

# ***Bits Manipulation***

***By Prince Agarwal***  
***[ “ Hello World ” ]***

# Bits Manipulation



**What is Bits ?**



**It understands only two things**

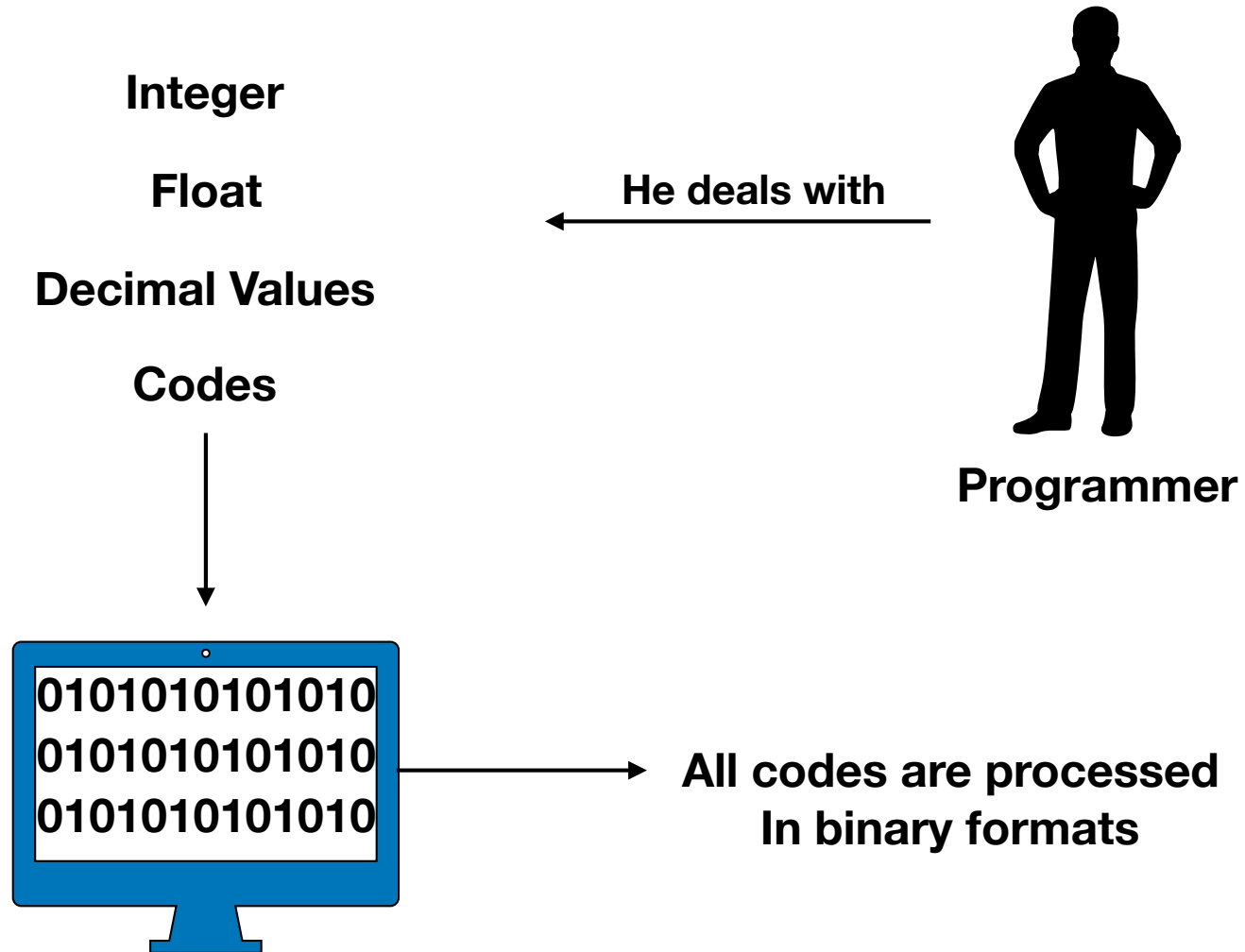
**0**

**Off**

**1**

**On**





Code —>

8795 + 7219



+ operator

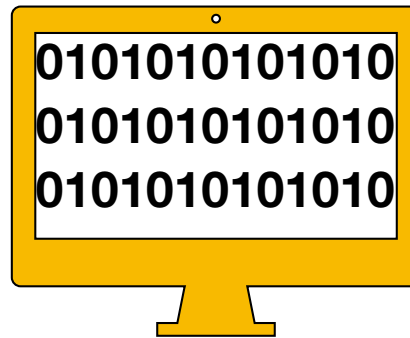
Working

8795

+ 7219

---

16014



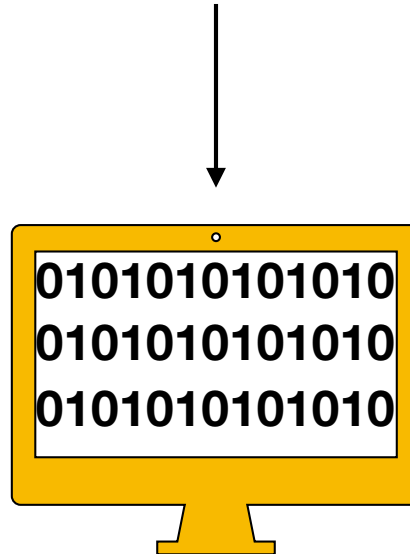
# Working on the bits level

Code —>

8795 + 7219



Bit level working



$$\begin{array}{r} 101010100001101 \\ + 101111010100101 \\ \hline 010101010101010 \end{array}$$

Final results : 16014

Working on bits level is very fast

## Conversion of Decimal into binary

**( 14 )**<sub>10</sub>

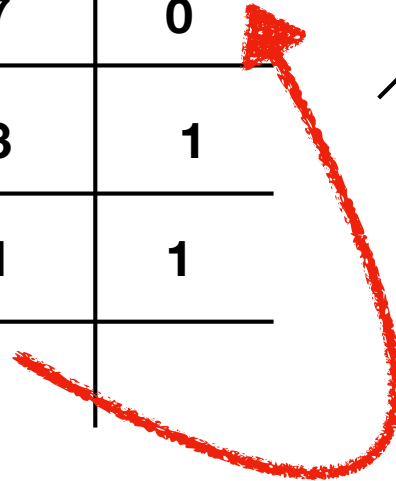
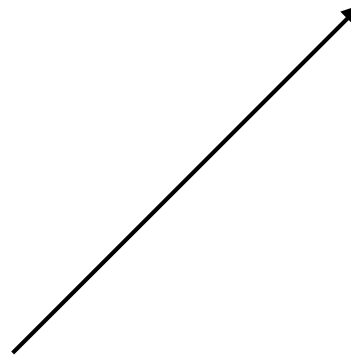
Decimal



**( 1110 )**<sub>2</sub>

Binary

2	14	
2	7	0
2	3	1
	1	1



## Conversion of Binary into Decimal

$$\begin{array}{ccc} (1110)_2 & \longrightarrow & (14)_{10} \\ \text{Binary} & & \text{Decimal} \end{array}$$

## Binary

## Decimal

1	1	1	0
↓	↓	↓	↓
3	2	1	0

$$\underline{1 * 2^3} + \underline{1 * 2^2} + \underline{1 * 2^1} + \underline{0 * 2^0} = 14$$

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## Hello World

*“ If you feel any problem then comments in my video  
I will reply as soon as possible “*

***- Prince Agarwal***