**Question 4**

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**First, we expand the array A into a two-dimensional array and re-store the values in binary.**

**Then we create a two-dimensional array B of the same size as array A, and a linked list array C of length .**

**Then we iterate through the array A.**

**When A[i][j] = 1, the chain of C[i-1] is appended with , B[i][j] = C[i-1].**

**When A[i][j] = 0, B[i][j] = B[i-1][j].**

**Finally, we traverse the array C and find the longest linked list. We use the elements in that list as indices to access the original array A, and we get the subarray we need.**

**Given that all our operations access m\*n-sized two-dimensional arrays sequentially, the time complexity of the algorithm is .**