Wave Print Problem Matrix [CodeStudio](https://www.codingninjas.com/studio/problems/print-like-a-wave_893268?leftPanelTab=0)

Given a matrix of integers, you need to perform a wave print of the matrix. A wave print is obtained by traversing the matrix in a zigzag pattern, starting from the top-left element and alternating the traversal direction for each column.

*Initial Matrix:*

*↓     ↑     ↓*

*13    34    33*

*↓     ↑     ↓*

*39    54    11*

*↓     ↑     ↓*

*18    22    27*

*Wave Print:*

*13 → 39 → 18 → 22 → 54 → 34 → 33 → 11 → 27*

**Function to perform wave print of the matrix**

* The **wavePrint** function takes the matrix, the number of rows, and the number of columns as input and returns a vector **ans** containing the elements in wave print order.
* The function initializes an empty vector **ans** with enough space to store all the elements in the matrix.
* It then uses a nested loop to traverse the matrix. For each column, it checks if the column index is odd or even using the bitwise **&** operation (**c & 1**).
* If the column index is odd, it traverses the column in an upward direction, starting from the last row and moving towards the first row.
* If the column index is even, it traverses the column in a downward direction, starting from the first row and moving towards the last row.
* During the traversal, it stores the elements in the **ans** vector using the **index** variable to keep track of the current position.
* Finally, it returns the **ans** vector containing the wave print elements.

**Time Complexity: The time complexity of the code is O(rows \* cols) as it needs to visit each element in the matrix once.**

**Space Complexity: The space complexity is O(rows \* cols) as it creates a vector to store the wave print elements, which can hold at most rows \* cols elements.**