

# **1.INTRODUCTION**

## **❖ WHAT IS ENCRYPTION?**

Encryption is the process of using an algorithm to transform information to make it unreadable for unauthorized users. This cryptographic method protects sensitive data such as credit card numbers by encoding and transforming information into unreadable cipher text. This encoded data may only be decrypted or made readable with a key.

Encryption is essential for ensured and trusted delivery of sensitive information.

## **❖ WHAT IS DECRYPTION?**

**Decryption** is the process of taking encoded or encrypted text or other data and converting it back into text that you or the computer can read and understand. This term could be used to describe a method of unencrypting the data manually or unencrypting the data using the proper codes or keys.

Data may be encrypted to make it difficult for someone to steal the information. Some companies also encrypt data for general protection of company data and trade secrets. If this data needs to be viewable, it may require decryption. If a decryption passcode or key is not available, special software may be needed to decrypt the data using algorithms to crack the decryption and make the data readable.

## **• WHAT ARE ITS TYPES?**

Symmetric-key and asymmetric-key are the two primary types of encryption.

- **SYMMETRIC**

Symmetric-key encryption uses two secret, often identical keys or codes for computers involved in message transmission. Each secret key's data packet is self-encrypted. The first symmetric encryption algorithm is the Data Encryption Standard (DES), which uses a 56-bit key and is not considered attack-proof. The Advanced Encryption Standard (AES) is considered more reliable because it uses a 128-bit, a 192-bit or a 256-bit key.

- **ASYMMETRIC**

Asymmetric-key encryption, also known as public-key encryption, uses private and public keys in tandem. The public key is shared with computers attempting to communicate securely with the user's computer. This key handles encryption, rendering the message indecipherable in transit. The private matching key remains private on the user's computer. It decrypts the message and makes it readable. Pretty good privacy (PGP) is a commonly used public-key encryption system.

- ***WHAT IS CIPHER TEXT?***

A cipher is a method of hiding words or text with encryption by replacing original letters with other letters, numbers and symbols through substitution or transposition. A combination of substitution and transposition is also often employed.

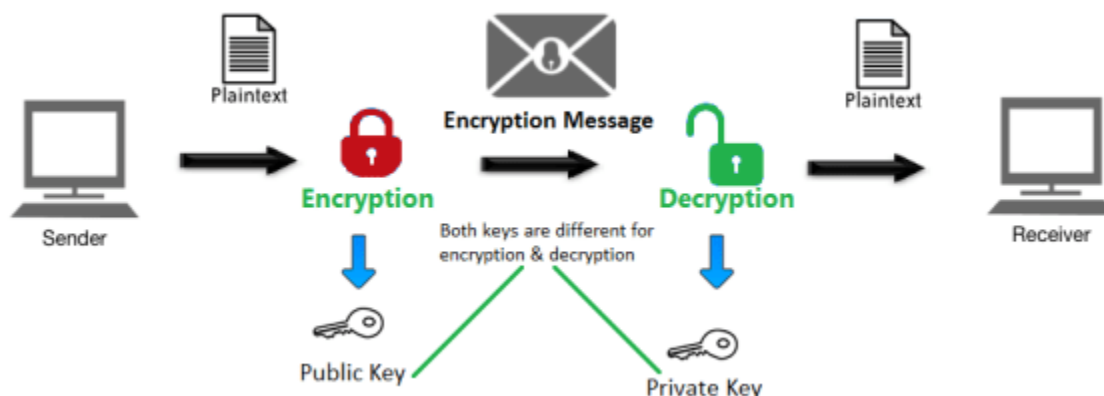
Cipher also refers to the encrypted text, cryptography system or encryption key for the original text.

Encrypted text is also known as ciphertext. Plaintext is the original, unencrypted text.

- **HOW ENCRYPTION AND DECRYPTION  
(CRYPTOGRAPHY)ACTUALLY WORKS?**

Encryption enhances the security of a message or file by scrambling the content. To encrypt a message, you need the right key, and you need the right key to decrypt it as well. It is the most effective way to hide communication via encoded information where the sender and the recipient hold the key to decipher data. The concept isn't that different from children who come up with secret code words and other discreet ways to communicate, where only they can be able to understand the message. Encryption is like sending secret messages between parties—if someone tries to pry without the proper keys, they won't be able to understand the message.

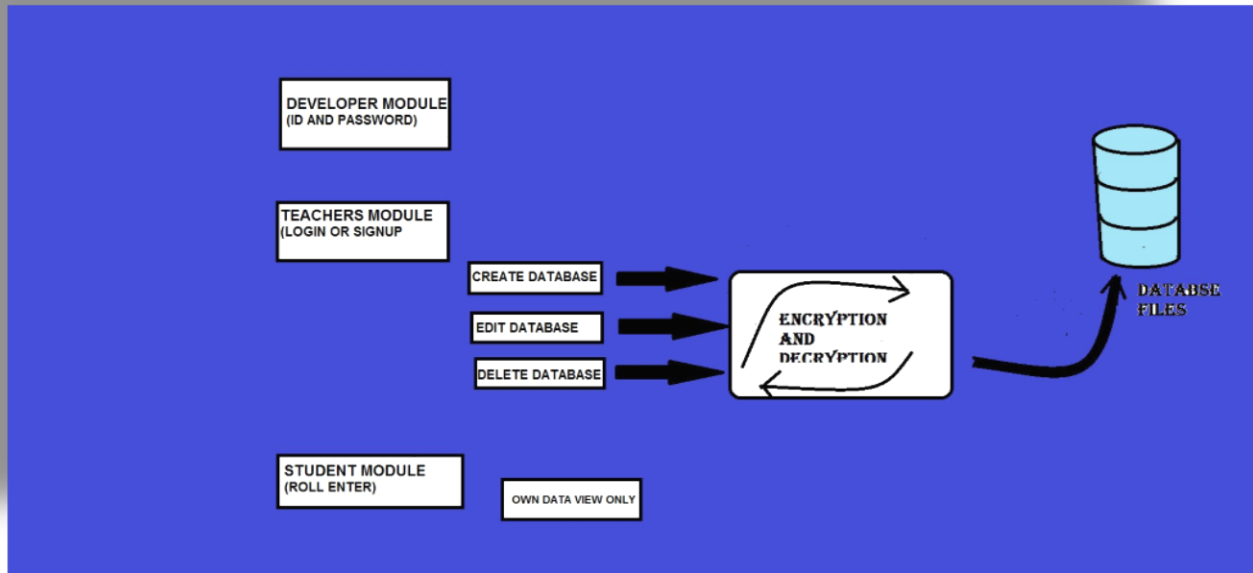
There are two methods of encryption: symmetric and asymmetric encryption. Symmetric encryption, also known as secret key encryption, pertains to the sender and the recipient holding the same keys to encrypt and decrypt a message. Asymmetric encryption, or public key encryption uses what is called a key pair—a public key for encrypting a message, and a private key to decrypt it.



- ***OVERVIEW OF THE PROJECT***

While encryption doesn't magically convey security, it can still be used to protect a user's identity and privacy. If we are ever being watched, inadvertently or not, we can hide our data by using properly implemented crypto systems. According to cryptographer and security and privacy specialist Bruce Schneier, "Encryption works best if it is ubiquitous and automatic. It should be enabled for everything by default, not a feature you only turn on when you're doing something you consider worth protecting."

## **2. MODULES OF THE PROJECT**



This project comprises of three primary modules :-

- DEVELOPER MODULE
- TEACHERS MODULE
- STUDENT MODULE

### ➤ DEVELOPER'S MODULE

In this module there is a portal for developer only for accessing the part of data hidden database .

He/she is able to access all the ids and passwords of teachers previously logged in after the installation of the software in the system.

He/she can also be able to access all the students information which was being created after the installation of the software

He/she able to access all those by providing the Id and Password into the developer's portal.

## ➤TEACHER'S MODULE

In teacher's module their firstly software asks to login or signup their ids and password.

One is able to go through the sub modules after the successful login otherwise he/she has to sign up their account for creating databases.

If he/she has done successful login then he/she will be able to create/edit/delete the databases by accessing sub modules.

- **CREATE :-** In this sub module ,the teacher is able to create any students details by providing the NAME/ ROLL/ BRANCH/ ADDRESS (Landmark) of the student.
- **EDIT:-** In this sub module, the teacher is able to manipulate any student data by inserting their roll no. in to the module.
- **DELETE:-**In this sub module, the teacher is able to delete any of the student data from the database by providing his/her roll no. into the module.

If he/she has chosen to sign up, then he/she had to create their login id and password .

Later he/she will be able to access the sub modules of the teacher's module.

## ➤STUDENT'S MODULE

This module is mainly for the student to access their information they can only see their module by providing their roll no.

### **3.REQUIREMENT SPECIFICATION**

#### **➤HARDWARE REQUIREMENT**

<i>PROCESSOR TYPE</i>	<i>: Dual Core or Pentium-IV(min)</i>
<i>SPEED</i>	<i>:1.5GHZ (min)</i>
<i>RAM</i>	<i>:512 MB(min)</i>
<i>HARD DISK</i>	<i>:20GB (min)</i>

#### **➤SOFTWARE REQUIREMENT**

<i>OPERATING SYSTEM</i>	<i>:windows based any(Win2000 min)</i>
<i>PROGRAMMING PACKAGE</i>	<i>:C plus plus (with file handling)</i>
<i>TOOLS</i>	<i>: -</i>
<i>SDK</i>	<i>: -</i>

#### **SOFTWARE USED**

*DEV C++ 5.11*

## ➤ SECURITY REQUIREMENT

*For the better running of the software always ensure that the all folder relaeted to the software exists or not.*

*This is good practice to always check for folders before running the software. If lost unpack the zip file and start from begining.*

*This is the responsibility of the teachers to keep their passwords hidden , if any one knows ,then their may be leakage of information.*

*The files contained in the folder must exist, if any deletion result in the error of concurrency of the software.*

*As this software is built for conveying the concept of encryption and decryption so no foreign key or primary keys were used ,it is the responsiblity of the user to check the redundancy of the software.*

*This software is not for commercial use,it may cause data corruption; this is for education purpose only.*

## ➤ PERFORMANCE REQUIREMENT

*For the better performance of the software , it must run free from other applications ie, no other software are running at that time.*



## **4.SYSTEM ANALYSIS**

### ➤ FACT FINDING

*The formal process of using techniques such as interviews and questionnaires to collect facts about systems, requirements, and preferences is termed as fact-finding. In this chapter, it will be discussed when a database developer might use fact-finding techniques, and what types of facts should be captured. We present an overview of how these facts are used to generate the main types of documentation used throughout the database system.*

- Examining documentation
- Interviewing
- Observing the enterprise in action
- Research
- Questionnaires
  - **Examining documentation** can be helpful when you try to gain some insight as to how the requirement for a database arose. You may also find that documentation can help to acquire information on the part of the enterprise associated with the problem. If the problem relates to the current system, there should have to be documents associated with that system. By examining documents, forms, reports, and files associated with the current system, you can quickly gain some thoughtful concepts out of the system.
  - **Interviewing** is the most frequently used, and usually most useful, fact-finding procedure used. We can interview to collect information from person face-to-face. There can be several objectives for using interviewing such as finding out facts, verifying those facts, clarifying these released facts, generating enthusiasm, getting the end-user involved, identifying requirements, and gathering ideas and opinions. However, using the interviewing practice must require proper communication skills for dealing

effectively with people who have different values, priorities, opinions, motivations, and personalities.

- **Observing the enterprise in action:** Observing the enterprise in action: Observation is one of the most successful fact-finding techniques carried out for understanding a system. Using this technique, it is achievable to either participate in or observe a person perform activities to learn about the system.
- **Research:** A useful fact-finding technique is to research the application or the problem that you are dealing with and want to put within a database. Computer trade journals, reference books, and the Internet are good sources of information which can make available of huge quantity of information on how others have solved similar problems/issues plus whether or not any software packages exist to resolve or even partially solve your current problem.
- **Questionnaires:** Another fabulous fact-finding method is to conduct surveys through questionnaires. Questionnaires are special-purpose documents that allow facts to be gathered from a large number of people while upholding some control over their responses. When dealing with a large number of listeners or audience, no other fact-finding technique can tabulate the same facts so efficiently. There are two types of questions that can be asked in a questionnaire namely *free-format* and *fixed-format*. *Free-format* questions offer the respondent greater freedom inputting answers. *Fixed-format* questions require specific responses from individuals, and for the given question, the respondent must choose from the available answers.

## ➤ SOFTWARE FEATURES

- ❖ The prime purpose of C++ programming was to add object orientation to the C programming language, which is in itself one of the most powerful programming languages.
- ❖ The core of the pure object-oriented programming is to create an object, in code, that has certain properties and methods. While designing C++ modules, we try to see whole world in the form of objects. For example a car is an object which has certain properties such as color, number of doors, and the like. It also has certain methods such as accelerate, brake, and so on.
- ❖ There are a few principle concepts that form the foundation of object-oriented programming –

## Object

- This is the basic unit of object oriented programming. That is both data and function that operate on data are bundled as a unit called as object.

## ➤ Class

When you define a class, you define a blueprint for an object. This doesn't actually define any data, but it does define what the class name means, that is, what an object of the class will consist of and what operations can be performed on such an object.

## Abstraction

- Data abstraction refers to, providing only essential information to the outside world and hiding their background details, i.e., to represent the needed information in program without presenting the details.
- For example, a database system hides certain details of how data is stored and created and maintained. Similar way, C++ classes provides different methods to the outside world without giving internal detail about those methods and data.

## Encapsulation

- Encapsulation is placing the data and the functions that work on that data in the same place. While working with procedural languages, it is not always clear which functions work on which variables but object-oriented programming provides you framework to place the data and the relevant functions together in the same object.

## Inheritance

- One of the most useful aspects of object-oriented programming is code reusability. As the name suggests Inheritance is the process of forming a new class from an existing class that is from the existing class called as base class, new class is formed called as derived class.
- This is a very important concept of object-oriented programming since this feature helps to reduce the code size.

## Polymorphism

- The ability to use an operator or function in different ways in other words giving different meaning or functions to the operators or functions is called polymorphism. Poly refers to many. That is a single function or an operator functioning in many ways different upon the usage is called polymorphism.

## Overloading

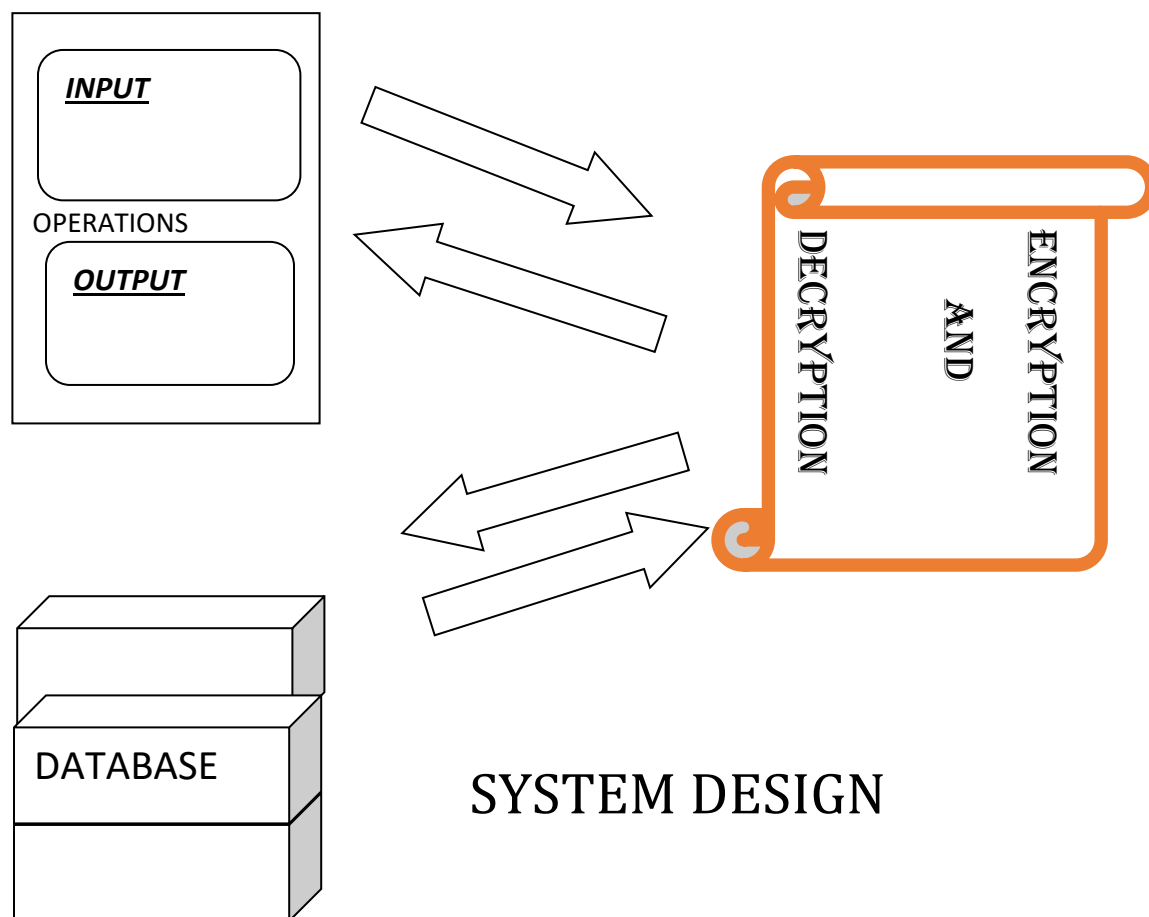
- The concept of overloading is also a branch of polymorphism. When the exiting operator or function is made to operate on new data type, it is said to be overloaded.

## **5.DESIGN AND DEVELOPMENT**

### ➤ SYSTEM DESIGN

*System design is the process of planning a new system to document or altogether replace the old system. The purpose of the design phase is to plan a solution for the problem. The phase is the first step in the in moving from the problem domain to the solution domain. The design is also called top-level design. The design phase translates the logical aspects of the system into physical aspects of the system.*

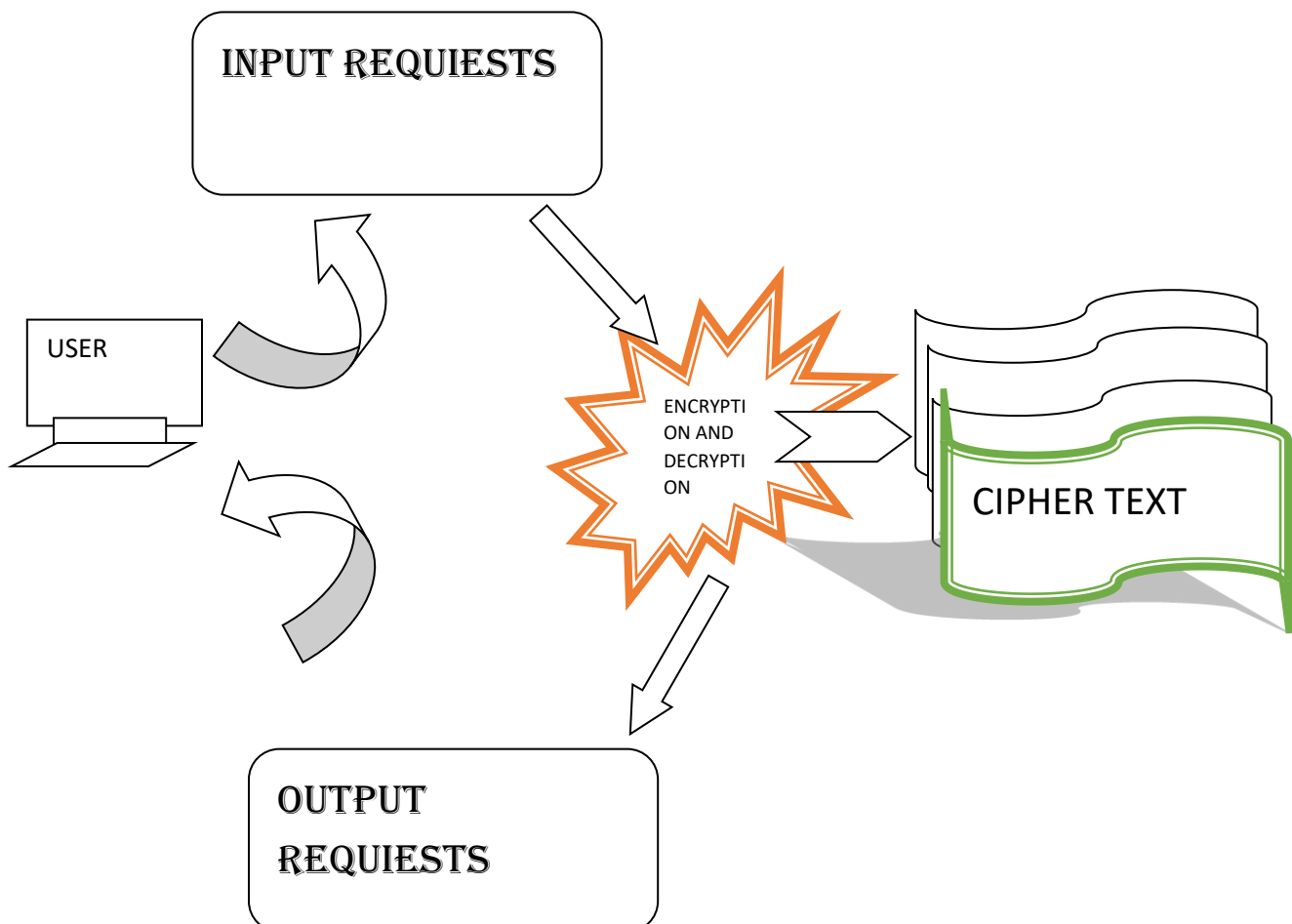
#### ● SYSTEM FLOW DIAGRAM



## ➤ DATAFLOW DIAGRAM

*A data flow diagram shows the way information flows through a process or system. It includes data inputs and outputs, data stores, and the various subprocesses the data moves through. DFDs are built using standardized symbols and notation to describe various entities and their relationships.*

*Data flow diagrams visually represent systems and processes that would be hard to describe in a chunk of text. You can use these diagrams to map out an existing system and make it better or to plan out a new system for implementation. Visualizing each element makes it easy to identify inefficiencies and produce the best possible system.*



## ➤ ALGORITHM

STEP 1. *For the encryption, first take one char from the file which is to be encrypted.*

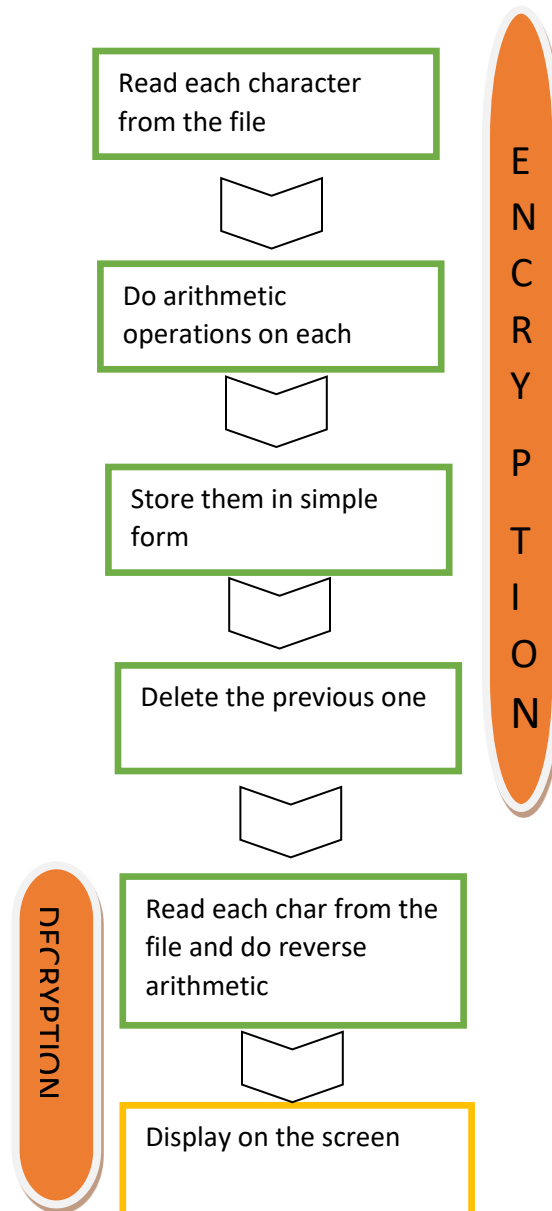
STEP 2. *Do arithmetic operation on it and store it.*

STEP 3. *Do until the file reaches to the end, then store them in simple form.*

STEP 4. *Delete the previous one.*

STEP 5. *For the decryption, read each char from the file and do reverse arithmetic operation.*

STEP 1. *And output them on screen.*



## ➤ CODING

```

#include<iostream>

#include<fstream>

#include<string.h>

#include<conio.h>

#include<windows.h>

void create (void); #include<iostream>

#include<fstream>

#include<string.h>

#include<conio.h>

#include<windows.h>

void create (void);

void modify (void);

void delet (void);

void login(void);

void developer(void);

void view(void);

void implement(void);

using namespace std;

HANDLE out = GetStdHandle(STD_OUTPUT_HANDLE);    //for font

void fontsize(int,int);

int main()

{ int z=1,y=0;

    while(z==1)

    {

        system("cls");

        system("mode 650");

        system("color 1a");

        fontsize(19, 19);

        cout<<"          ----- "<<endl;

        cout<<"          ||-----||"<<endl;

```



```

cout<<"          ||    REPUBLIC OF GAMERS UNION~[PROJECT MACROSS]    ||"<<endl;
cout<<"          ||    .....                                ||"<<endl;
cout<<"          ||    The Concept Of ENCRYPTION AND DECRYPTION    ||"<<endl;
cout<<"          ||          For FILE SECURITY                    ||"<<endl;
cout<<"          ||          With                                  ||"<<endl;
cout<<"          ||          STUDENT DATABASE MANAGEMENT SYSTEM..... ||"<<endl;
cout<<"          ||          ||"<<endl;
cout<<"          ||          ||"<<endl;
cout<<"          ||Project leader:=ASHISH                        ||"<<endl;
cout<<"          ||CREW members:=SANTOSH,SANDEEP,RABINDRANATH,RAJESH||"<<endl;
cout<<"          ||----- ||"<<endl;
cout<<"          ||-----||"<<endl;

cout<<"\n*****\n";

cout<<"          1.DEVELOPERS PORTAL\n";
cout<<"          2.TEACHER LOGIN/SIGNUP PORTAL\n";
cout<<"          3.STUDENT ACTIVITY PORTAL \n";
cout<<"          4.EXIT\n";

cin>>y;
if(y==1)
    developer();
    else if(y==2)
        login();
    else if(y==3)
        view();
    else if(y==4)
        break;

    else
        cout<<"WRONG INPUT...Try AGAIN\n";
        cout<<"\n\npress ENTER.....\n";
        getch();
cout<<"\nloding";

```

```
        for(int i=0;i<5;i++)
        {
            //for(int j=0;j<199999999;j++);
            Sleep(300);
            cout<<".";}

        }

    return 0;
}

/////////////////////////////////login signup module/////////////////////////////////

void login(void)
{ int x;
  cout<<"for LOGIN-----1\n";
  cout<<"for SIGN UP---2\n";
  cin>>x;
  if(x==1)
  { string id,path;char t;int j=0;
    path="DATABASE/";
    cout<<"enter your ID\n";
    cin>>id;
    path.append(id.c_str());
    id=path;
    fstream file(id.c_str(),ios::in);

    if(file.is_open())
    { string id2,password,password2;
      id2=id;
      id2.append(".txt");
      path.append(id2.c_str());
```

```
        cout<<"Enter your PASSWORD\n";
    cin>>password;

    fstream file4(id2.c_str(),ios::out);
while(!file.eof())
{ file>>t;
    t=t-121;
    if(!file.eof())
    { file4<<t;
    }
}
file4.close();
file.close();
file4.open(id2.c_str(),ios::in);
file4>>password2;
file4.close();

if(password==password2)
{ cout<<"access granted\n";    ///delay
remove(id2.c_str());

    //manipulation code

    int choice;

    cout<<"create a student profile-----1\n";
    cout<<"modify a student profile-----2\n";
    cout<<"delete a student profile-----3\n";
    cout<<"for exit                -----4\n";
    cin>>choice;

    if(choice==1)
    {
        create();

    }
}
```

```
else if(choice==2)
//modification module
{
modify();
}
else if(choice==3)
{ delet();
}
else if(choice==4)
{ return;
}

}
else
{
    cout<<"INCORRECT PASSWORD\n";
}

}
else
    cout<<"INVALID ID\n";
}
if(x==2)
{
    string createId,createId2,pass,pass2,path,path2,path3,passD,createD;
char x;
cout<<"FOR SIGN UP==...\n\n\n";
cout<<"[Id and Password both must be 8 characters]\n";
cout<<"Enter your ID :";
cin>>createId;
cout<<"Enter your PASSWORD :";
cin>>pass;
```

```
createD=createId;
passD=pass;
path="DATABASE/";
path2="DATABASE_CONFIDENTIAL/logins";
path3=path2;
path3.append(".txt");
path.append(createId.c_str());
createId=path;
createId2=createId;
createId2.append(".txt");
fstream file6(createId2.c_str(),ios::out);
fstream fileD(path2.c_str(),ios::out | ios::app);
fstream fileD1(path3.c_str(),ios::out);
fileD1<<createD<<"      "<<passD<<endl;
fileD1.close();
fileD1.open(path3.c_str(),ios::in);
while(!fileD1.eof())
{ fileD1>>noskipws>>x;
  x=x+131;
  if(!fileD1.eof())
  { fileD<<x;
    }
  }
fileD.close();
fileD1.close();
remove(path3.c_str());
file6<<pass;
file6.close();
fstream file7(createId.c_str(),ios::out);
file6.open(createId2.c_str(),ios::in);
while(!file6.eof())
```

```

{file6>>x;
x=x+121;
if(!file6.eof())
{ file7<<x;
    fileD<<x;
}
}
file6.close();
file7.close();
fileD.close();
remove(createId2.c_str());
cout<<"YOUR ACCOUT HAS BEEN CREATED\n";
cout<<"thank you\n";

}

return;
}

//////////////////////////////////////////developer module

```

```

void developer(void)
{ int x;char c;
string ID;
int pass;
string path1,path2;
path1="DATABASE_CONFIDENTIAL/logins";
path2="DATABASE_CONFIDENTIAL/data";
cout<<"enter your id sir\n";
cin>>ID;

if(ID=="ashish")
{ cout<<"enter your password sir\n";

```

```
//developer id
```

```

cin>>pass;

if (pass==24955942)                                     //developer
password

{ int choice;

  cout<<"FOR VIEW ALL IDS and PASSWORDS ACCESSED-----1\n";

  cout<<"FOR VIEW ALL STUDENT DATA -----2\n\n";

  cout<<"[NOTE]:-<<endl;

  cout<<"[all data viewed here are those,which has been created form the software is
started]"<<endl;

  cout<<"[it also consists of deleted data for recovery and verification]\n"<<endl;

  cin>>choice;

  if (choice==1)

  {      cout<<" IDs      PASSWORDs\n";

        cout<<"-----\n";

        fstream f(path1.c_str(),ios::in);

        while(!f.eof())

        { f>>noskipws>>c;

          if(!f.eof())

          { c=c-131;
//decryption of ids file

          cout<<c;

          }

        }

      }

    else if(choice==2)

    {  cout<<"NAME    ROLL    BRANCH    ADDRESS"<<endl;

      cout<<"-----\n";

      ifstream f(path2.c_str(),ios::in);

      while(!f.eof())

      { f>>c;

      if(!f.eof())

```

```
        { c=c-122;
//decryption of stud file
        cout<<c;
        }
    }

}

}

else
{   cout<<"sorry...wrong password \n";
    cout<<"thank you ...joining us\n";
}
}
else
{ cout<<"sorry...wrong ID \n";
  cout<<"thank you ...joining us\n";
}
return;

}

////////////////////////////////////module definition area
////////////////////////////////////

void create ()
{ string roll,Roll,branch,address,name,path,path2,path3,rollID,oroll;
path="DATABASE_STUD/";
path2="DATABASE_CONFIDENTIAL/data";
path3=path2;
char ch;
```



```

cout<<"enter NAME=";
cin>>name;
cout<<"\nenter ROLL=";
cin>>roll;
cout<<"\nenter BRANCH=";
cin>>branch;
cout<<"\nenter ADDRESS=";
cin>>address;
oroll=roll;
rollD=roll;
path.append(roll.c_str());
roll=path;
Roll=roll;
Roll.append(".txt");
fstream file1(Roll.c_str(),ios::out);
file1<<name<<"    "<<oroll<<"    "<<branch<<"    "<<address;
file1.close();
file1.open(Roll.c_str(),ios::in);
fstream file2(roll.c_str(),ios::out);
    while(!file1.eof())
    { file1>>noskipws>>ch;
        ch=ch+121;
files
        if (!file1.eof())
        { file2<<ch;
            }    }
            file1.close();
            file2.close();

remove(Roll.c_str());
path3.append(".txt");
file1.open(path3.c_str(),ios::out);
file1<<name<<"                "<<rollD<<"                "<<branch<<"                "<<address<<endl;

```

```

file1.close();
file1.open(path3.c_str(),ios::in);
file2.open(path2.c_str(),ios::out | ios::app);
while(!file1.eof())
{ file1>>noskipws>>ch;
ch=ch+122;                ///++++
if(!file1.eof())
{ file2<<ch;
}
}
file1.close();
file2.close();
remove(path3.c_str());
    cout<<"student file created succefully :("<<name<<)"<<endl;
    return ;
}

```

```

//////////.....

```

```

void modify()
{ string roll,Roll,branch,address,name,path,path2,path3,roll2;
path="DATABASE_STUD/";
path2="DATABASE_CONFIDENTIAL/data";
path3=path2;
char ch;
cout<<"enter roll for updation\n";
cin>>roll;
path.append(roll.c_str());
roll=path;
fstream file3(roll.c_str(),ios::in);
if(file3.is_open())

```

```

{
file3.close();
remove(roll.c_str());
cout<<"enter new NAME      =:";
cin>>name;
cout<<"\nenter new ROLL      =:";
cin>>roll;
cout<<"\nenter new BRANCH =:";
cin>>branch;
cout<<"\nenter new ADDRESS=:";
cin>>address;

path="DATABASE_STUD/";
path.append(roll.c_str());
roll2=roll;
roll=path;
Roll=roll;
Roll.append(".txt");

fstream file1(Roll.c_str(),ios::out);
file1<<name<<"      "<<roll2<<"      "<<branch<<"      "<<address;
file1.close();
file1.open(Roll.c_str(),ios::in);
fstream file2(roll.c_str(),ios::out);
while(!file1.eof())
{ file1>>noskipws>>ch;
ch=ch+121;
files
if (!file1.eof())
{ file2<<ch;
}
}
file1.close();
file2.close();
//reading from the

```

```

remove(Roll.c_str());

path3.append(".txt");
file1.open(path3.c_str(),ios::out);
file1<<name<<"      "<<roll2<<"      "<<branch<<"      "<<address<<endl;
file1.close();
file1.open(path3.c_str(),ios::in);
file2.open(path2.c_str(),ios::out | ios::app);
while(!file1.eof())
{ file1>>noskipws>>ch;
ch=ch+122;                      ///++++
if(!file1.eof())
{ file2<<ch;
}
}
file1.close();
file2.close();
remove(path3.c_str());

    cout<<"databse modified of Roll:"<<roll2<<endl;
    cout<<"Thank YOU\n";
    return ;
}
else
{
    cout<<"no roll found\n";
    return;}

}

//////////////////////////.....

void delet()
{string roll,Roll,branch,address,name,path,roll2;

```

```
    path="DATABASE_STUD/";
    char ch;
    cout<<"enter roll for deletion\n";
    cin>>roll;
    roll2=roll;
    path.append(roll.c_str());
    roll=path;
    fstream file3(roll.c_str(),ios::in);
    if(file3.is_open())
    {

        file3.close();

        remove(roll.c_str());
        cout<<"student file roll:= "<<roll2<<" has been DELETED \n";
        return;
    }
    else
    { cout<<"NO SUCH FILE EXIST OF THIS ROLL no.:-"<<roll2<<endl;
      return;
    }

}

void view()
{ string roll,Roll,branch,address,name,path,roll2;
  path="DATABASE_STUD/";
  char ch;
  cout<<"enter roll for view\n";
  cin>>roll;
  roll2=roll;
  path.append(roll.c_str());
```

```

fstream file3(path.c_str(),ios::in);
if(file3.is_open())
{cout<<"NAME    ROLL    BRANCH    ADDRESS\n";
cout<<"----    ----    -----    -----\n";
while(!file3.eof())
    { file3>>noskipws>>ch;
      ch=ch-121;
if(!file3.eof())
    { cout<<ch;
      }

    }
}
else
{ cout<<"\nNO SUCH FILE EXIST OF THIS ROLL no.:"<<roll2;
}
return;
}

//////////////////////.....

void fontsize(int a, int b){
    PCONSOLE_FONT_INFOEX lpConsoleCurrentFontEx = new CONSOLE_FONT_INFOEX();
    lpConsoleCurrentFontEx->cbSize = sizeof(CONSOLE_FONT_INFOEX);
    GetCurrentConsoleFontEx(out, 0, lpConsoleCurrentFontEx);
    lpConsoleCurrentFontEx->dwFontSize.X = a;
    lpConsoleCurrentFontEx->dwFontSize.Y = b;
    SetCurrentConsoleFontEx(out, 0, lpConsoleCurrentFontEx);
}

```

## 6.SCREEN SHOTS

```

C:\Users\ASHISH KUMAR YADAV\Desktop\project marcross\project marcross_bug free\project marcross.exe

REPUBLIC OF GAMERS UNION~[PROJECT MACROSS]
The Concept Of ENCRYPTION AND DECRYPTION
For FILE SECURITY
With
STUDENT DATABASE MANAGEMENT SYSTEM.....

Project leader:=ASHISH
CREW members:=SANTOSH,SANDEEP,RABINDRANATH,RAJESH

*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT

```

### 1. START UP OF THE SOFTWARE.....

```

C:\Users\ASHISH KUMAR YADAV\Desktop\project marcross\project marcross_bug free\project marcross.exe

REPUBLIC OF GAMERS UNION~[PROJECT MACROSS]
The Concept Of ENCRYPTION AND DECRYPTION
For FILE SECURITY
With
STUDENT DATABASE MANAGEMENT SYSTEM.....

Project leader:=ASHISH
CREW members:=SANTOSH,SANDEEP,RABINDRANATH,RAJESH

*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT

1
enter your id sir
ashish
enter your password sir
24955942_

```

### 2.DEVELOPERS LOGIN.....

```

*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT

1
enter your id sir
ashish
enter your password sir
24955942
FOR VIEW ALL IDS and PASSWORDS ACCESSED-----1
FOR VIEW ALL STUDENT DATA -----2

[NOTE]:-
[all data viewed here are those,which has been created form the software is started]
[it also consists of deleted data for recovery and verification]

1
  IDs      PASSWORDs
  ----      -
raj      123456
ashish   24955942

press ENTER.....

```

### 3.ACCESS IDS AND PASSWORDS BY DEVELOPER

```

*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT

1
enter your id sir
ashish
enter your password sir
24955942
FOR VIEW ALL IDS and PASSWORDS ACCESSED-----1
FOR VIEW ALL STUDENT DATA -----2

[NOTE]:-
[all data viewed here are those,which has been created form the software is started]
[it also consists of deleted data for recovery and verification]

2
NAME  ROLL  BRANCH  ADDRESS
----  -
ashish  22    cse     dhanbad
ashish  9     cse     dugda
ashish  9     cse     dugda

press ENTER.....

```

### 4.ACCESSING ALL STUDENT DATA BY DEVELOPERS MODULE



C:\Users\ASHISH KUMAR YADAV\Desktop\project marcross\project marcross\_bug free\project marcross.exe

```

      REPUBLIC OF GAMERS UNION~[PROJECT MACROSS]
      ~~~~~
      The Concept Of ENCRYPTION AND DECRYPTION
      For FILE SECURITY
      With
      STUDENT DATABASE MANAGEMENT SYSTEM.....

      Project leader:=ASHISH
      CREW members:=SANTOSH,SANDEEP,RABINDRANATH,RAJESH
      ~~~~~

*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT
2
for LOGIN-----1
for SIGN UP---2

```

#### 5.INTERFACE OF TEACHER'S MODULE.....

```

*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT
2
for LOGIN-----1
for SIGN UP---2
2
FOR SIGN UP==...

[Id and Password both must be 8 characters]
Enter your ID :raj
Enter your PASSWORD :123456
YOUR ACCOUT HAS BEEN CREATED
thank you

press ENTER.....

```

#### 6.CREATING TEACHER'S ACCOUNT.....

```

*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT
2
for LOGIN-----1
for SIGN UP---2
1
enter your ID
raj
Enter your PASSWORD
123456
access granted
create a student profile-----1
modify a student profile-----2
delete a student profile-----3
for exit          -----4

```

#### 7.SUB MODULE INTERFACES OF TEACHER'S MODULE.....

<pre> ***** 1.DEVELOPERS PORTAL 2.TEACHER LOGIN/SIGNUP PORTAL 3.STUDENT ACTIVITY PORTAL 4.EXIT 2 for LOGIN-----1 for SIGN UP---2 1 enter your ID raj Enter your PASSWORD 123456 access granted create a student profile-----1 modify a student profile-----2 delete a student profile-----3 for exit          -----4 1 enter NAME=:ashish  enter ROLL=:22  enter BRANCH=:cse  enter ADDRESS=:dhanbad_ </pre>	<pre> ***** 1.DEVELOPERS PORTAL 2.TEACHER LOGIN/SIGNUP PORTAL 3.STUDENT ACTIVITY PORTAL 4.EXIT 2 for LOGIN-----1 for SIGN UP---2 1 enter your ID raj Enter your PASSWORD 123456 access granted create a student profile-----1 modify a student profile-----2 delete a student profile-----3 for exit          -----4 1 enter NAME=:ashish  enter ROLL=:22  enter BRANCH=:cse  enter ADDRESS=:dhanbad student file created succefully :(ashish)  press ENTER..... </pre>
--	---

#### 8.CREATING STUDENT DATABSE.....CREATED SUCCESSFULLY.....

```

*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT
2
for LOGIN-----1
for SIGN UP---2
1
enter your ID
raj
Enter your PASSWORD
123456
access granted
create a student profile-----1
modify a student profile-----2
delete a student profile-----3
for exit -----4
2
enter roll for updation
22
*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT
2
for LOGIN-----1
for SIGN UP---2
1
enter your ID
raj
Enter your PASSWORD
123456
access granted
create a student profile-----1
modify a student profile-----2
delete a student profile-----3
for exit -----4
2
enter roll for updation
22
enter new NAME   =:ashish

enter new ROLL   =:9

enter new BRANCH =:cse

enter new ADDRESS=:dugda
databse modified of Roll:9
Thank YOU

press ENTER.....

```

9.EDITING DATABASE.....MODIFIED SUCCESSFULLY.....

```

*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT
2
for LOGIN-----1
for SIGN UP---2
1
enter your ID
raj
Enter your PASSWORD
123456
access granted
create a student profile-----1
modify a student profile-----2
delete a student profile-----3
for exit -----4
3
enter roll for deletion
9
*****
1.DEVELOPERS PORTAL
2.TEACHER LOGIN/SIGNUP PORTAL
3.STUDENT ACTIVITY PORTAL
4.EXIT
2
for LOGIN-----1
for SIGN UP---2
1
enter your ID
raj
Enter your PASSWORD
123456
access granted
create a student profile-----1
modify a student profile-----2
delete a student profile-----3
for exit -----4
3
enter roll for deletion
9
student file roll:= 9 has been DELETED

press ENTER.....

```

10.DELETING DATABASE.....DELETED SUCCESSFULLY.....

```
*****
      1.DEVELOPERS PORTAL
      2.TEACHER LOGIN/SIGNUP PORTAL
      3.STUDENT ACTIVITY PORTAL
      4.EXIT
3
enter roll for view
9
NAME      ROLL      BRANCH      ADDRESS
----      -
ashish    9         cse         dugda

press ENTER.....
```

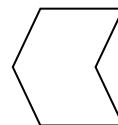
## 11. VIEWING DATABASE IN STUDENT'S PORTAL.....

```

2
NAME      ROLL      BRANCH      ADDRESS
-----
ashish     22         cse         dhanbad
ashish     9          cse         dugda
ashish     9          cse         dugda

```

## Plain Text



```

1 01aa1assssss→ssssssŸıßssssssPaÜeÜP„01aa1assssss
2 3ssssssŸıßssssssPiáPÜ„01aa1assssss³
3 sssssŸıßssssssPiáPÜ„

```

*CIPHER TEXT*

## **7.CONCLUSION**

*As we toward a society where automated information resources are increased and cryptography will continue to increase in importance as a security mechanism. Electronic networks for banking, shopping, inventory control, benefit and service delivery, information storage and retrieval, distributed processing, and government applications will need improved methods for access control and data security. The information security can be easily achieved by using Cryptography technique. DES is now considered to be insecure for some applications like banking system. there are also some analytical results which demonstrate theoretical weaknesses in the cipher. So it becomes very important to augment this algorithm by adding new levels of security to make it applicable. By adding additional key, modified S-Box design, modifies function implementation and replacing the old XOR by a new operation as proposed by this thesis to give more robustness to DES algorithm and make it stronger against any kind of intruding. DES Encryption with two keys instead of one key already will increase the efficiency of cryptography.*

