CMSI 2210
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9/12 In-Class Assignment #2

- Convert 101_2 to decimal
  - 2^2 + 2^0 = 5
- Convert 1010101_2 to decimal
  - 2^0 + 2^2 + 2^4 + 2^6 = 1 + 4 + 16 + 64 = 85
- Convert 0101010_2 to decimal
  - 2^5 + 2^3 + 2^1 = 42
- Convert 11111111_2 to decimal
  - 255
- Convert 1100110011001101_2 to decimal
  - 2^0+2^2+2^3+2^6+2^7+2^10+2^11+2^14+2^15= 52429
- Convert 11111111111111111111_2 to decimal
  - 2^19 to 2^0 = 1048575
- Convert 111100001111_2 to decimal
  - 2^11 to 2^8 + 15 = 3855
- Convert 100000000000_2 to decimal
  - 2^11 = 8*8*8*4 = 2048
- Convert $10101011110011011110111 1_2$ to decimal
  - 11259375
- Convert 5421_{10} to binary
  - 1010100101101
- Convert 80_{10} to binary
  - 2|80
  - 2|40 0
  - 2|20 0
  - 2|10 0
  - 2|5 0
  - 2|2 1
  - 1 0
  - = 1010000

- Convert 12345_{10} to binary
  - 2|12345
  - 2|6172 1
  - 2|3086 0
  - 2|1543 0
  - 2|771 1
  - 2|385 1
  - 2|192 1
  - 2|96 0
  - 2|48 0
  - 2|24 0
  - 2|12 0
  - 2|6 0

    - 2|3 0
    - 2|1 1
    - 0 1
    - = 11000000111001

- Convert 15_{10} to binary
    - 2|15
    - 2|7 1
    - 2|3 1
    - 2|1 1
    - 0 1
    - = 1111
- Convert 65535_{10} to binary
    - 65535 = 1111111111111111
- Convert 32767_{10} to binary
  32767=1111111111111