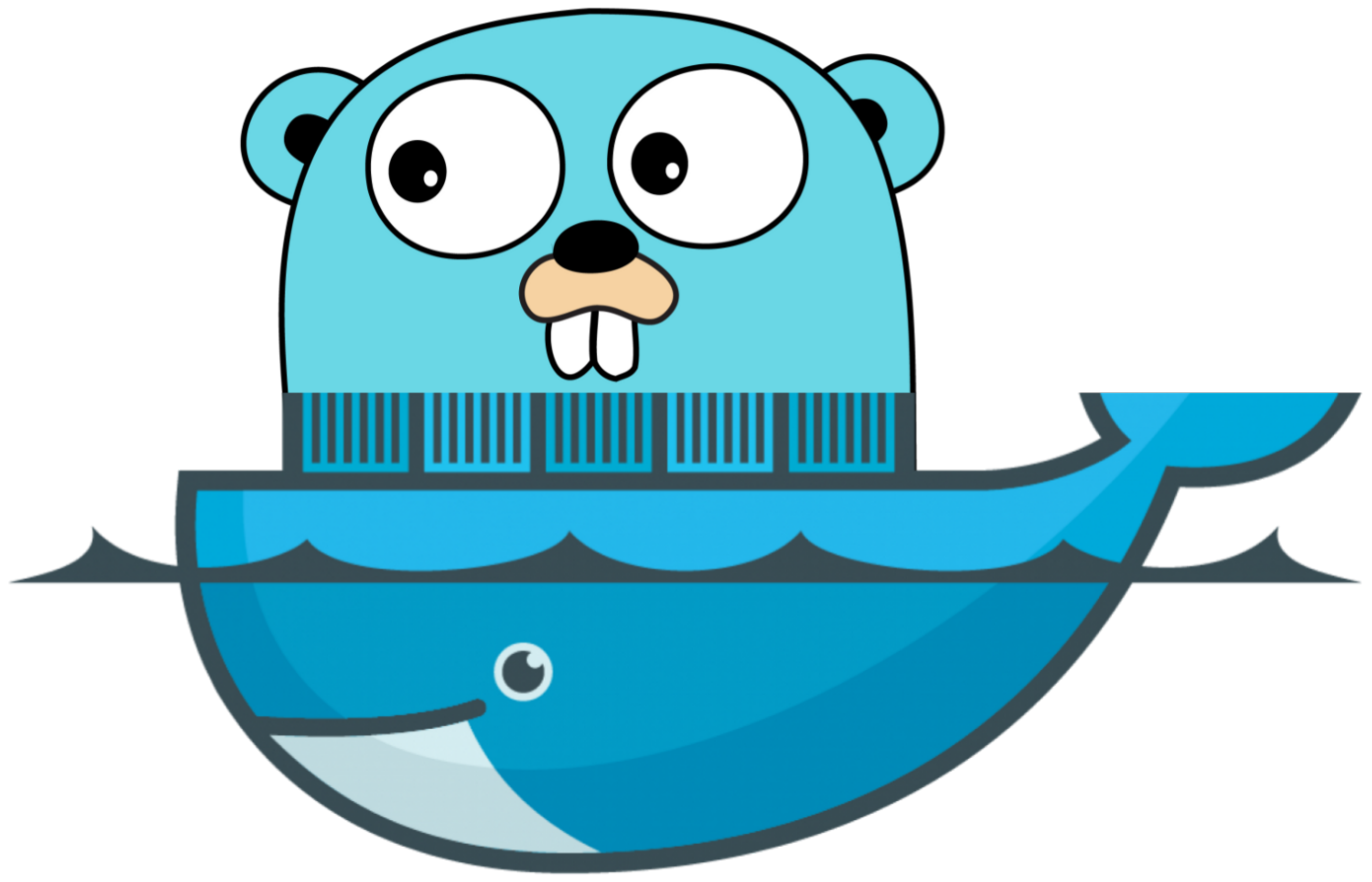
Golang Engineer Training

Error handling in practice



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Designed by **200lab Education - Nâng tầm chuyên môn, định hướng tương lai**
Mentor/Instructor: Viet Tran - Solution Architect 200lab

Agenda

- Standardize error response
- What's panic & recover in Golang?
- Use gin middleware to handle panic recover

Standardize error response. Why!!!

- Too many errors can cause in our application/system.
- Error response should be in formatted: status code, message (readable), root cause (for dev/test only), custom code (may be used in i18n), trace_id (optional).
- Treat crashes as normal errors.
- Hide some sensitive errors (Ex: DB errors). Or keep it only for who have permission.

Standardize error response

Let’s do it in Golang

Treat crashed as normal errors

Wait! Golang have no try/catch

How we "catch" crashes?

Treat crashed as normal errors

The answer is Panic & Recover

Panic & Recover in Golang

- Panic is a built-in function that stops the ordinary flow of control and begins panicking.
- When F calls panic, execution of F stops, but deffered functions in F are execution.
- Recover is a built-in function that regains control of panicking.
- Recover only useful inside deferred functions

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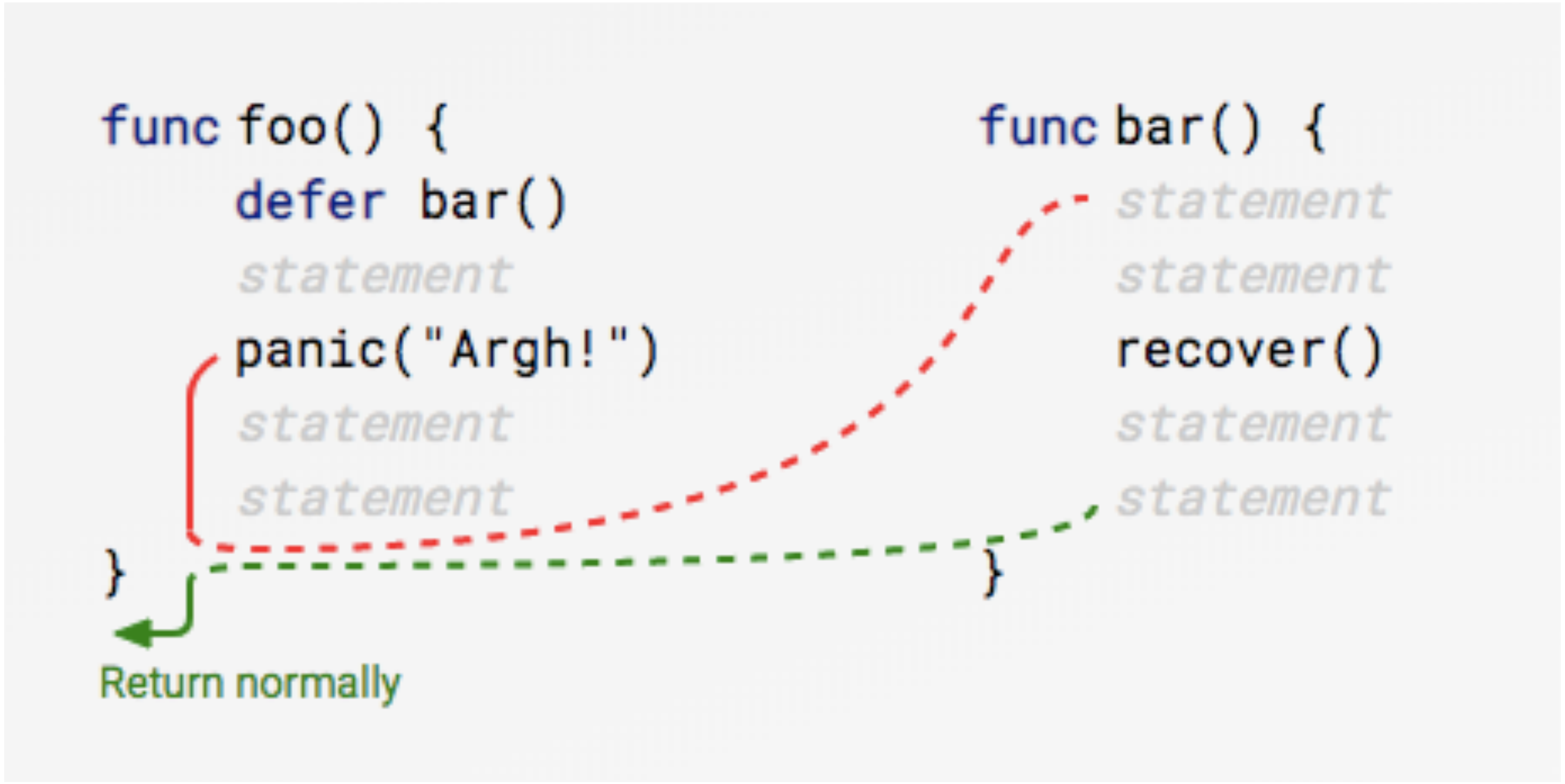
Panicking



```
func foo() {
    defer bar()
    statement
    panic("Argh!")
    statement
    statement
}
```

```
func bar() {
    statement
    statement
    recover()
    statement
    statement
}
```

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Recover in deferred function

```
defer func() {
        if r := recover(); r != nil {
            fmt.Println("Recovered in f", r)
        }
}()
```

Panic & Recover

Show me the code!!!

https://play.golang.org/p/GUNuOvupYAI

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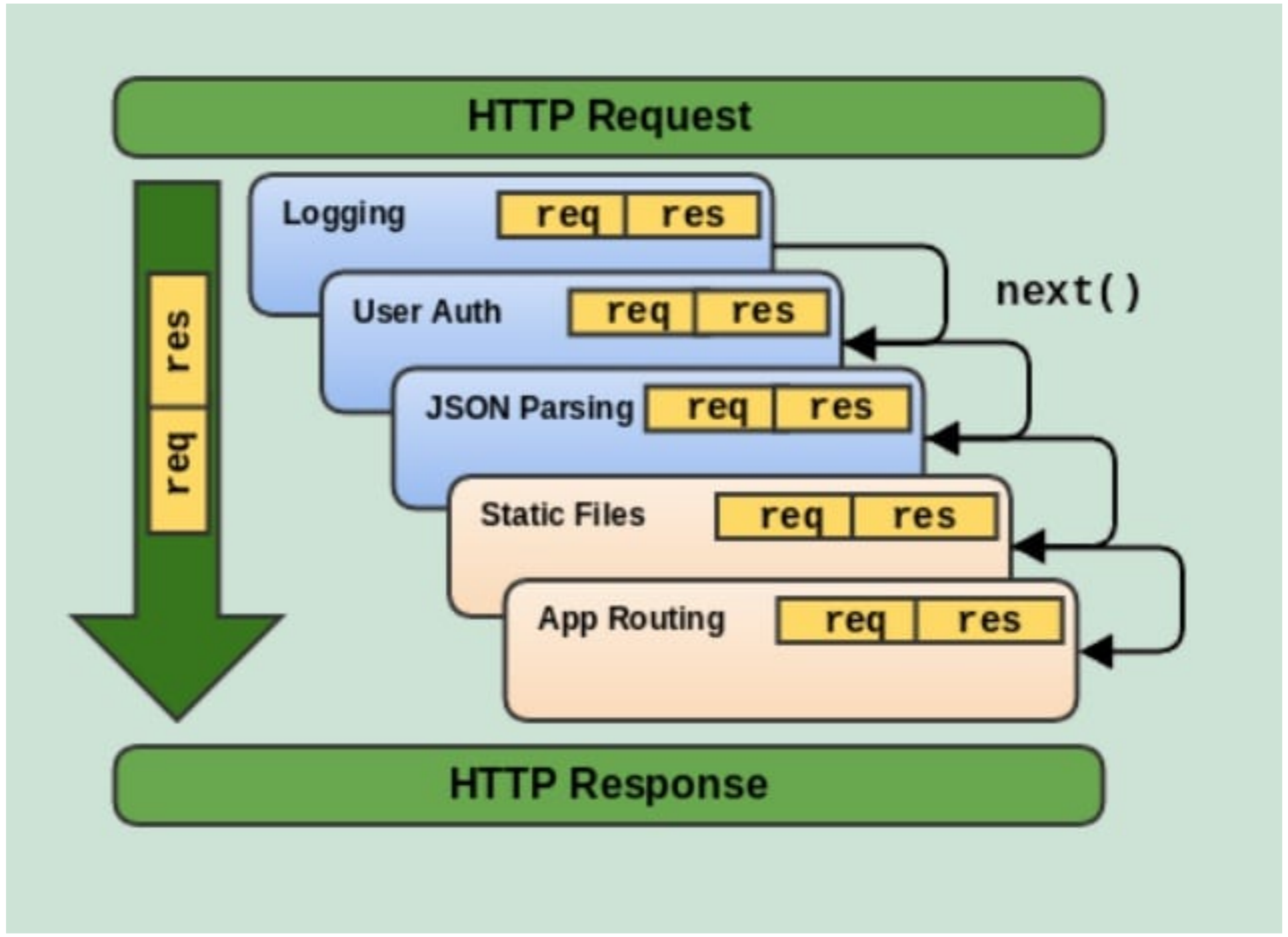
Gin middleware



Middleware functions are functions that have access to the request data, and the next middleware function in the application's request-response cycle.

- Execute any code.
- Make changes to the request and the response objects.
- End the request-response cycle.
- Call the next middleware function in the stack

Gin Middleware - Practice

Use gin middleware to handle panic recover in Golang

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Thank you.