

### "Solution for 3"

i) Firstly I xor'd  $C_1$  and  $C_2$  and got " $C_1 \oplus C_2$ "

ii) Professor said  $m_1$  and  $m_2$  has one word each from the 100 most common

- I decided to iterate these hundred words and xor " $C_1 \oplus C_2$ " with the common word. For
- There is another for loop to iterate " $C_1 \oplus C_2$ ".

### Result

The hidden words were "time" and "work".

- Next I did xor. xor " $\text{"-time-"}$ " with " $C_1 \oplus C_2$ " and got " $\text{"ework-"}$ ".
- Next I imagined after time, usually we see "to", so I xor'd " $\text{"-time-to-"}$ " with " $C_1 \oplus C_2$ " and got " $\text{"ework-pro"}$ ".
- I was thinking it must be project but realised it is "problem".
- I xor'd " $\text{"ework-problem"}$ " with " $C_1 \oplus C_2$ " and got "time to work".
- It was lots of guessing and I realised "ework" must be "homework". I xor'd " $\text{"-homework-problem"}$ " with " $C_1 \oplus C_2$ " and got "One time to work".

After some try, I realised message were-

"I want more time to work on this homework problem."