

ARMassembly 0

Description

What integer does this program print with arguments

266134863 and 1592237099? File: [chall.S](#) Flag format:

picoCTF{XXXXXXXX} -> (hex, lowercase, no 0x, and 32 bits. ex.

5614267 would be picoCTF{0055aabb})

Downloaded the file `chall.S`, knew it was an assembly code because duh.

Searched up how to compile arm assembly code and ended up in a stack exchange where I saw these :

I am using `as` and `gcc` to assemble and create executables of ARM assembly programs, as recommended by [this](#) tutorial, as follows:

Given an assembly source file, `program.s`, I run:

```
as -o program.o program.s
```

Then:

```
gcc -o program program.o
```

However, I ran headfirst into an error :

```
(kali@kali)-[~/Desktop]
$ as -o program.o chall.s
chall.s: Assembler messages:
chall.s:1: Error: no such architecture: `armv8'
chall.s:1: Error: junk at end of line, first unrecognized character is `-'
chall.s:8: Error: expecting operand after ','; got nothing
```

"No such architecture armv8"

I looked it up

I realised that this was an armv8 architecture code, and I was tryna compile it on my x86 device

Few minutes of googling how to cross compile armv8 on an x86 I reached this :

<https://github.com/joebobmiles/ARMv8ViaLinuxCommandline>

Following the instructions on there, I installed a cross compiler and an emulator to help run the arm binaries as normal executable files.

Then I ran the thing with the arguments that it had asked me to put in

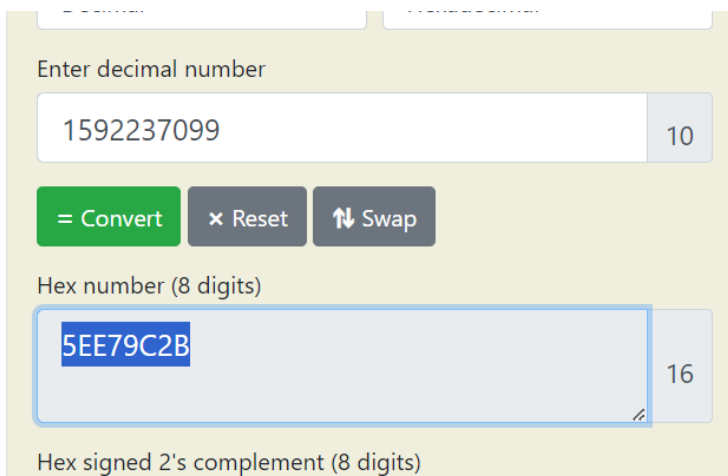
266134863 and 1592237099?

Sure enough :

```
(kali@kali)-[~/Desktop]
$ ./chall 266134863 1592237099
Result: 1592237099
```

Yeay

I then converted this to hex



A screenshot of a web-based decimal to hex conversion tool. The interface has a light beige background. At the top, it says "Enter decimal number". Below this is a text input field containing "1592237099" and a small dropdown menu set to "10". Below the input field are three buttons: a green "= Convert" button, a grey "x Reset" button, and a grey "↕ Swap" button. Below the buttons, it says "Hex number (8 digits)". Below this is a text input field containing "5EE79C2B" and a small dropdown menu set to "16". At the bottom, it says "Hex signed 2's complement (8 digits)".

Typed in picoCTF{5EE79C2B}

Hurray! You earned 40 points.