

# THE DYNAMIC LINKER

(A.K.A. LOADER)

CALLED AT

STARTUP: Loads all required libraries (.so) transitively

SECTIONS

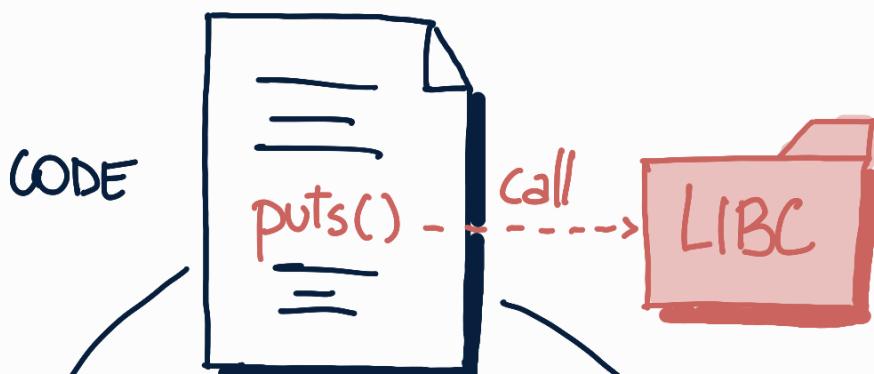
GOT = Global Offset Table

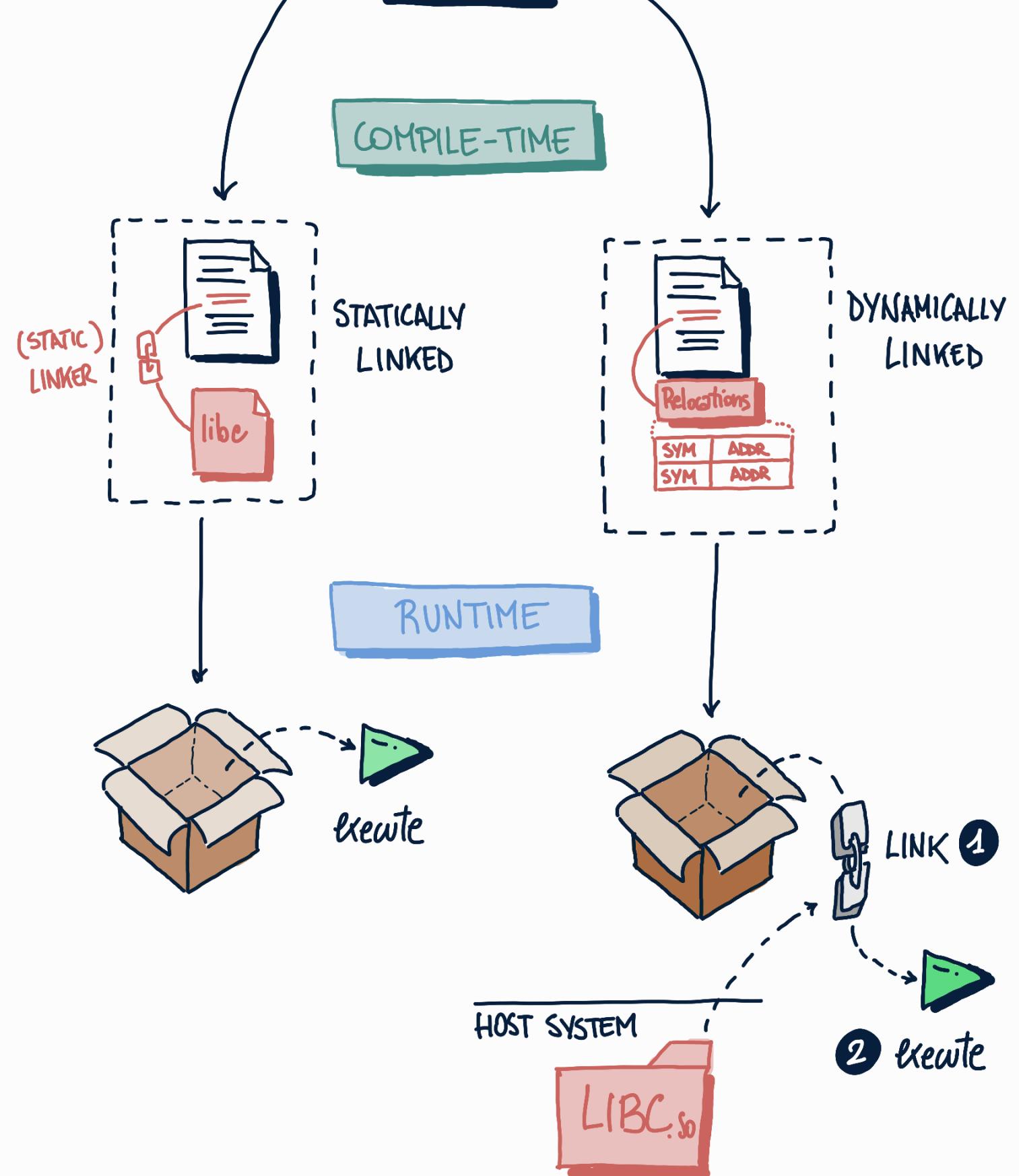
Tells the program where to find external library functions

PLT = Procedure Linkage Table  
Stubs for library functions

# LINKING

(STATIC vs DYNAMIC)

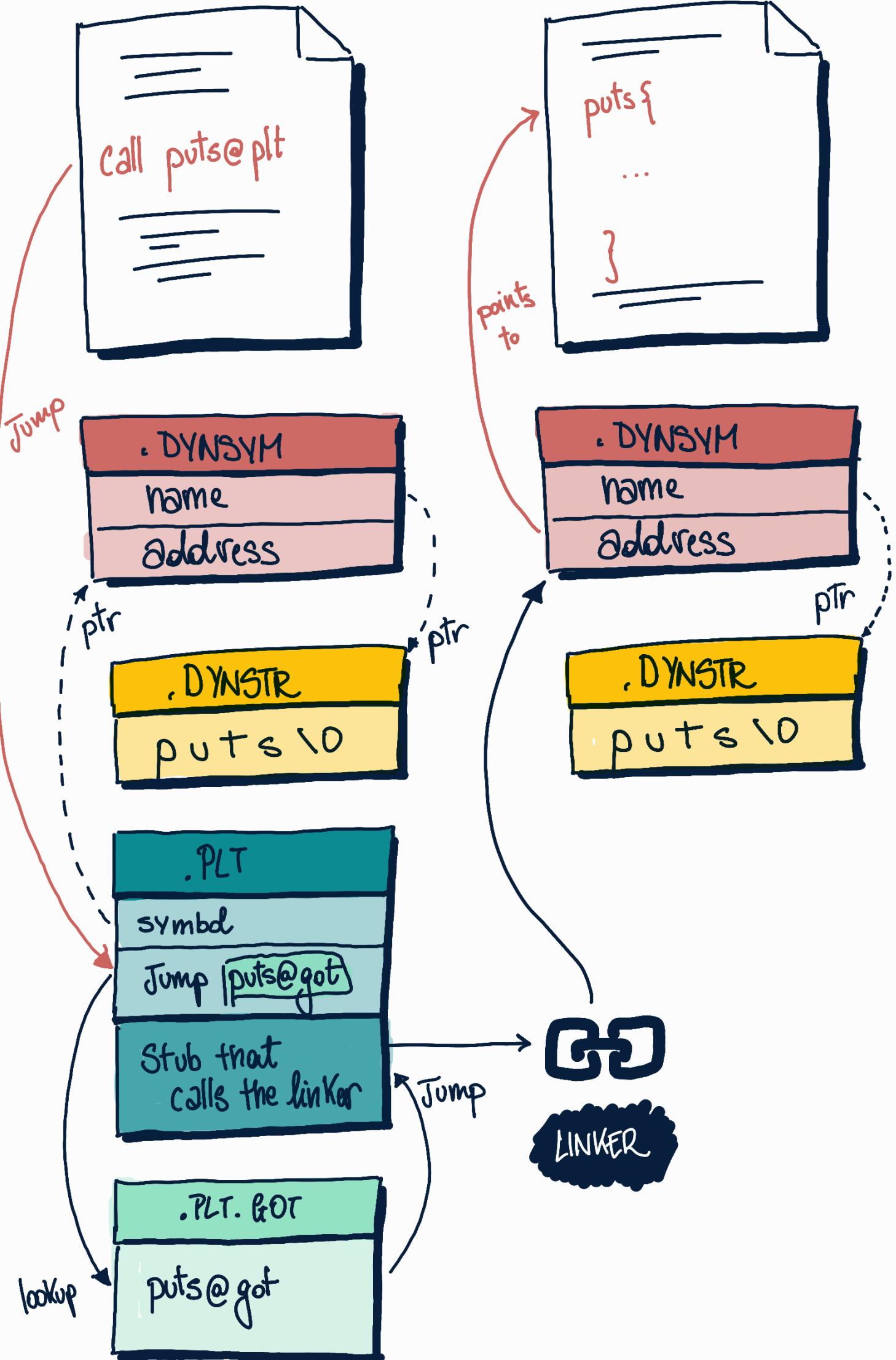




DYNAMIC LINKING  
(ELF SECTIONS)

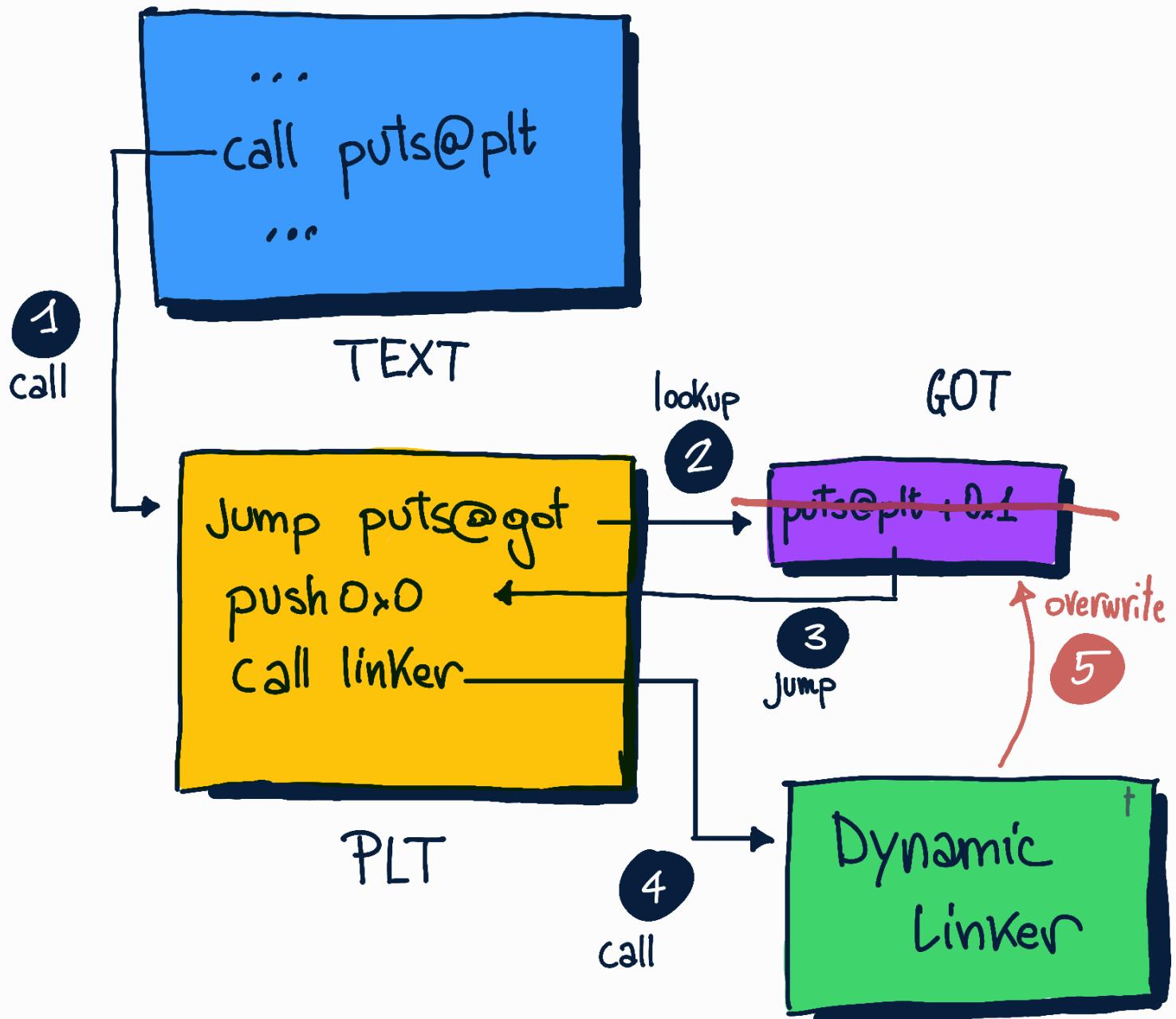
USER CODE

libc.so



# RELOCATIONS

(LAZY LOADING)



- 1 User code calls PLT
- 2 PLT jumps to pointer in the GOT
- 3 The first time, the GOT points to a stub in the PLT

4 The stub calls the linker

5 The linker loads the real address in the GOT  
↳ next time, the PLT will jump directly to the lib

## RELRO

(RELOCATIONS READ-ONLY)

- PARTIAL

-z,relro

↳ some sections marked read-only

- FULL

-z,relro -z,now

↳ no lazy loading







