

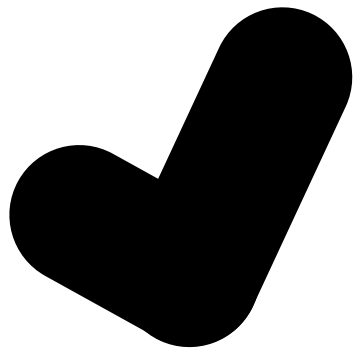


# DON'T PRINT,

# GO DEBUG!

by Alexander Podkhalyuzin

彭俐客



# How to print?



**Casey Newton**

@CaseyNewton



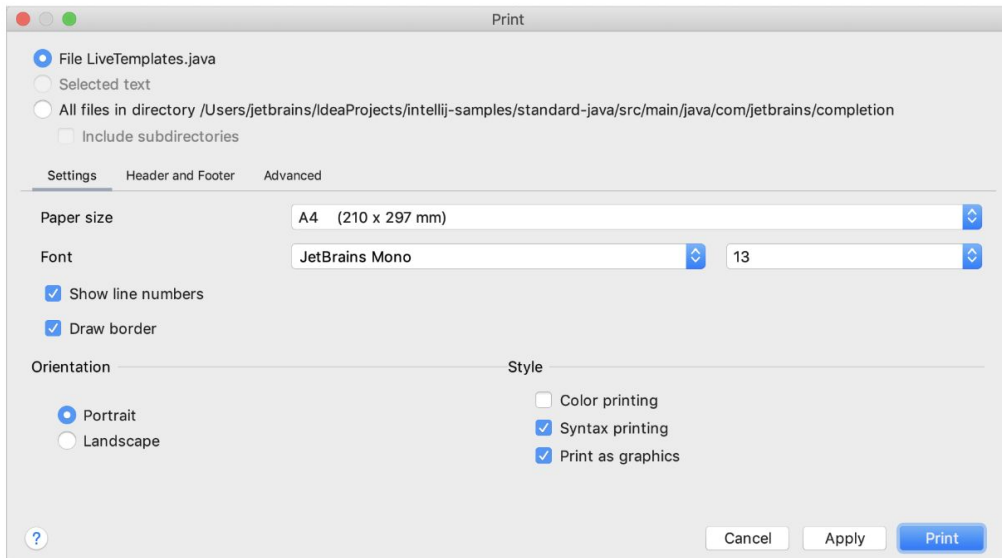
Here it is: Twitter engineers were told today to \*print out\* their last 30 to 60 days of code, so they could show it to Elon Musk himself.

Then they were told wait, no, actually, please shred all that code you just printed out.

Subscribe to read 

[platformer.news/p/elon-takes-o...](#)

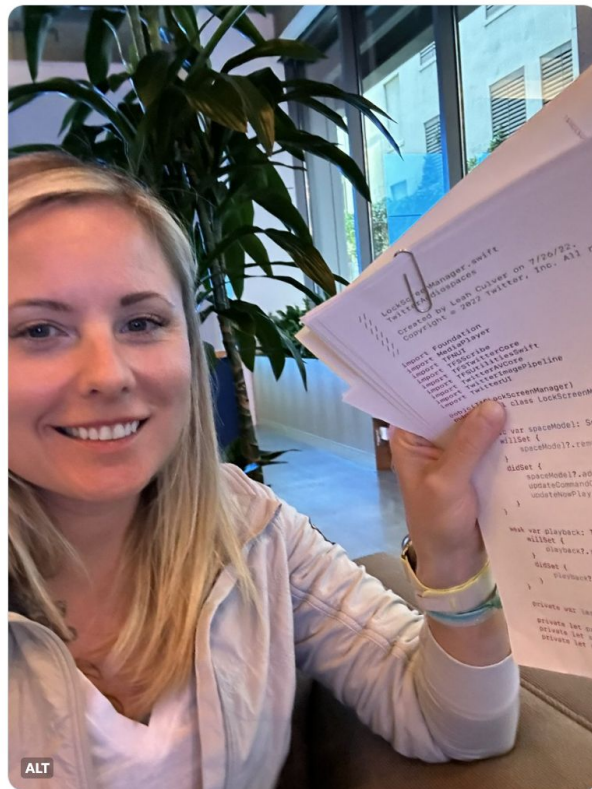
# How to print?



**i** After you configure the printing options and click **Print**, you will see the system **Print** dialog. There, you can select the printer you want to use.

 **Leah Culver** ✓  
@leahculver

Happy Friday all.



7:59 AM · Oct 29, 2022

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p<sup>l</sup>an

# p<sup>l</sup>an

1

First steps

# p<sup>l</sup>an

1

First steps

2

Run to cursor

# p<sup>l</sup>an

1

First steps

2

Run to cursor

3

Don't debug. Print!

# pʌn

1

First steps

2

Run to cursor

3

Don't debug. Print!

4

Attach to process



# p<sup>l</sup>an

- 1 First steps
- 2 Run to cursor
- 3 Don't debug. Print!
- 4 Attach to process
- 5 Debug Goroutines

# p<sup>l</sup>an

- 1 First steps
- 2 Run to cursor
- 3 Don't debug. Print!
- 4 Attach to process
- 5 Debug Goroutines
- 6 Superpower!

# p<sup>l</sup>an

1

First steps

2

Run to cursor

3

Don't debug. Print!

4

Attach to process

5

Debug Goroutines

6

Superpower!

# What's instead?

**Debug!**

**First steps!**

GP go-project ▾ Version control ▾

go build go-project ▾ ▶ ⚙️ ⋮ 👤 🔍 ⚙️

Project ▾

go-project ~/GolandProjects/

go.mod

main.go

External Libraries

Scratches and Consoles

main.go ×

⋮ 🔔

1 package main

2

3 import (

4 "fmt"

5 )

6

7 // Book represents a book in the library.

8 type Book struct { 4 usages

9 ID int

10 Title string

11 Author string

12 PublicationYear int

13 }

14

15 // Library represents a library.

16 Ⓜ️ type Library struct { 6 usages

17 books []Book

18 lastBookID int

19 }

20 \*LibraryApp.Run()

⚠️ 2 ^ ▾

🌀

📄

🏠

go-project > main.go

93:1 LF UTF-8 🔗 AWS: Unable to connect Tab 🔗

# p1an

1

First steps

2

Run to cursor

3

Don't debug. Print!

4

Attach to process

5

Debug Goroutines

6

Superpower!

**Try to be faster  
than debugger**



**Shout the 'total' value!**

\*\*\* GP go-project Version control go build run-to-cursor.go

run-to-cursor.go

1 package main

2

3 import "fmt"

4

5 func sum(numbers []int) int { 1 usage

6 total := 0

7

8 // Debugging: Print the initial value of total

9 fmt.Println(a...: "Initial total value:", total)

10

11 for \_, num := range numbers {

12 total += num

13 }

14

15 // Debugging: Print the final value of total

16 fmt.Println(a...: "Final total value:", total)

go-project > run-to-cursor.go 1:13 LF UTF-8 AWS: 2 Connections Expired CodeWhisperer Tab

# pLan

- 1 First steps
- 2 Run to cursor
- 3 Don't debug. Print!
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- 5 Debug Goroutines
- 6 Superpower!

**Rarely you still need  
to print...**

# Almost 9 years ago, while in Scala, I had an epic:

~~SCL-8025~~ Created by [Ilan Godik](#) about 9 years ago  
Updated by [Alexander Podkhalyuzin](#) almost 9 years ago

 Visible to issue readers ▾

## Standard scala library unrecognized on sbt project creation on 2.11.4



Scenario:

Created an sbt project, the scala version defaulted to 2.11.4 in the generated build.sbt.

## The fix was this one:

```
73      - def byte(i : Int) = bytes(pos) & 0xFF
      78      + def byte(i : Int) = {
      79      +      val b = bytes(pos)
      80      +      if (b >= 0) b.toInt
      81      +      else b.toInt + 256
      82      +  }
```

**Such cases are  
just once per 10 years**

**For the rest, please,  
debug!**



# p<sup>l</sup>an

- 1 First steps
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- 5 Debug Goroutines
- 6 Superpower!



Project ▾



go-project ~/GolandProjects/  
attach-process.go  
go.mod  
External Libraries  
Scratches and Consoles

attach-process.go ×

```
1 package main
2
3 import (
4     "fmt"
5     "log"
6     "net/http"
7     "os"
8     "time"
9
10    "github.com/gorilla/mux"
11 )
12
13 const (
14     readTimeout  = 5 1 usage
15     writeTimeout = 10 1 usage
16     idleTimeout  = 120 1 usage
17 )
18
19 indexHandler(w http.ResponseWriter, r *http.Request)
```

1 ^ ▾

# p<sup>l</sup>an

- 1 First steps
- 2 Run to cursor
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- 4 Attach to process
- 5 **Debug Goroutines**
- 6 Superpower!



label-goroutines.go ×



```
1 package main
2
3 func main(){
4
5 }
```




main()




**Is it allowed to use AI  
in your company?**

**Do you actually use AI?**

# p<sup>l</sup>an

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Project



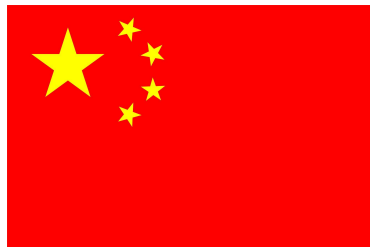
- full-line-completion-demo ~/Gola
  - go.mod
  - main.go
- External Libraries
- Scratches and Consoles

main.go

```
1 package main
2
3 func main() {
4     I
5 }
6
```

main()

# GoLand / CSE in China Mainland



# GoLand / CSE in China Mainland



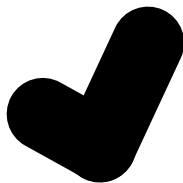
彭俐客 (Alex)



Scan the QR code to add me as friend

# Thank you!

Alexander PodkhaLyuzin  
彭俐客



彭俐客 (Alex)



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