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Assumptions: There are no other rules of Odiosis that have not been mentioned in the question

Model: There are 4 possible combinations of 0 and 1 for each column, $\frac{0}{0}, \frac{0}{1}, \frac{1}{0}$, and $\frac{1}{1}$.

If the top 2 cells match their corresponding bottom 2 cells, it implies that they share the same combination of 0 and 1. Thus, it follows that, in order for a pair of corresponding cells to not match, they must not share the same combination.

Solution: There are 4 possible combinations for the first column, namely $\frac{0}{0}, \frac{0}{1}, \frac{1}{0}$, or $\frac{1}{1}$

Subsequently, each column cannot match the previous column, thus if the first column is $\frac{0}{0}$, the second column must be $\frac{0}{1}, \frac{1}{0}$, or $\frac{1}{1}$. Thus, there are 4 possibilities for the first column, and 3 possibilities for every subsequent column. Therefore, there are 4×3^{2017} possible ways to fill an Odiosis board.

Discussion: The graphic given in the question can be misleading, as it makes one think of the possibilities of A and B, where there are only 2. The key to solving the problem relies on thinking of the grid vertically, rather than horizontally as the graphic may lead one to do. Upon realising that each column following the first one has 3 possible combinations, the problem becomes simple.