

Date
18/05/2020

⇒ Number System:- A number system also known as system of numeration. This is the technique to represent numbers in the computer system architecture. Every value that you are saving or getting into/from computer memory has a defined N.S.

⇒ Types of Number System:- There are four types of Number System -

1- Binary N.S.

2- Decimal N.S.

3- Octal N.S.

4- Hexadecimal (Hex) N.S.

⇒ Conversion of Number System - When we convert a number system into another N.S. this process is called Conversion.

There are three main types of conversions:

1- Decimal N.S. to Other Base

2- Other Base to Decimal number system

3- Other Base to Other base N.S.

1⇒ Decimal N.S. to other Base Ex:-

(a) Decimal to Binary N.S. Conversion

$$(157)_{10} \rightarrow (?)_2$$

Remainder	
2 157	1 → LSB (Least Significant Bit)
2 78	0
2 39	1
2 19	1
2 9	1
2 4	0
2 2	0
1	→ MSB (Most Significant Bit)

(write Remainder from MSB to LSB)

$(10011101)_2$

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2 ⇒ Decimal to Octal number System:-

$$(345)_{10} \rightarrow (?)_8$$

Method

8	345	1	→ LSB
8	43	3	
	5		→ MSB

$(531)_8$

3 ⇒ Decimal number System to Hexadecimal N.S.

16	5324	12	→ LSB
16	332	12	
16	20	4	
	1		→ MSB

$(14CC)_{16}$

H.W.

Q1- Explain types of N.S. from your Book?

Q2- Write the step. to convert Decimal N.S. to Other Base N.S. from your Book?

Q3- Convert Given N.S. -

1- $(5434)_{10} \rightarrow (?)_8$

2- $(3434)_{10} \rightarrow (?)_{16}$

3- $(473)_{10} \rightarrow (?)_2$

4- $(843)_{10} \rightarrow (?)_8$

5- $(7879)_{10} \rightarrow (?)_{16}$

6- $(984)_{10} \rightarrow (?)_2$

Q. 4- Write the fullform MSB, LSB and N.S.?

VINAY

Teacher's Sign.