# **Generalskills**

#### 2Warm

Author: Sanjay C/Danny Tunitis

## **Description**

Can you convert the number 42 (base 10) to binary (base 2)?

debug info: [u:880571 e: p: c:86 i:206]

#### Hints

Submit your answer in our competition's flag format. For example, if your answer was '11111', you would submit 'picoCTF{11111}' as the flag.

Let's convert **42** (base 10) to binary (base 2) step by step.

We repeatedly divide by 2 and note the remainders:

- 42÷2=2142 \div 2 = 2142÷2=21 remainder **0**
- 21÷2=1021 \div 2 = 1021÷2=10 remainder 1
- 10÷2=510 \div 2 = 510÷2=5 remainder **0**
- 5÷2=25 \div 2 = 25÷2=2 remainder 1
- 2÷2=12 \div 2 = 12÷2=1 remainder **0**
- 1÷2=01 \div 2 = 01÷2=0 remainder 1

flag: picoCTF{101010}

# **First Grep**

Author: Alex Fulton/Danny Tunitis

# Description

Can you find the flag in <u>file</u>? This would be really tedious to look through manually, something tells me there is a better way.

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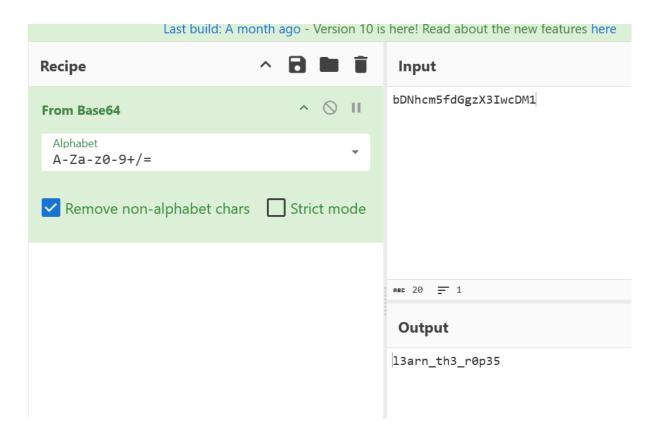


#### **Bases**

Author: Sanjay C/Danny T

# **Description**

What does this **bDNhcm5fdGgzX3IwcDM1** mean? I think it has something to do with bases.



Generalskills 2

# Warmed Up

Author: Sanjay C/Danny Tunitis

# **Description**

What is 0x3D (base 16) in decimal (base 10)?

Let's convert **0x3D** (hexadecimal) to decimal:

- $3D16=(3\times161)+(D\times160)3D_{16}=(3\times161)+(D\times160)3D_{16}=(3\times161)+(D\times160)$
- 3×16=483 \times 16 = 483×16=48
- D=13D = 13D=13
- 48+13=6148 + 13 = 6148+13=61
- $\sqrt{\ }$  So, **0x3D (base 16) = 61 (base 10)**

flag:picoCTF{61}

## **Lets Warm Up**

Author: Sanjay C/Danny Tunitis

# **Description**

If I told you a word started with 0x70 in hexadecimal, what would it start with in ASCII?

Let's solve this step by step.

- 1. **Given:** The word starts with 0x70 in hexadecimal.
  - 0x70 is a hex representation of a number.
- 2. Convert hex to decimal:
  - $0x70 \rightarrow 7 \times 16 + 0 = 1127 \times 16 + 0 = 1127 \times 16 + 0 = 1121 = 11$
- 3. Convert decimal to ASCII:
  - ASCII code 112 corresponds to the character 'p'.
- Answer: The word would start with p in ASCII.

so the flag: picoCTF{p}

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