I have an easy to understand solution for this problem.

First I wrote the (i+1),(j+1),(k+1) triples on the paper. The triples were going like this (1,2,4), (1,3,9), (1,4,16), (2,4,8), (1,5,25), (1,6,36), (2,6,18), (3,6,12), (4,6,9), (1,7,49), (1,8,64), (2,8,32), (4,8,16)..

Then I saw a pattern between these. There were some seeds and the rest were multiples of these like : (1,2,4)-(2,4,8)-(3,6,12)-(4,8,16) or (1,4,16)-(2,8,32). And the seeds were in the form of (t^2, t\*z, z^2) like (1,2,4), (1,3,9), (4,6,9).

So finding these seeds, taking their multiples and checking for the condition given in the question was enough to solve the problem. Here is the code:

static void Main(String[] args) {

int n = Convert.ToInt32(Console.ReadLine());

string s = Console.ReadLine();

HashSet<string> hash = new HashSet<string>();

for (int t = 1; t \* t <= n; t++){

for (int z = t + 1; z \* z <= n; z++){

int i = t \* t;

int k = z \* z;

int j = t \* z;

for (int x = 1; 1 == 1; x++){

int ii = i \* x;

int jj = j \* x;

int kk = k \* x;

if (ii > n || jj > n || kk > n)

break;

if ((s[jj - 1] == 'b') &&

((s[ii - 1] == 'a' && s[kk - 1] == 'c') ||

(s[ii - 1] == 'c' && s[kk - 1] == 'a'))){

hash.Add(ii+" "+jj+" "+kk);

}

}

}

}

Console.WriteLine(hash.Count);

}