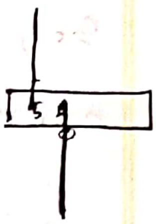
ID- 1705045

(1) Yes, we can do it.

(2) Reason:-

Example matrix —

(1,1)	$\boxed{(1,2)}$	(1,3)	(1,4)	----
(2,1)	$\boxed{(2,2)}$	(2,3)	(2,4)	----
(3,1)	$\boxed{(3,2)}$	$\boxed{(3,3)}$	(3,4)	----
(4,1)	(4,2)	$\boxed{(4,3)}$	(4,4)	
⋮	⋮	⋮	⋮	



00
11
01
10

	c-bit	Parity of data bits
Parity set A →	1	3,5,7,9,11
Parity set B →	2	3,6,7,10,11
Parity set C →	⋮	

Errorned bit are boxed.

As burst of length at k+1 bits, only one row will have at most 2 erroneous bit. All other rows will have at most 1 errorneous bit.

When their will be 1 errornaous bit in a row, of course at least ~~one~~ 1 ~~check~~ parity-set will have even parity.

Now, when their will be at most 2 errorneous bit in a row, we need to proof that all parity-sets will not have odd parity. In case of one parity set to have odd parity even after having erroneous bits, there must be 2 erroneous bit. Otherwise, it would have even parity

Now, we know, every number's binary representation are distinct. So, the row and 2 erroneous bit we are talking about, there must be some parity-set having not both of them. So, that parity-set must ~~having~~ have its parity even. And, we can detect this.

So, we will simply detect by checking if their are any even parity.

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