COMP6010 Practical Week 2

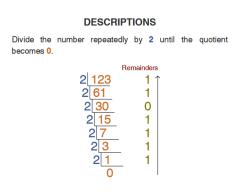
1. Convert the following decimal numbers to Base-2 and Base-8 numbers respectively

(a) 123

ANS: (https://madformath.com/calculators/basic-math/base-converters/base-converters)

RESULT

 $(123)_{10} = (1111011)_2$



(b) 2784

ANS:

RESULT

 $(2784)_{10} = (101011100000)_2$

(c) 86910

ANS:

RESULT

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(86910)_{10} = (101010011011111110)_2
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2. Convert the following binary numbers to decimal numbers.

(1) 1010

ANS:

RESULT

 $(1010)_2 = (10)_{10}$

(2) 1101001

ANS:

RESULT

 $(1101001)_2 = (105)_{10}$

3. Given a non-negative integer n, calculate its last digit.

ANS: n%10

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4. Given a negative integer n, calculate its last digit (note -11 mod 7 = 3 because -11 = 7(-2) + 3).
ANS: 10 - n%10, or, abs(n)%10
5. Given an integer n, get it is second last digit, and its first digit.
ANS:
import math
n = 123
print(abs(n)%10)
print(pow(10, (int)(math.log10(abs(n)))))
6. Given a string, output its first character and last character.
ANS:
str[0]
str[-1]
7. Given a string 'Hello World', output the two words separately.
ANS:
str = 'Hello World'
print(str[:str.index(' ')+1]) # method 1
print(str[str.index(' ')+1:])
list = str.split(' ') # method 2
print(list[0])
print(list[1])
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