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ROLL NO: 12 (BE-H)

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#include<bits/stdc++.h>

using namespace std;

void rc4\_algo(unsigned char\* input,unsigned char\* key,unsigned char\* &output){

int s[256];

int j=0;int temp,i;

unsigned char\* arr;

for(i=0;i<256;i++){

s[i] = i;

}

for(i=0;i<256;i++){

j=(j+s[i]+key[i%strlen((char\*)key)])%256;

// swap\_ele(s[i],s[j]);

temp = s[i];

s[i] = s[j];

s[j] = temp;

}

//////prga

//int k = (int)strlen(char\*)input;

i=j=0;

int keystream,m=0,k;

arr = new unsigned char[(int)strlen((char\*)input)+1];

//while(k!=0){

for(k=0;k<strlen((char\*)input);k++){

i = (i + 1)%256;

j = (j + s[i])%256;

temp = s[i];

s[i] = s[j];

s[j] = temp;

m = (s[i] + s[j]) % 256;

if(s[m] == input[k])

arr[k] = input[k];

else

arr[k] = s[m] ^ input[k];

}

arr[k] = '\0';

output = arr;

}

int main()

{

cout<<"Enter the plain text: "<<endl;

unsigned char\* pl\_txt;

pl\_txt = (unsigned char\*)malloc(sizeof(char)\*100);

cin>>pl\_txt;

cout<<"Enter the key: "<<endl;

unsigned char\* key;

key = (unsigned char\*)malloc(sizeof(char)\*100);

cin>>key;

unsigned char\* encrypt;

unsigned char\* decrypt;

rc4\_algo(pl\_txt,key,encrypt);

rc4\_algo(encrypt,key,decrypt);

cout<<"Encrypted text is: "<<endl;

cout<<encrypt<<endl;

cout<<"Decrypted text is: "<<endl;

cout<<decrypt<<endl;

return 0;

}

/\*Output:

Enter the plain text:

AkshayBrahmankar13

Enter the key:

vitpune

Encrypted text is:

\â•~â•¨Ã yÂª7â™ Ã¨â˜ºqnâ”¤Ã¿BÃ»Ã…

Decrypted text is:

AkshayBrahmankar13

Process returned 0 (0x0) execution time : 20.647 s

Press any key to continue.

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