**Description-** In [question 11](https://docs.google.com/document/d/1q7jCJMrjYKAmD1HNp8Efr3aKZYMzhKUMmJlfaRFZ62U/edit) first we have a good poem to boost us up and then we have a huge binary code to make us down.

**Ideas and Observations-**

1. First we converted binary into text and got nothing meaningful. This means the binary was encrypted and the most famous algorithm to encrypt is XOR cipher.
2. Then an idea struck and hence we used H3KMKB as the key and it worked with XOR cipher!!
3. This was the decoded message --

“A is a 4X4 matrix is composed of elements 0,1 and 2. Both A and A', have an eigenvector [1,1,1,1] corresponding to the same eigen value. Find number of such matrices.

Instructions: You are required to submit the code for this problem. Marks will be based on your approach.”

**Solution –** Hence we wrote the C program to solve it .This is the required [file](https://drive.google.com/file/d/1Gcm6ggY8FJawP3nCnpbc-Cvbnbou2GVx/view?usp=share_link).

The answer comes out to be 5673.