**Topic 2**

* How is this string ‘Hello’ stored in a computer? It is stored using ACSII code.

H e l l o

0100100001100101011011000110110001101111 Binary

4 8 6 5 6 C 6 C 6 F Hex

* Convert Hex to Binary (B8 🡪 10111000)
* Convert Binary to Hex (10100001 🡪 A1)
* Convert Binary to Decimal (10000010 🡪 130)
* Convert Decimal to Binary (195 🡪 11000011)
* Convert Hex to Binary to Decimal (83 🡪 10000011 🡪 131)
* Convert Decimal to Binary to Hex (192 🡪 11000000 🡪 C0)
* Storing a negative decimal number in 4-bit 2’s complement (e.g. -5)
  + First express 5 in 4-bit binary 🡪 0101 (+5)
  + Convert to 1’s complement 🡪 1010
  + Add 1 to get 2’s complement 🡪 1011 (-5)
* Hex A4 stores a negative decimal number in 2’s complement. What is this negative number?
  + A4 🡪 10100100
  + Convert to 1’s complement 🡪 01011011
  + + 1
  + Add 1 to get 2’s complement 🡪 01011100 (92)
  + The number is -92





















