

Working with the Time Package



Jeremy Morgan

SOFTWARE / DEVOPS ENGINEER

@JeremyCMorgan www.jeremymorgan.com



What is The Time Package?



Overview



Understanding Wall Clock
vs. Monotonic Clock

Formatting Time Output

Calculating Time Spans

Calculate Elapsed Time for Applications



Understanding Wall Clock vs. Monotonic Clock



Wall Clock



Used to keep track of the current time of day

Subject to variation

Great for humans

Not great for measuring time



Monotonic Clock



Used for measuring time

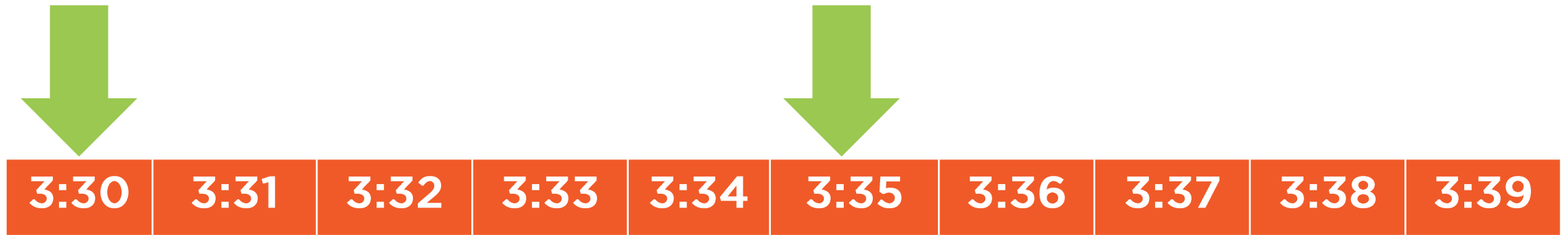
Not subject to variation

Only meaningful for the process calling it

Can be simulated by wall clock time



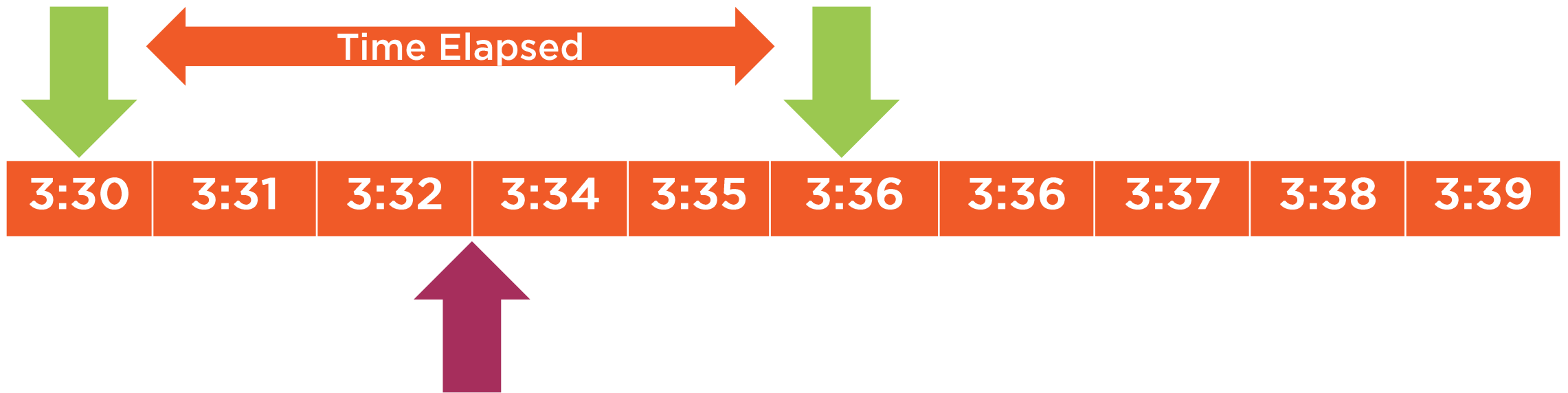
Measuring Time Intervals



Time to process file: 5 minutes ?



Measuring Time Intervals

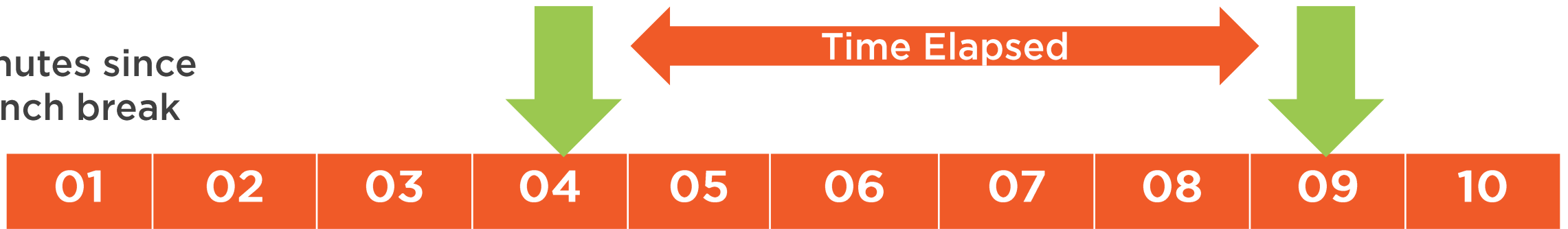


Time to process file: 6 minutes ?



Measuring Time Intervals

Minutes since
lunch break

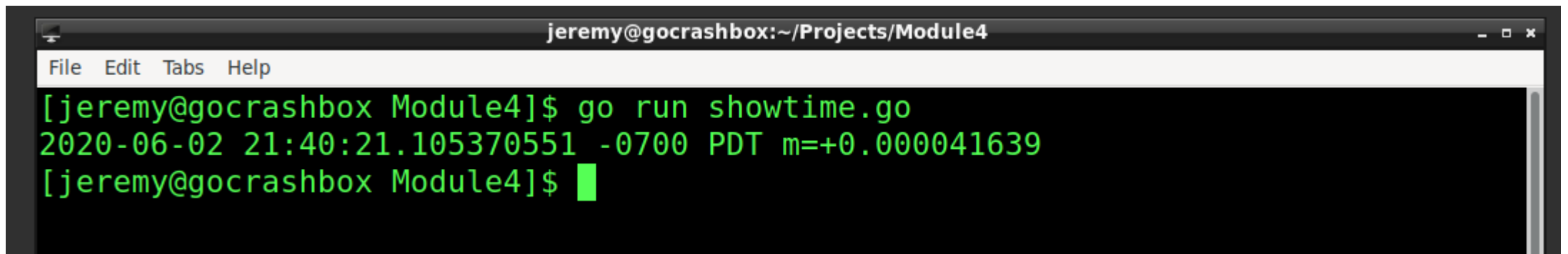


Time to process file: 5 minutes



```
t := time.Now()  
fmt.Print(t)
```

time.Now() returns both Wall clock and Monotonic

A terminal window titled 'jeremy@gocrashbox:~/Projects/Module4' with a menu bar (File, Edit, Tabs, Help). The terminal shows the command 'go run showtime.go' being executed, which outputs the ISO 8601 timestamp '2020-06-02 21:40:21.105370551 -0700 PDT m=+0.000041639'. The prompt '[jeremy@gocrashbox Module4]\$' is shown again with a green cursor.

```
jeremy@gocrashbox:~/Projects/Module4  
File Edit Tabs Help  
[jeremy@gocrashbox Module4]$ go run showtime.go  
2020-06-02 21:40:21.105370551 -0700 PDT m=+0.000041639  
[jeremy@gocrashbox Module4]$
```



Demo



Formatting Time Output



Demo



Calculating Time Spans



Demo



Calculate Elapsed Time for Applications



Summary



Wall Clock vs. Monotonic Clock

Formatted Time Output

Calculated Time Spans

Calculated Elapsed Time for Applications

