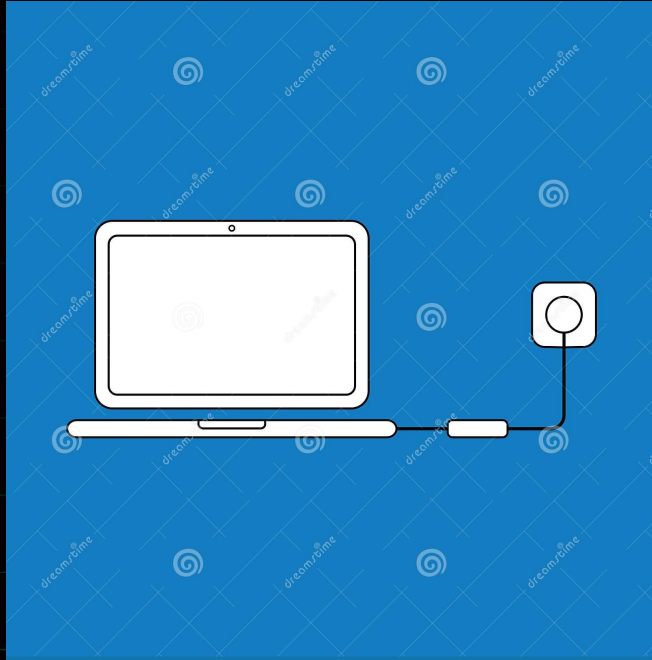


HOW COMPUTER WORKS

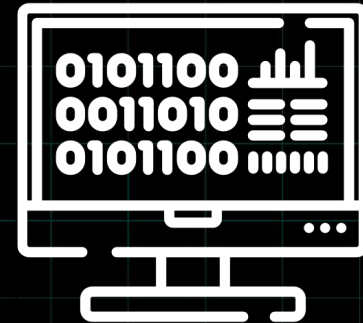
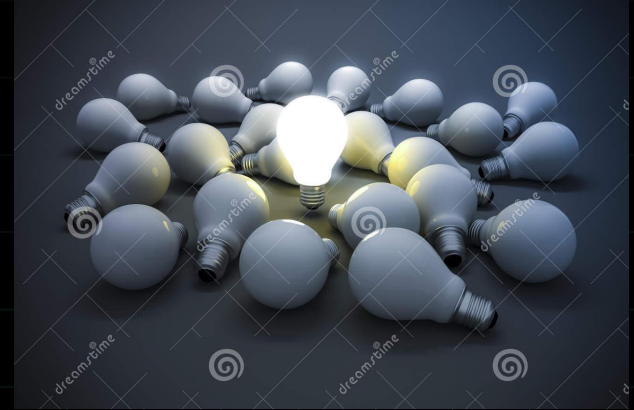
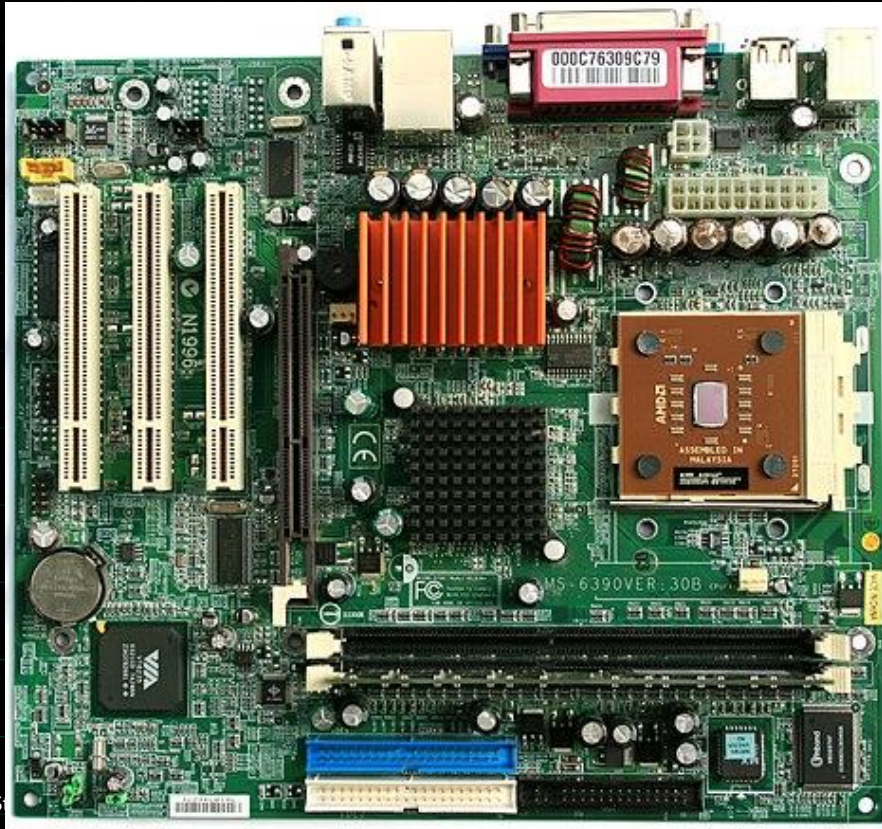
College of Science & Technology, Royal University of Bhutan



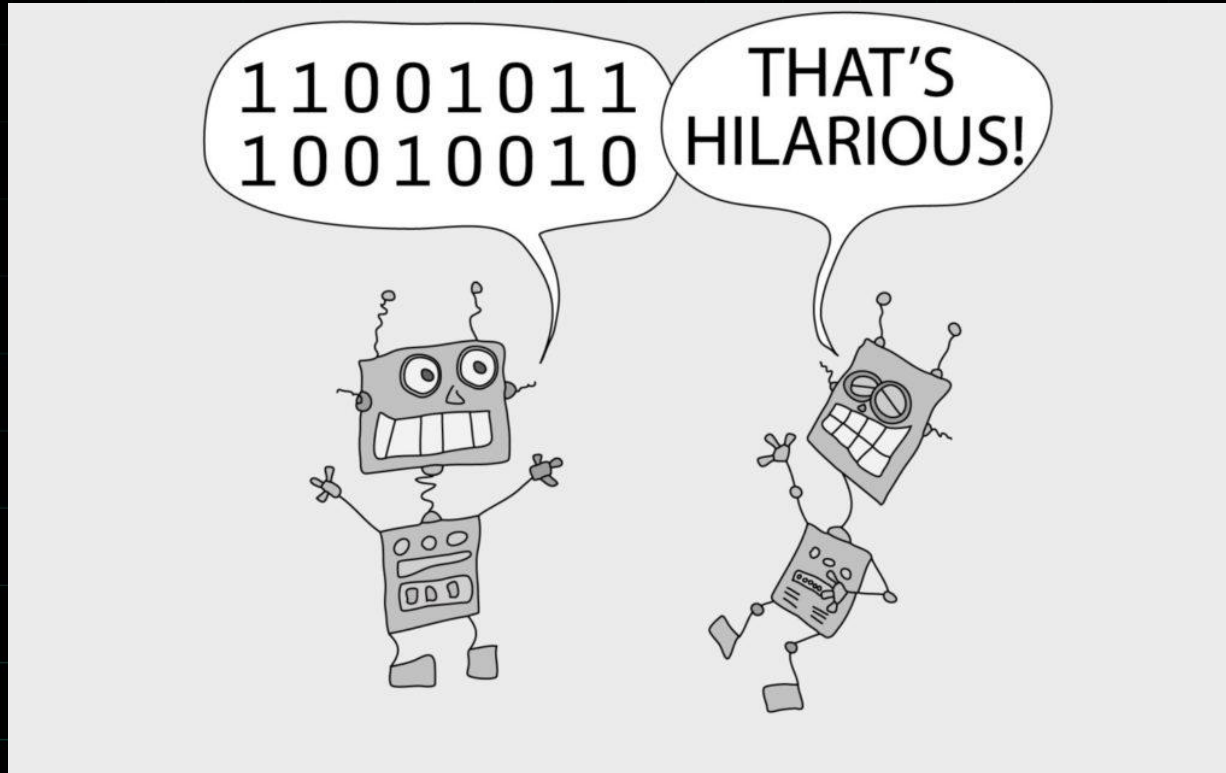
UNDERSTANDING COMPUTERS



UNDERSTANDING COMPUTERS

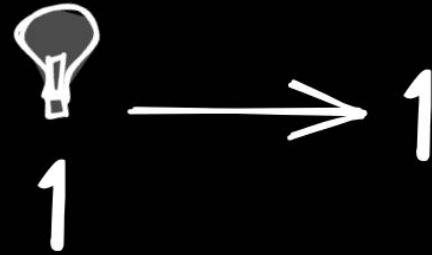
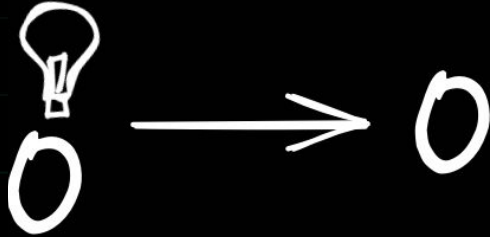


UNDERSTANDING COMPUTERS



COMPUTERS x HUMANS

How can we represent the human number system to the computers?





COMPUTERS x HUMANS


Hint (How we humans count):


0,1,2,3,4,5,6,7,8,9 \longrightarrow 10,11,12,13...


COMPUTERS x HUMANS


1 0 → 2


1 1 → 3


1 0 0 → 4


1 0 1 → 5


1 1 1 1 → ?

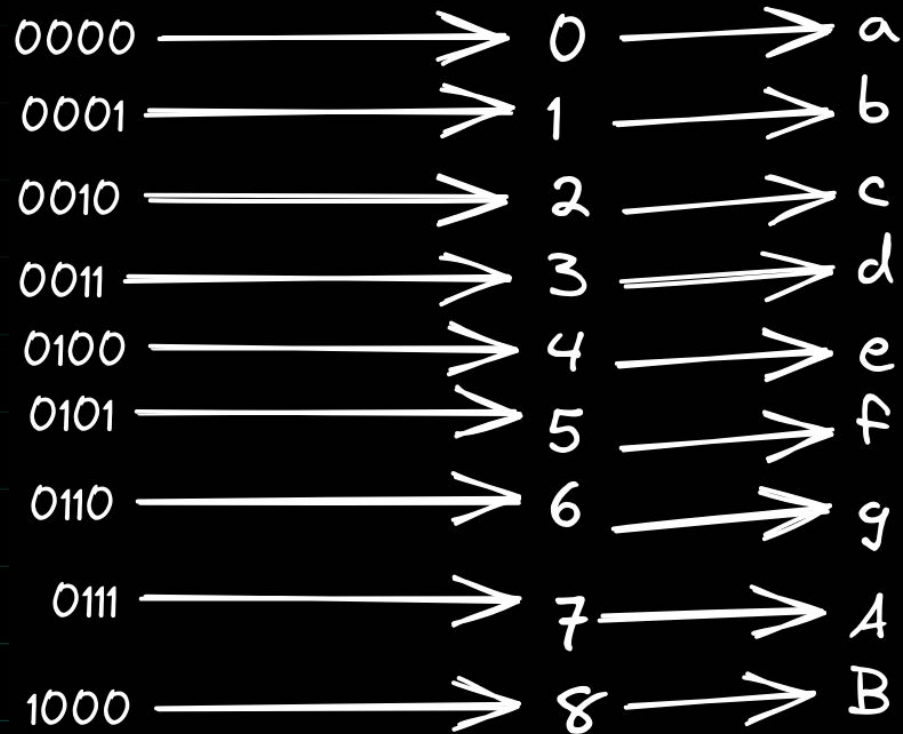
COMPUTERS x HUMANS

0	→	a
1	→	b
2	→	c
3	→	d
4	→	e
5	→	f
6	→	g
7	→	A
8	→	B

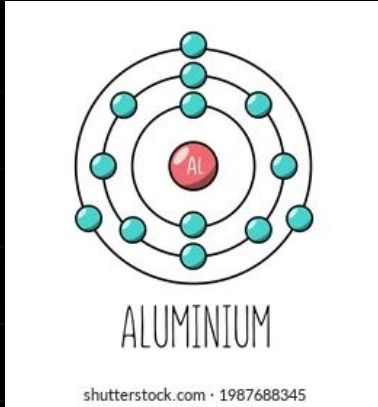
ASCII

65	→	A
66	→	B
67	→	C
68	→	D
69	→	E
70	→	F
71	→	G
97	→	a
98	→	b

ABSTRACTION



ABSTRACTION



ABSTRACTION



convert Hi to binary



All



Videos



Images



News



Books



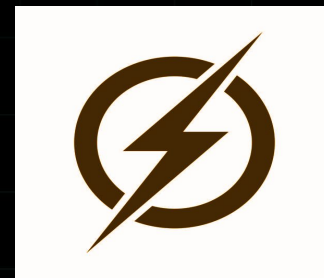
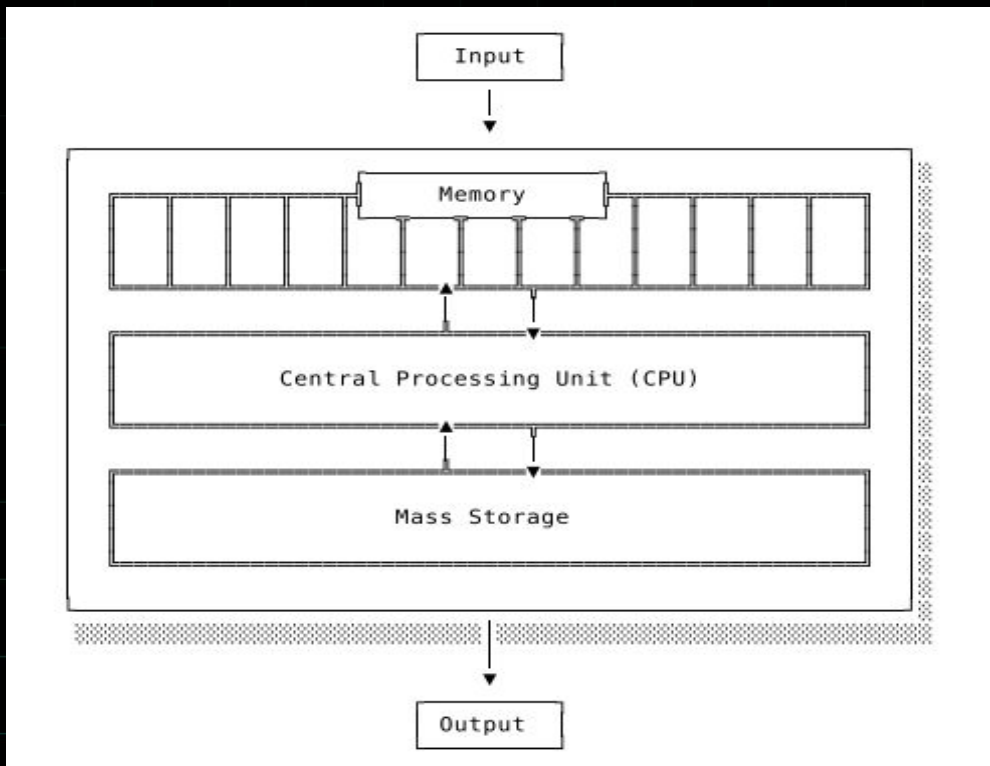
More

Tools

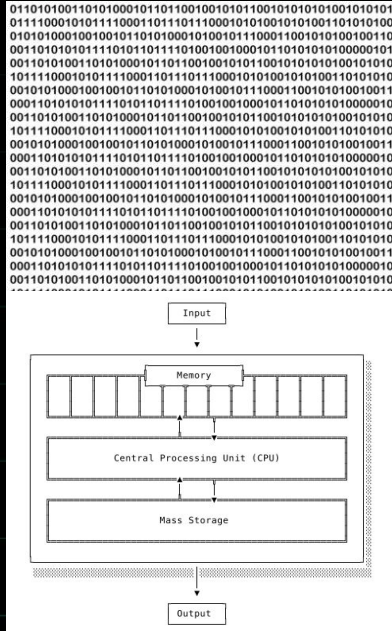
About 12,700,000 results (0.41 seconds)

"hello" in binary will be 01001000 01100101 01101100 01101100 01101111.
The capital letter "A" will be 01000001. The lowercase letter "a" will be 01100001.

ABSTRACTION



ABSTRACTION



Abstraction



TAKEAWAYS

- Abstraction
- Input \rightarrow Computer \rightarrow Output

MATERIALS

Article: [How a computer works](#)

Video series by Code.org

1. [Introducing how computers work](#)
2. [What Makes a Computer, a Computer?](#)
3. [Binary and Data](#)
4. [Circuits and Logic](#)
5. [CPU, Memory, Input and Output](#)

FAQs

“Any queries or further clarifications needed?”

Thank you!

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douglas.cst@rub.edu.bt