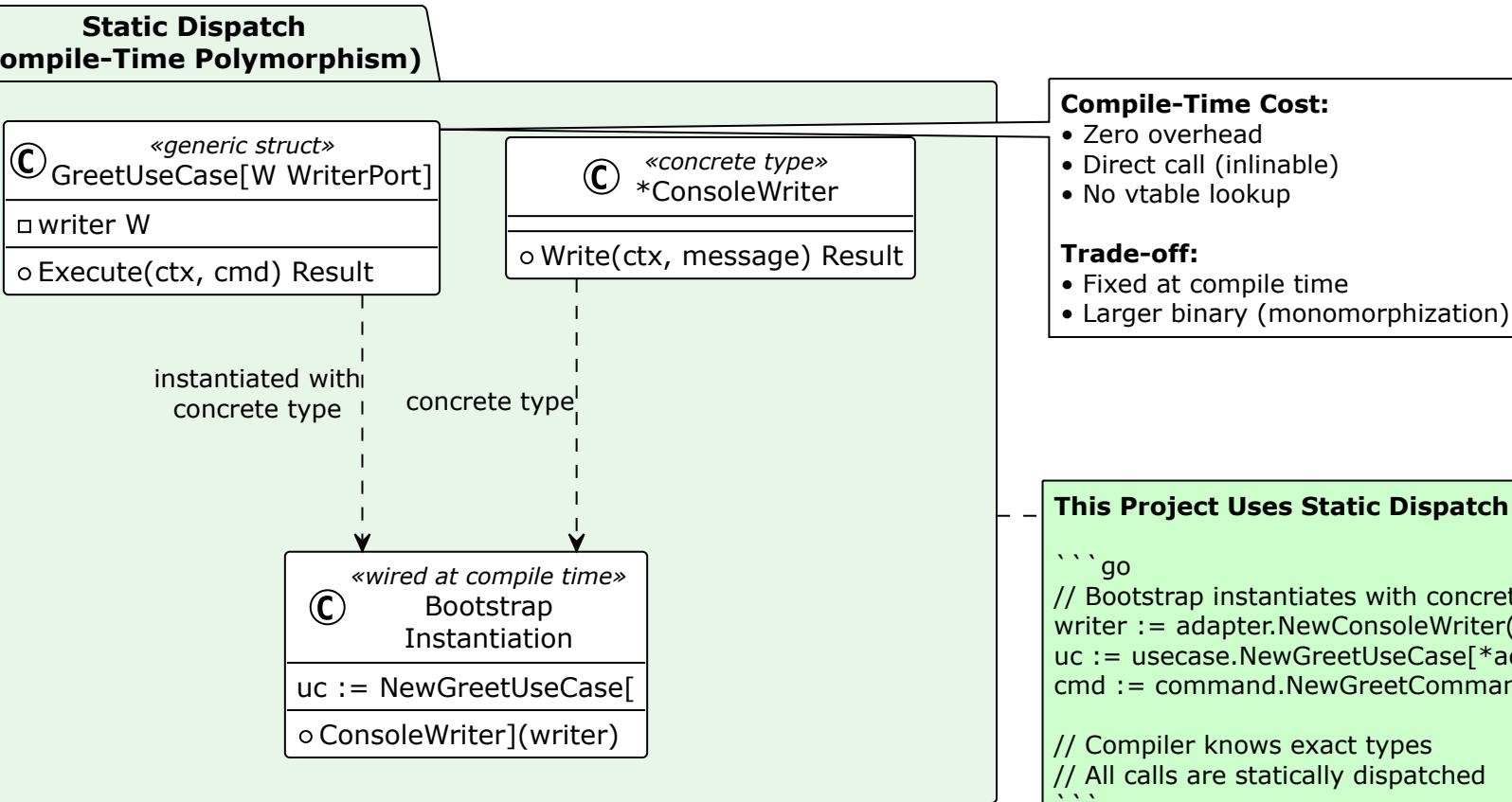
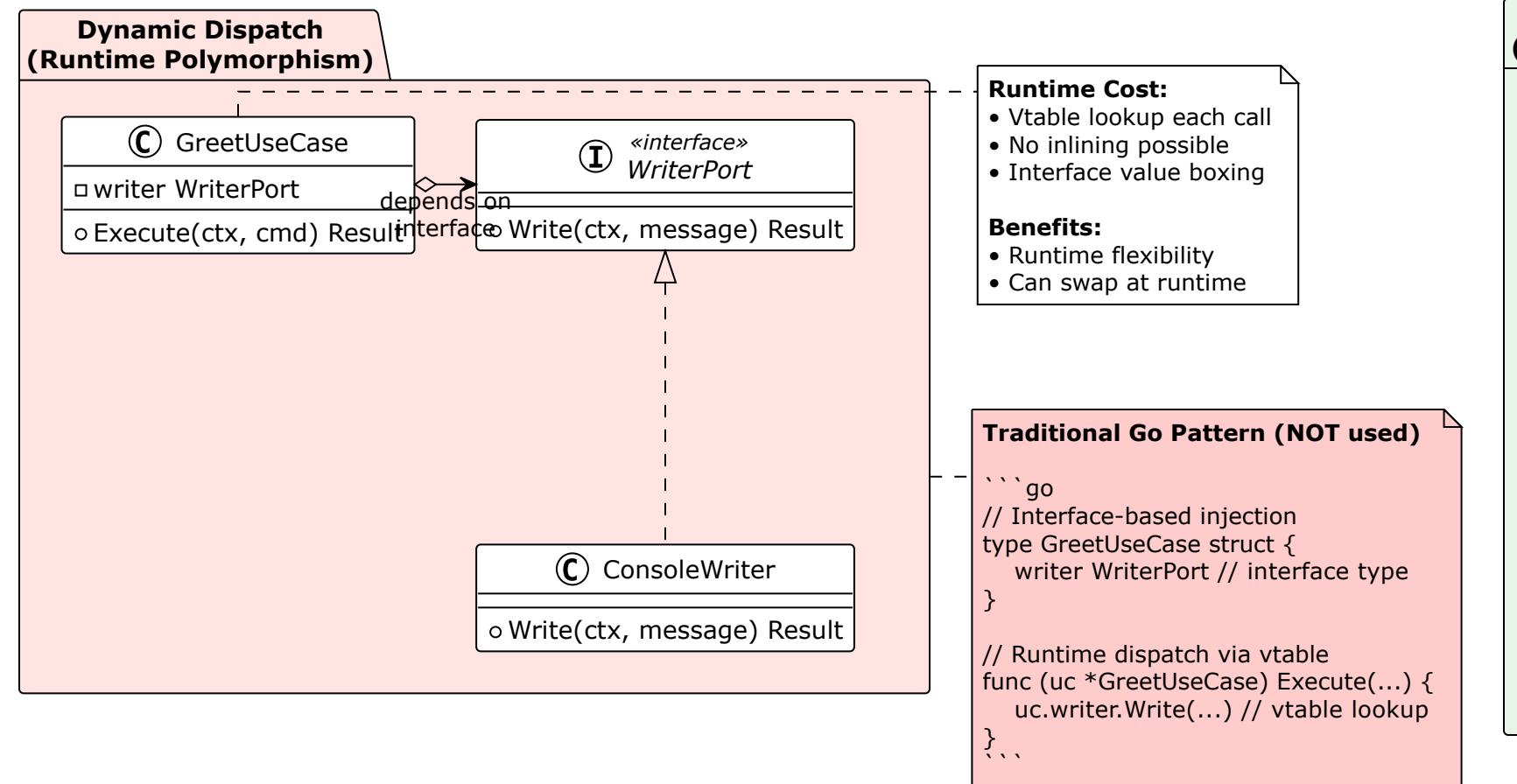


# Static vs Dynamic Dispatch

## Dependency Injection in Go with Generics



**Why Static Dispatch?**

---

**Performance:**

- Zero runtime overhead
- Method calls can be inlined
- No interface value allocation

**Type Safety:**

- Full type checking at compile time
- Errors caught before runtime

**Matching Ada Pattern:**

- Ada uses generics for static dispatch
- Go generics provide equivalent pattern
- Same architecture, same performance

**Go Generics (1.18+)**

---

```

```go
type GreetUseCase[W WriterPort] struct {
    writer W // Concrete type, not interface
}

// W is known at instantiation:
// NewGreetUseCase[*ConsoleWriter](w)
// Compiler generates code for *ConsoleWriter
```
  
```