LBP operator value →

$$LBP = \sum_{n=0}^{7} s(i_n - i_c)2^n \quad , s(z) = \begin{cases} 1, & z \geq 0 \\ 0, & z < 0 \end{cases}$$

eg →

5	9	1
4	4	6
7	7	3

i_0	i_1	i_2
i_7	i_c	i_3
i_6	i_5	i_4

for $n=0 \Rightarrow s(i_0 - i_c)2^n$

$s(5-4)2^0$

$s(1)$

Hence i_0 will be 1.

1	1	0
1		1
1	1	0

for $n=1 \Rightarrow s(9-4)2$

$s(10)$

So value of i_1 will be 1.

for $n=2 \Rightarrow s(1-4)2^2$

value of i_2 will be $=0$

for $n=3 \Rightarrow s(6-4)2^3$

$s(2)2^3$

value of $i_3 = 1$

for $n=4 \Rightarrow s(3-4)2^4$

$s(-1)2^4$

value of $i_4 = 0$

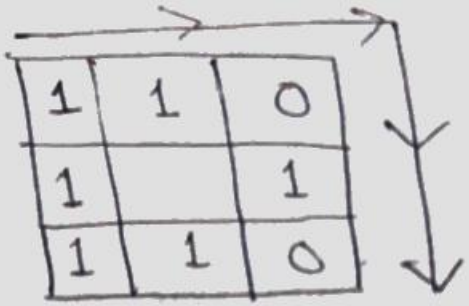
for $n=5 \Rightarrow s(7-4)2^5$

value of $i_5 = 1$

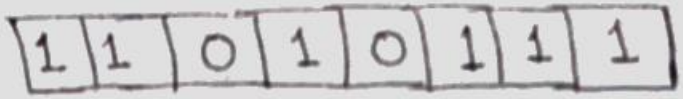
for $n=6 \Rightarrow i_6 = 1$

for $n=7 \Rightarrow i_7 = 1$

The final matrix

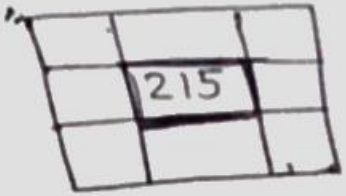


8 bit binary number ⇒



Decimal value = 215

So the value for central pixel will be



-Ajay