## Introduction to x86\_64 (dis)assembly

https://github.com/tobywf/talk-x86-64-asm			
64-bit	Caller owned	Role	
RAX		return value	Callee must restore caller owned registers
RBX	Yes		_
RCX		4 <sup>th</sup> arg	Tools:

• clang -O1 -S -masm=intel foo.c -o foo.s

-target x86\_64-pc-

- objdump -M intel -S foo > foo.s
- gdb

add

macOS:

linux-elf

3<sup>rd</sup> arg/ret val

RDX 2<sup>nd</sup> arg RSI

1<sup>st</sup> arg RDI

**RSP** stack pointer **RBP** Yes frame pointer 5<sup>th</sup> arg

R8 6<sup>th</sup> arg R9 R10

R11 R12-R15 Yes