

C-Plus-Plus Project

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Topic – To make a chatting Application and storing the previous chats using database.

Requirements-Basics of CPP,OOPs concepts of CPP, Basics of Databases(e.g. – MYSQL),Database Connector Concepts etc;

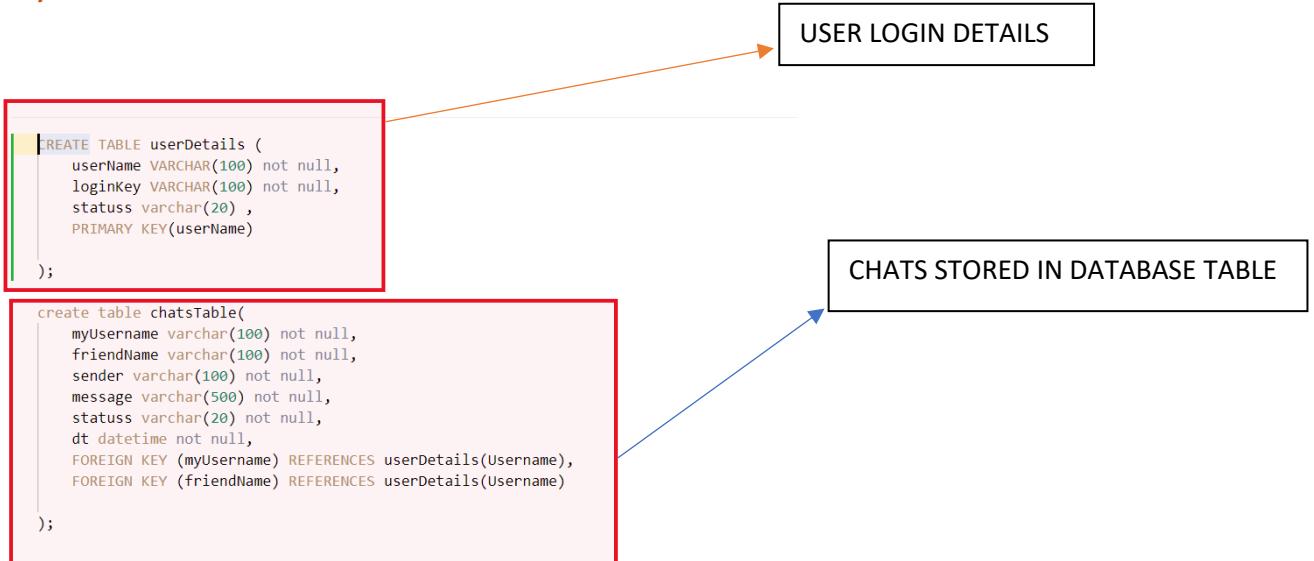
Other Requirements-Laptop or PC to Run Program, Application to Run/Implement(e.g.-Visual Studio), Mysql Application, popSQL ;

Theory: This chat Application Project is built in the Visual Studio Community 2022 . MySQL database is used to store the data of users such as chats and login credentials.

Concept of classes(oop) , built-in as well as user-defined functions , header files , database implementation in cpp are used in this project.

Some More Concepts of Databases :

1) TABLES:

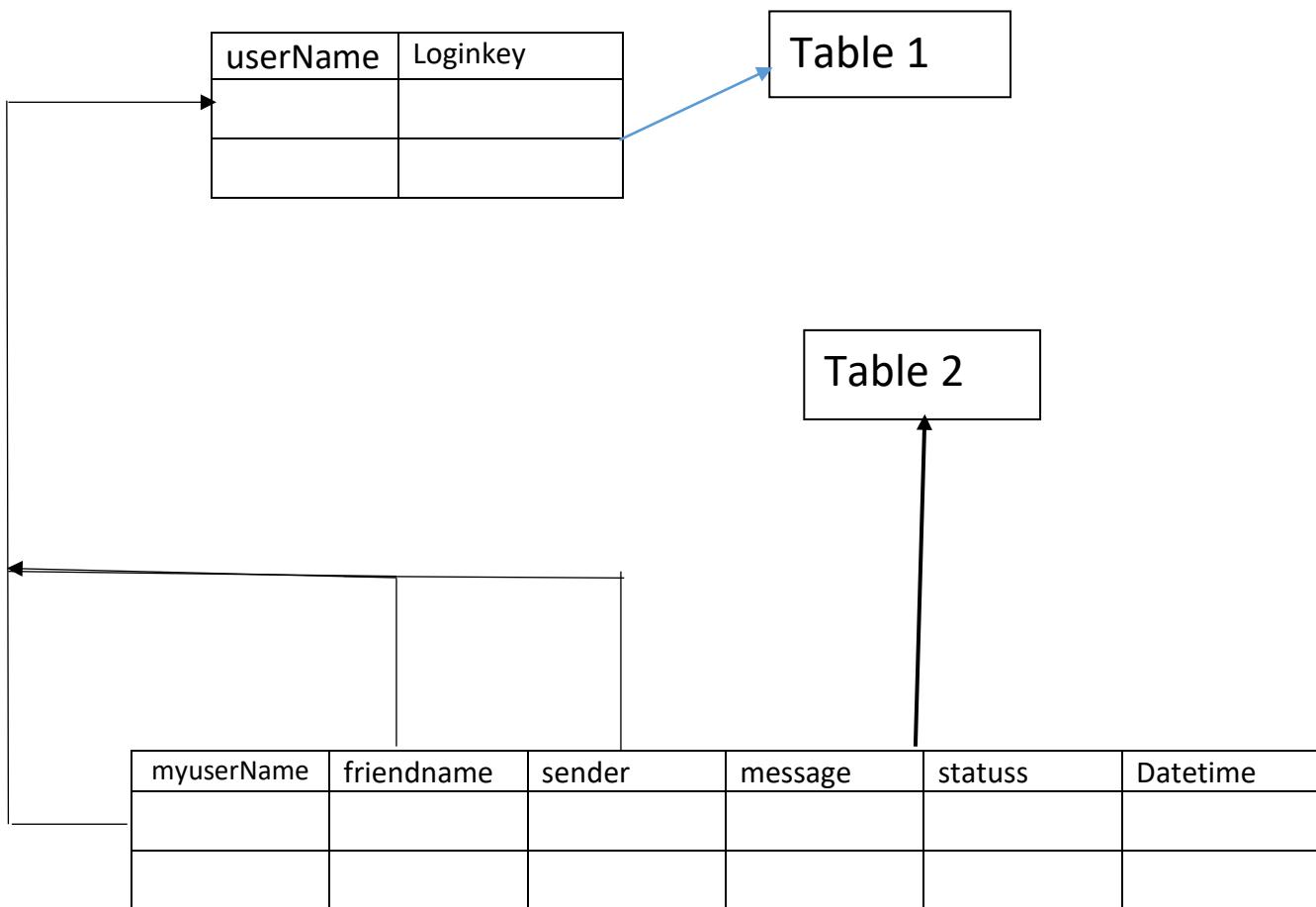


2) TABLES VIEW :

myUsername	friendName	sender	message	statuss	dt
atharva	mahesh	mahesh	hii		2022-03-20 01:32:27
mahesh	atharva	mahesh	hii		2022-03-20 01:32:27
atharva	mahesh	mahesh	atharva		2022-03-20 01:32:27
mahesh	atharva	mahesh	atharva		2022-03-20 01:32:27
mahesh	atharva	atharva	hello	new message	2022-03-20 01:33:26
atharva	mahesh	atharva	hello		2022-03-20 01:33:26

userName	loginKey
atharva	atharva
mahesh	mahesh
raj	raj

Above data is stored in database as user enters or registers for the account.



IN the above Table 1, Username is the primary key.

In the Table 2,myUserName,friendName, sender are the foreign keys referencing to the users in the Table 1.

3) Main Screen -options given to log into account and to create new account.

```

-----WELCOME TO MY CHAT APPLICATION-----
1. Create Account
2. Login to your Account
3. Exit

*Enter : 

```

4) Usernames are uniquely stored in the databases so no duplicates entries allowed of same usernames while creating new account.

```
-----WELCOME TO MY CHAT APPLICATION-----  
Enter Username :mahesh  
Enter Password :mahesh  
User Name already exists ...Error Code:1062  
  
1. Login to Account  
2. Back  
3. Exit  
  
*Enter : -
```

5)Login Screen for existing user, if the user enters wrong login credentials he/she cannot login.

```
-----WELCOME TO MY CHAT APPLICATION-----  
  
-----Login Page-----  
  
Enter Username :raj  
Enter password :ram  
User Not Found.Wrong User Name or Password .  
Enter any num key :  
  
*Enter : -
```

6) With the correct username and password user can log into his/her account and he will be able to see the list of other users.

```
-----WELCOME TO MY CHAT APPLICATION-----  
-----atharva: Your Friend List-----  
atharva  
mahesh  
raj  
  
Press '2' to Log Out  
Or enter User Name to Chat With  
Enter :■
```

7) New messages are informed to the user, that these messages are not read by user.

```
-----WELCOME TO MY CHAT APPLICATION-----  
mahesh : hii      new message      2022-03-20 01:32:27  
mahesh : atharva  new message      2022-03-20 01:32:27  
  
***Press '1' to Back Or enter correct User Name to Chat With  
Enter :hello
```

8) After when the user reads the messages the messages that were informing will disappear.

```
-----WELCOME TO MY CHAT APPLICATION-----
mahesh : hii                                     2022-03-20 01:32:27
mahesh : atharva                                2022-03-20 01:32:27
atharva : hello                                  2022-03-20 01:33:26

***Press '1' to Back Or enter correct User Name to Chat With
Enter :
```

Code for Database Connection-

```
#pragma once
#include<mysql.h>

MYSQL* conn;
MYSQL_ROW row;
MYSQL_RES* res;
void connect() {
    conn = mysql_init(0);
    conn = mysql_real_connect(conn, "localhost", "root", "Mahesh@mahesh", "UserLoginDetails", 3306, NULL, 0);

    if (conn) {
        puts("successful Connection to database . ");
        //system("cls");
    }
    else {
        puts("connection to database has failed . ");
    }
}
```

*Screens-

```
switch (screen)
{
case MAINSCREEN:
    myChoice= mainScreen();
    if (myChoice == 1) screen = CREATEACCOUNTSCREEN;
    if (myChoice == 2) screen = LOGINSCREEN;
    if (myChoice == 3) screen = EXIT;
    break;

case CREATEACCOUNTSCREEN:
    myChoice = createAccountScreen();
    if (myChoice == 1) screen = LOGINSCREEN;
    if (myChoice == 2) screen = MAINSCREEN;
    if (myChoice == 3) screen = EXIT;
    break;

case LOGINSCREEN:
    myChoice = loginAccountScreen();
    if (myChoice == 1) screen = FRIENDLISTSCREEN;
    if (myChoice == 2) screen = MAINSCREEN;

    break;

case FRIENDLISTSCREEN:
    myChoice = friendListScreen();
    if (myChoice == 1) screen = FRIENDLISTSCREEN;
    if (myChoice == 2) screen = MAINSCREEN;
    break;
case EXIT:
    exit(0);
    break;
default:
    screen = MAINSCREEN;
    break.
```