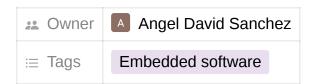
## Homework 2 - Convertions and bitwise exercises



## **▼** Bitwise Exercises

- $4 \& 7 = 0100 \& 0111 = 0100 \rightarrow 4$
- $16 \mid 7 = 10000 \mid 00111 = 10111 \rightarrow 23$
- $2 \& (\sim 13) = 00010 \& (\sim 01101 \rightarrow 10010) = 00010 = 2$
- $5 ^ 8 = 0101 ^ 1000 = 1101 = 13 \rightarrow D$
- 7 >> 2 = 0111 >> 0010 = 000111 = 1
- 84 >> 4 = 1010100 >> 0000100 = 000100101 = 5
- 15 << 5 = 1111 << 0101 = 10100000 = 480
- 4 & (2 << 3) = 00011000 = 0100 & 00011000 = 0</li>
- 2 | (19 >> 1) = 10011 = 11
- 0xFF & (0x13 << 0x2) = 01001100 = 0x4C = 76

## **▼** Convertions

- Convert to hexadecimal
- 1011 1100 -> 0xBC
- 1000 0001 1100 -> 0x81C
- 1000 0011 0011 1111 1010 —> 0x833FA
- 1111 1010 0001 —> 0xFA1
- 1111 1111 1111 1111 1101 1110 -> 0xFFFFDE
- Convert to binary
- 84 —> 1000 0100
- 0xFC15 -> 1111 1100 0001 0101

- 0x5487DA --> 0101 0100 1000 0111 1101 1010
- 298 —> 0010 1001 1000
- 0xA15CB4 -> 1010 0001 0101 1100 1011 0100