Put each character of cypher text into matrix.

XOR binary of 100 which will act as a key

Finally concatenate them to get the original text.

Find the corresponding characters of the ASCII values

Convert the binary into its ASCII.

Reverse the binary values

Find 1’s complement of the generated binary

Do this for all the characters in derived matrix.

Merge

Convert val1 into binary

Convert val2 into binary

Means val1 = row and val2 = column

Find the character from the s-box and store its row and column as val1 and val2.