**Code :**

#include<iostream>

#include<time.h>

#include<string.h>

using namespace std;

int totalsave=0;

void CC(int difflev)

{

int shift,a=3,c=0;

static int b=1;

char encword[5],decworduser[5],decword[5];

string building;

bool x=true;

cout<<"\n\nLet's Start!!!";

srand(time(0));

if(b==1)

building="hospital";

else if(b==2)

building="School";

else if(b==3)

building="Restaurant";

for(int i=0; i<4; i++)

{

encword[i]=rand()%(122-97+1)+97;

}

cout<<endl;

cout<<"Decrypt this word or the "<<building<<" will be destroyed!!! :";

for(int i=0; i<4; i++)

{

cout<<encword[i];

}

shift=rand()%(5-1+1)+1;

cout<<"\n\nCeaser Shift = "<<shift<<endl;

for(int i=0; i<4; i++)

{

if((encword[i]-shift)<97)

{

decword[i]=(encword[i]-shift+26);

}

else{

decword[i]=(encword[i]-shift);}

}

if(difflev==1)

{

do

{

if(a!=3 && a>=1)

cout<<"\n\nTry Again";

cout<<"\n\nEnter decrypted word: ";

cin>>decworduser;

for(int i=0; i<4; i++)

{

if(decworduser[i]==decword[i])

x=true;

else

{

x=false;

break;

}

}

if(x==true)

{

cout<<"\n\nYou saved the "<<building;

totalsave++;

}

else

cout<<"\n\nOOPS!!!";

if(x==false && a==1)

cout<<"You could'nt save the building!!!";

a--;

}while(x==false && a>=1);

if(x==false)

cout<<"\nTrys finished";

}

if(difflev==2)

{

do

{

if(a!=3 && a>=1)

cout<<"\n\nTry Again";

cout<<"\n\nEnter decrypted word: ";

cin>>decworduser;

for(int i=0; i<4; i++)

{

if(decworduser[i]==decword[i])

x=true;

else

{

x=false;

break;

}

}

if(x==true)

{

cout<<"\n\nYou saved the "<<building;

totalsave++;

}

else

cout<<"\n\nOOPS!!!";

if(x==false && a==2)

cout<<"You could'nt save the building!!!";

a--;

}while(x==false && a>=2);

if(x==false)

cout<<"\nTrys finished";

}

if(difflev==3 )

{

do

{

if(a!=3 && a>=1)

cout<<"\n\nTry Again";

cout<<"\n\nEnter decrypted word: ";

cin>>decworduser;

for(int i=0; i<4; i++)

{

if(decworduser[i]==decword[i])

x=true;

else

{

x=false;

break;

}

}

if(x==true)

{

cout<<"\n\nYou saved the "<<building;

totalsave++;

}

else

cout<<"\n\nOOPS!!!";

if(x==false && a==3)

cout<<"You could'nt save the building!!!";

a--;

}while(x==false && a>=3);

if(x==false)

cout<<"\nTrys finished";

}

b++;

}

void reversearr(int difflev)

{

bool x=true;

int a=3,c=0;

char encword[5],decworduser[5],temp;

static int b=1;

string building;

if(b==1)

building="hospital";

else if(b==2)

building="School";

else if(b==3)

building="Resturant";

char \*start=&encword[0];

char \*endd=&encword[3];

srand(time(0));

for(int i=0; i<4; i++)

{

encword[i]=rand()%(122-97+1)+97;

}

cout<<"\n\nDecrypt this word or the "<<building<<" will be destroyed!!! : ";

for(int i=0; i<4; i++)

{

cout<<encword[i];

}

for(int i=0; i<2; i++)

{

temp=\*start;

\*start=\*endd;

\*endd=temp;

start++;

endd--;

}

if(difflev==1)

{

do

{

if(a!=3 && a>=1)

cout<<"\n\nTry Again";

cout<<"\n\nEnter decrypted word: ";

cin>>decworduser;

for(int i=0; i<4; i++)

{

if(decworduser[i]==encword[i])

x=true;

else

{

x=false;

break;

}

}

if(x==true)

{

cout<<"\n\nYou saved the "<<building;

totalsave++;

}

else

cout<<"\n\nOOPS!!!";

if(x==false && a==1)

cout<<"You could'nt save the building!!!";

a--;

}while(x==false &&a>=1);

if(x==false)

cout<<"\nTrys finished";

}

if(difflev==2)

{

do

{

if(a!=3 && a>=1)

cout<<"\n\nTry Again";

cout<<"\n\nEnter decrypted word: ";

cin>>decworduser;

for(int i=0; i<4; i++)

{

if(decworduser[i]==encword[i])

x=true;

else

{

x=false;

break;

}

}

if(x==true)

{

cout<<"\n\nYou saved the "<<building;

totalsave++;

}

else

cout<<"\n\nOOPS!!!";

if(x==false && a==2)

cout<<"You could'nt save the building!!!";

a--;

}while(x==false &&a>=2);

if(x==false)

cout<<"\nTrys finished";

}

if(difflev==3 )

{

do

{

if(a!=3 && a>=1)

cout<<"\n\nTry Again";

cout<<"\n\nEnter decrypted word: ";

cin>>decworduser;

for(int i=0; i<4; i++)

{

if(decworduser[i]==encword[i])

x=true;

else

{

x=false;

break;

}

}

if(x==true)

{

cout<<"\n\nYou saved the "<<building;

totalsave++;

}

else

cout<<"\n\nOOPS!!!";

if(x==false && a==3)

cout<<"You could'nt save the building!!!";

a--;

}while(x==false && a>=3);

if(x==false)

cout<<"\nTrys finished";

}

b++;

}

int main()

{

int choice,difflev,mode;

string name;

bool a=false;

cout<<"Enter your first name: ";

cin>>name;

cout<<"\n----Welcome "<<name<<" To The World Of Cryptography----"<<endl;

cout<<"\n\n1. Start Game \n2. Tutorial\n";

cin>>choice;

if(choice==1)

{

cout<<"\n\nChoose Difficulty Level\n1. Easy\n2. Intermediate\n3. Hard\n";

while(a==false)

{

cin>>difflev;

if(difflev>=1 && difflev<=3)

a=true;

else

cout<<"\n\nEnter Valid Level: ";

}

cout<<"\n\nEnter mode\n1. Ceaser Cipher\n2. Reverse Array\n";

cin>>mode;

if(mode==1)

{

for(int i=0; i<3; i++)

{

CC(difflev);

}

if(totalsave>=2)

cout<<"\n\nYou win!!!\nYou saved "<< totalsave<<" buildings.";

else

cout<<"\n\nOOPS You Lose!!!\nYou saved "<< totalsave<<" buildings.";

}

else if(mode==2)

{

for(int i=0; i<3; i++)

{

reversearr(difflev);

}

if(totalsave>=2)

cout<<"\n\nYou win!!!\nYou saved "<< totalsave<<" buildings.";

else

cout<<"\n\nOOPS You Lose!!!\nYou saved "<< totalsave<<" buildings.";

}

else

cout<<"\n\nEnter Valid Mode!!!";

}

else if(choice==2)

{

cout<<"\n\nWelcome to the Cryptography Game! Your mission is to save buildings by decrypting words in two modes: Caesar Cipher and Reverse Array.\nChoose Difficulty:\n\nEasy (3 attempts), Intermediate (2 attempts), Hard (1 attempt).\nGame Modes:\n\nCaesar Cipher: Decrypt a 4-letter word by reversing the Caesar shift (e.g., shift of 2 turns efgh to cdef).\nReverse Array: Reverse the 4-letter word (e.g., abcd becomes dcba).\nWinning: Save at least 2 out of 3 buildings to win. Fail, and the city is destroyed.\nPro Tips:For Caesar Cipher, wrap around if letters go below 'a'.\nStay calm and double-check your answers.\nGood luck, cryptographer! \n"<<endl;

}

else

cout<<"Invalid Input!!!"<<endl;

}

Output :

