

# **CORE JAVA PROJECT**

## **PROJECT TITLE : EMAIL APPLICATION**

### **AIM :**

- To achieve the email create and login process without any interruptions.

### **LANGUAGES :**

- JAVA
- SQL

### **SOFTWARE REQUIREMENTS :**

- Eclipse for Java
- MySQL for SQL

### **SYNOPSIS :**

In this Email Application there are two main operations,  
They are,

- Create Account > User can create new account here.
- Login Account > User can perform login page operations here.

In this email application a medium of transferring data in the form of texts. from a sender to a receiver, for this there would be an email service provider and one has to register with them to avail there services. The messages will be transmitted and the recipient would receive the data almost instantly. In this application also supports multi recipients so that we can send the same data to many no users.

The proposed Email Application have built as user friendly. As Mentioned user can perform those two operations as a main operations in this application. After choosing any of the operations in the main class user can perform all the classes which comes under those operations.

## INITIAL SETUP :

### (IN JAVA)

**Maven Project Name :** MiniProject

**Package Name :** com.siva

**Classes :**

- EmailAppMain
- CreateMailID
- LoginAccount
- ChangePassword
- MailOperations
- DatabaseConnection

### (IN DATABASE)

Creating Database in MySQL(query)

```
mysql> create database mail;
```

### (USE CREATED DATABASE)

```
mysql> use mail;  
Database changed
```

### (CREATED TABLES)

```
mysql> show tables;  
+-----+  
| Tables_in_mail |  
+-----+  
| mails          |  
| users          |  
+-----+
```

# EMAIL APPLICATION MAIN

## USER MAIN METHOD CODE:

\*\*\*\*\***CORE JAVA PROJECT**\*\*\*\*\*

- ❖ CSR CAPGEMINI TRAINING PROJECT
- ❖ EDUBRIDGE INDIA PRIVATE LIMITED
- ❖ PROJECT TITLE: **EMAIL APPLICATION**
- ❖ UNDER THE GUIDANCE OF TRAINER **MRS.INDRAKA MALI**

DONE BY  
**SIVA B**

IN EMAIL APPLICATION :

### MAIN OPERATIONS

- Create Account > User can create new account here.
- Login Account > User can perform login page operations here.

EmailAppMain class is having two major operations  
This will decide which operation user going to perform

- 'L' to Login Account
- 'C' to Create Account

#### ➤ Case 'L':

If user choice is 'L' user can perform Login operations

#### ➤ Case 'C':

If user choice is 'C' user can create new account

## **Class EmailAppMain:**

```
package com.siva;

import java.util.Scanner;

public class EmailAppMain {

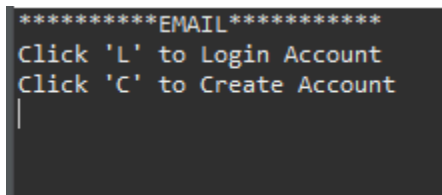
    public static void main(String[] args)
    {
        while(true)//to do the operations again and again
        {
            Scanner in=new Scanner(System.in);
            System.out.println("*****EMAIL*****");
            System.out.println("Click 'L' to Login Account");
            System.out.println("Click 'C' to Create Account");
            char ch=in.next().charAt(0);
            switch(ch)
            {
                case 'L':
                    LoginAccount.Showdetails();//to go login page..We accessing
                    Showdetails static method from LoginAccount class
                    break;
                case 'C':
                    CreateMailID.createmail();//to create new mail account...Accessing
                    createmail static method from CreateMailID class
                    break;
                default :System.out.println("Invalid Input");//it will execute when we
                    click anything other than 'L' and 'C'
            }
            System.out.println("Do you want to Exit?");
            System.out.println("Click 'n'");
            System.out.println("Click 'y' if you want to continue");
            char c=in.next().charAt(0);
            if(c=='n')//to exit from the loop
```

```

        {
            break;
        }
    }
}

```

### **Class EmailAppMain Output:**



```

*****EMAIL*****
Click 'L' to Login Account
Click 'C' to Create Account
|

```

### **Class CreateMailID:**

```

package com.siva;
//to create new Mail ID
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.Scanner;
public class CreateMailID {
    private static Connection con;
    private static Statement st;
    private static ResultSet rs;
    private static Scanner in;

    public static void createmail()
    {
        in=new Scanner(System.in);
    }
}

```

```

try {
    con=DataBaseConnection.myConnection();
    st=con.createStatement();

    while(true)
    {
        System.out.println("Enter your Username ");
        String us=in.next();
        String s="select * from users where username='"+us+"' ";
        rs=st.executeQuery(s);
        if(rs.next())
        {
            System.out.println("Already exists this
username\nTry another Username");
        }
        else
        {
            System.out.println("Enter Firstname");
            String fn=in.nextLine();
            System.out.println("Enter Lastname");
            String ln=in.nextLine();
            System.out.println("Enter your Date of Birth");
            String dob=in.nextLine();
            System.out.println("Enter your alt_username");
            String aun=in.next();
            System.out.println("Create password");
            String pw=in.next();
            System.out.println("Confirm password");
            String pw1=in.next();
            if(pw1.equals(pw)) {

                String ins="insert into users
values '"+fn+"','"+ln+"','"+dob+"','"+us+"','"+aun+"','"+pw1+"',null)";
                int i=st.executeUpdate(ins);
                if(i>0)

```

```

        {
            System.out.println("Welcom "+fn+"
!");
            System.out.println("You can update
your Mobile number");
            System.out.println("Click 'Yes' to
continue");
            String ch=in.next();
            if(ch.equals("Yes")||ch.equals("yes"))
            {
                System.out.println("Enter Valid
Mobile Number");
                String mob=in.next();
                verification(mob,us);
                break;
            }
        }
        else
        {
            System.out.println("Your Account is
Not Created");
            System.out.println("TRY AGAIN");
        }
    }
    else
    {
        System.out.println("Password Not Match");
    }
}
}
}
catch (Exception e)
{
    e.printStackTrace();
}

```

```
}  
}
```

### **Output for Class CreateMailID:**

( createmail() method):

```
*****EMAIL*****  
Click 'L' to Login Account  
Click 'C' to Create Account  
C  
Enter your Username  
shiva28@gmail.com  
Enter Firstname  
Siva  
Enter Lastname  
B  
Enter your Date of Birth  
28/12/2000  
Enter your alt_username  
shiva123@gmail.com  
Create password  
1247s  
Confirm password  
1247s  
Welcom Siva !  
You can update your Mobile number  
Click 'Yes' to continue
```

### **//Method to verify mobile number**

```
public static void verification(String mob,String us)  
{  
    try  
    {  
        in=new Scanner(System.in);  
        st=con.createStatement();  
        while(true) {  
            int min = 1000;  
            int max = 9999;  
            int r=(int)(Math.random()*(max-min+1)+min);  
            System.out.print("This OTP valid for 1 time : ");  
            System.out.println(r);  
        }  
    }  
}
```



```

        System.out.println("Enter OTP");
        int o=in.nextInt();
        if(o==r) {
            String upd="update users set Mobile_num='"+mob+"'
where username='"+us+"'";
            int i=st.executeUpdate(upd);
            if(i>0){
                System.out.println("Mobile Number
Verified Successfully");
                break;
            }
        }
    }
    catch (Exception e)
    {
        e.printStackTrace();
    }
}

```

### **Output for Class CreateMailID:**

(verification() method):

```

Welcom Siva !
You can update your Mobile number
Click 'Yes' to continue
yes
Enter Valid Mobile Number
6383639571
This OTP valid for 1 time : 9181
Enter OTP
9181
Mobile Number Verified Successfully
Do you want to Exit?
Click 'n'
Click 'y' if you want to continue

```

## **Class LoginAccount:**

//login operations

```
package com.siva;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;
import java.util.Scanner;

public class LoginAccount {
    private static ResultSet rs;
    private static Statement st;
    private static Connection con;
    private static Scanner in;

    public static void Showdetails()
    {
        in=new Scanner(System.in);
        try
        {
            con=DataBaseConnection.myConnection();//to access database
connection class
            st=con.createStatement();

            while(true)
            {
                System.out.println("Enter your Mail ID");
                String us=in.next();//username from user input
                String s="select * from users where username='"+us+"' or
Alt_username='"+us+"'";//sql query to display the row which have mentioned
username
                rs=st.executeQuery(s);//we sending query to result set to check the
given username exists or not
                if(rs.next()) //if it is exists we can go further
```

```

        {
            System.out.println("Enter Password");
            String pw=in.next();
            String sel="select * from users where
username='"+us+"' and password='"+pw+"'";//sql query
            rs=st.executeQuery(sel);//now checking row for
given username with the given password exists or not
            if(rs.next()) //if exists we can go to login page
            {
                String name=rs.getString(1);//it will getting
first name from users table

                System.out.println("  Welcome Back
"+name+"!");

                System.out.println("-----");
                while(true)
                {
                    System.out.println("Click 'I' to go
Inbox Email");

                    System.out.println("Click 'S' to
Compose Email");

                    System.out.println("Click 'R' to check
sent mail");

                    System.out.println("Click 'C' to
Change Password");

                    System.out.println("Click 'U' to
Update Mobile Number");

                    char ch=in.next().charAt(0);
                    switch(ch)
                    {
                        case 'I':

MailOperations.Inbox(us);//to check Inbox..accessing inbox method with argument
of username

                                break;

```

case 'S':

MailOperations.ComposeMail(us,name);//to send mail..accessing compose mail  
method with argument of username

break;

case 'R':

MailOperations.SentMail(us);

break;

case 'C':

Changepassword.changePass(us);//to change password..accessing changePass  
method with argument of username

break;

case 'U':

System.out.println("Enter Mobile Number");

String mob=in.next();

CreateMailID.Verification(mob, us);

}

System.out.println("Click 'O'

Logout");

char choice=in.next().charAt(0);

if(choice=='O')

{

break;

}

}

System.out.println("See you later "+name);

}

else //it will execute when we enter wrong

password

{

```

        emailid");
        continue");
        'F' ");

password method
        System.out.println("Wrong Password OR
        System.out.println("Click Anything to
        System.out.println("Forgot password? Click
        char ch=in.next().charAt(0);

        if(ch=='F')//if click 'F' we will go to forgot
        {
            Changepassword.forgotpassword();
            break;
        }
    }
    else //if the given username not exists this will executes
    and will ask again to enter the username
    {
        System.out.println("Enter your valid emailid");
    }
}
}
catch(Exception e)
{
    e.printStackTrace();
}
}
}

```

### Output for Class LoginAccount:

```
*****EMAIL*****
Click 'L' to Login Account
Click 'C' to Create Account
L
Enter your Mail ID
shiva28@gmail.com
Enter Password
1247s
    Welcome Back Siva!
-----
Click 'I' to go Inbox Email
Click 'S' to Compose Email
Click 'R' to check sent mail
Click 'C' to Change Password
Click 'U' to Update Mobile Number
```

### Class MailOperations:

```
package com.siva;
```

```
import java.sql.Connection;
import java.sql.ResultSet;
import java.sql.Statement;
import java.util.Scanner;
```

```
public class MailOperations
{
```

```
    private static Connection con;
    private static Statement st;
    private static ResultSet rs;
    private static Scanner in;
```

```
    //Method for Checking Inbox
```

```
    public static void Inbox(String us)//in this function we can check our mails
```

```

{
    in=new Scanner(System.in);
    try
    {
        con=DataBaseConnection.myConnection();
        st=con.createStatement();

        while(true)
        {
            String inb="Select * from mails where
username='"+us+"'";//selecting inbox and from(who send the mail) to given
username

            rs=st.executeQuery(inb);
            if(rs.next())
            {
                rs=st.executeQuery(inb);
                while(rs.next())
                {
                    if(rs.getString(2)!=null)
                    {

System.out.println("*****");
                        System.out.println("From    :
"+rs.getString(5));//getting mail and printing
                        System.out.println("Through  :
"+rs.getString(4));//getting sender mail id and printing
                        System.out.println("Date     :
"+rs.getDate(6));
                        System.out.println("Time     :
"+rs.getDate(6));
                        System.out.println("Message  :
"+rs.getString(2));

System.out.println("*****");
                    }
                }
            }
        }
    }
}

```

```

    }
    System.out.println("Do you want to Clear the
Inbox\nClick 'D' Delete all the mails\nClick Anything to go login page");
    char ch=in.next().charAt(0);
    if(ch=='D')
    {
        String del="delete from mails where
username='"+us+"'";

        int i=st.executeUpdate(del);
        if(i>0)
        {
            System.out.println("Deleted..!");
            break;
        }
    }
    else
    {
        break;
    }
}
else
{
    System.out.println("Inbox is empty");
    break;
}
}
}
catch(Exception e)
{
    e.printStackTrace();
}
}

public static void ComposeMail(String us,String name)//function to
compose mail
{

```



```

in=new Scanner(System.in);
try
{
    con=DataBaseConnection.myConnection();
    st=con.createStatement();
    while(true)
    {
        System.out.println("Enter Recipient Mail ID: ");
        String rep=in.next();
        String s="select * from users where
username='"+rep+"'";//query to check recipient user name
        rs=st.executeQuery(s);
        if(rs.next())//checking the recipient user name exists or not
        {
            String rname=rs.getString(1);
            Scanner sc=new Scanner(System.in);
            System.out.println("Type Your Content");
            String msg=sc.nextLine();//we typing our content here
            if(msg!="")//if the content is not null we can go further
            {
                String send="insert into mails
values '"+rep+"', '"+msg+"', null, '"+us+"', '"+rname+"', default)";
                int i=st.executeUpdate(send);
                if(i>0)
                {
                    System.out.println("Mail Sent");
                    String sent="insert into mails
values '"+us+"', null, '"+msg+"', '"+rep+"', '"+rname+"', default)";
                    int j=st.executeUpdate(sent);
                    break;
                }
                else
                {
                    System.out.println("Mail didn't
send");

```

```

        System.out.println("Try again");
    }
}
else//if content is empty this else statement executes
{
    ComposeMail(us,name);//we calling the compose mail
function whenever content is empty(recursive)
}
}
else
{
    System.out.println("Enter vaid Username");
}
}
}
catch(Exception e)
{
    e.printStackTrace();
}
}

```

```

//Method for check sent mail section
public static void SentMail(String us)
{
    try {
        in=new Scanner(System.in);
        con=DataBaseConnection.myConnection();
        st=con.createStatement();
        while(true)
        {
            String snb="Select * from mails where username='"+us+"'";
            rs=st.executeQuery(snb);
            if(rs.next())
            {
                rs=st.executeQuery(snb);
            }
        }
    }
}

```

```

        while(rs.next())
        {
            if(rs.getString(3)!=null)
            {

System.out.println("*****");

                                System.out.println("To
: "+rs.getString(5));

                                System.out.println("Date
: "+rs.getDate(6));

                                System.out.println("Time
: "+rs.getTime(6));

                                System.out.println("Message
: "+rs.getString(3));

System.out.println("*****");

                                }
            }
            System.out.println("Do you want to Clear the Sent
Mails\nClick 'D' Delete all the mails\nClick Anything to go login page");
            char ch=in.next().charAt(0);
            if(ch=='D')
            {
                String del="delete from mails where
recipient='"+us+"'";

                int i=st.executeUpdate(del);
                if(i>0)
                {
                    System.out.println("Deleted..!");
                    break;
                }
            }
            else
            {
                break;

```

```

        }
    }
    else
    {
        System.out.println("You Didn't Send Any
Messages");
        break;
    }
}

} catch(Exception e) {
    e.printStackTrace();
}
}
}

```

**Output for Class MailOperations:  
(In Compose Mail Section):**

```

Welcome Back Siva!
-----
Click 'I' to go Inbox Email
Click 'S' to Compose Email
Click 'R' to check sent mail
Click 'C' to Change Password
Click 'U' to Update Mobile Number
S
Enter Recipient Mail ID:
shiva123@gmail.com
Type Your Content
good morning
Mail Sent

```

### (In Inbox Section):

```
      Welcome Back Siva!
-----
Click 'I' to go Inbox Email
Click 'S' to Compose Email
Click 'R' to check sent mail
Click 'C' to Change Password
Click 'U' to Update Mobile Number
I
|*****
From      : Shiva
Through   : shiva123@gmail.com
Date      : 2022-12-05
Time      : 2022-12-05
Message   : hello siva
*****
*****
From      : Shiva
Through   : shiva123@gmail.com
Date      : 2022-12-05
Time      : 2022-12-05
Message   : hi
*****
*****
From      : Shiva
Through   : shiva123@gmail.com
Date      : 2022-12-05
Time      : 2022-12-05
Message   : hello
*****
Do you want to Clear the Inbox
Click 'D' Delete all the mails
Click Anything to go login page
```

### (In Sent Mail Section):

```
|*****
To        :Shiva
Date      :2022-12-06
Time      :08:19:53
Message   :sending mail to shiva
*****
*****
To        :Shiva
Date      :2022-12-06
Time      :08:24:32
Message   :good morning
*****
Do you want to Clear the Sent Mails
Click 'D' Delete all the mails
Click Anything to go login page
```

## **Class ChangePassword:**

```
package com.siva;
```

```
import java.sql.Connection;  
import java.sql.DriverManager;  
import java.sql.ResultSet;  
import java.sql.SQLException;  
import java.sql.Statement;  
import java.util.Scanner;
```

```
public class Changepassword
```

```
{
```

```
    private static ResultSet rs;  
    private static Statement st;  
    private static Connection con;  
    private static Scanner in;  
    public static void forgotpassword()
```

```
    {
```

```
        in=new Scanner(System.in);
```

```
        try {
```

```
            con=DataBaseConnection.myConnection();
```

```
            st=con.createStatement();
```

```
            System.out.println("Enter your emailid ");
```

```
            String us=in.next();
```

```
            System.out.println("Enter your Alternate emailid OR Mobileno");
```

```
            String ae=in.next();
```

```
            String s="select * from users where (Alt_username='"+ae+"' or  
Mobile_num='"+ae+"' ) and Username='"+us+"'";
```

```
            rs=st.executeQuery(s);
```

```
            if(rs.next())
```

```
            {
```

```
                while(true)
```

```
                {
```

```
                    int min = 1000;
```

```
                    int max = 9999;
```

```

int r=(int)(Math.random()*(max-min+1)+min);
System.out.print("This OTP valid for 1 time : ");
System.out.println(r);
System.out.println("Enter OTP");
int o=in.nextInt();
if(o==r) {
    System.out.println("Enter New Password");
    String npw=in.next();
    System.out.println("Enter Confirm Password");
    String cpw=in.next();
    if(npw.equals(cpw))
    {
        String ins="update users set
password='"+npw+"' where username='"+us+"' ";
        int i=st.executeUpdate(ins);// this for insert
        purpose
        if(i>0)
        {
            System.out.println("Password
Changed");
            break;
        }
        else
        {
            System.out.println("*****OOPS TRY AGAIN*****");
            break;
        }
    }
}
else
{
    System.out.println("Enter Valid OTP");
}

```

```

        }

    }

    else
    {
        System.out.println("Enter valid Mobilenos or emailid");
        forgotpassword();
    }
}

catch(Exception e)
{
    e.printStackTrace();
}

}

//method to change password
public static void changepass(String us)
{
    in=new Scanner(System.in);
    System.out.println("Enter old Password");
    String op=in.next();
    try
    {
        while(true)
        {
            con=DataBaseConnection.myConnection();
            st=con.createStatement();
            String m="select * from users where username='"+us+"'
and password='"+op+"'";
            rs=st.executeQuery(m);
            if(rs.next()) {
                System.out.println("Enter New Password");
                String np=in.next();
                System.out.println("Confirm Password");
                String cp=in.next();
            }
        }
    }
}

```



```

        if(cp.equals(np)) {
            String up="update users set
password='"+cp+"' where username='"+us+"' ";
            int i=st.executeUpdate(up);// this for insert purpose
            if(i>0) {
                System.out.println("Password Updated");
                break;
            }else {
                System.out.println("Password Not
Updated");
            }
        }
    }
}
else
{
    System.out.println("Click 'F' to ForgotPassword");
    char ch=in.next().charAt(0);
    if(ch=='F')
    {
        forgotpassword();
    }
}
}
}
catch (Exception e)
{
    e.printStackTrace();
}
}
}

```

**Output for Class ChangePassword:  
(for changepass() method):**

```
Enter your Mail ID
shiva28@gmail.com
Enter Password
1247s
    Welcome Back Siva!
-----
Click 'I' to go Inbox Email
Click 'S' to Compose Email
Click 'R' to check sent mail
Click 'C' to Change Password
Click 'U' to Update Mobile Number
C
Enter old Password
1247s
Enter New Password
Itsme
Confirm Password
Itsme
Password Updated
Click 'O' Logout
```

**(for forgotpassword() method):**

```
*****EMAIL*****
Click 'L' to Login Account
Click 'C' to Create Account
L
Enter your Mail ID
shiva28
Enter your valid emailid
Enter your Mail ID
shiva28@gmail.com
Enter Password
shiva
Wrong Password OR emailid
Click Anything to continue
Forgot password? Click 'F'
F
Enter your emailid
shiva28@gmail.com
Enter your Alternate emailid OR Mobileno
6383639571
This OTP valid for 1 time : 1672
Enter OTP
1672
Enter New Password
shiva
Enter Confirm Password
shiva
Password Changed
Do you want to Exit?
Click 'n'
Click 'y' if you want to continue
```

## **Class DataBaseConnection:**

```
package com.siva;
import java.sql.Connection;
import java.sql.DriverManager;
public class DataBaseConnection
{
    private static String driver="com.mysql.cj.jdbc.Driver";
    private static String ur="root";
    private static String pw="root";
    private static String url="jdbc:mysql://localhost:3306/mail";
    private static Connection con=null;

    public static Connection myConnection()
    {
        try
        {
            Class.forName(driver);
            con=DriverManager.getConnection(url,ur,pw);
            if(con==null)
            {
                System.out.println("Error in connection");
                System.exit(0);
            }
        }
        catch(Exception e)
        {
            e.printStackTrace();
        }
        return con;
    }
}
```

## Database Records:

### Table to store users details:

```
mysql> select * from users;
```

First_Name	Last_Name	Date_Of_Birth	Username	Alt_username	Password	Mobile_Num
Dinesh	Kumar	25/11/2000	dk2000@gmail.com	shiva123@gmail.com	dk25	9600700114
praveen	s	22/11/2001	praveen123@gmail.com	shiva123@gmail.com	pk1234	8508200253
Shiva	B	28/12/2000	shiva123@gmail.com	shiva1234@gmail.com	shiva123	6383639517
Siva	B	28/12/2000	shiva28@gmail.com	shiva123@gmail.com	1247s	6383639571

```
4 rows in set (0.00 sec)
```

### Storing names:

```
mysql> select * from users;
```

First_Name	Last_Name
Dinesh	Kumar
praveen	s
Shiva	B
Siva	B

```
4 rows in set (0.00 sec)
```

### Storing DOB's:

Date_Of_Birth
25/11/2000
22/11/2001
28/12/2000
28/12/2000

### Storing username and alternate username:

Username	Alt_username
dk2000@gmail.com	shiva123@gmail.com
praveen123@gmail.com	shiva123@gmail.com
shiva123@gmail.com	shiva1234@gmail.com
shiva28@gmail.com	shiva123@gmail.com

## Storing Passwords and mobile numbers:

Password	Mobile_Num
dk25	9600700114
pk1234	8508200253
shiva123	6383639517
1247s	6383639571

Mobile number is not mandatory, here until we need to change password

## Table to store user mails:

```
mysql> select * from mails;
```

username	inbox	sent	recipient	name	time
shiva123@gmail.com	NULL	hello siva	shiva28@gmail.com	Siva	2022-12-05 13:43:04
shiva123@gmail.com	NULL	hi	shiva28@gmail.com	Siva	2022-12-05 13:48:31
shiva123@gmail.com	NULL	hello	shiva28@gmail.com	Siva	2022-12-05 13:49:47
shiva123@gmail.com	sending mail to shiva	NULL	shiva28@gmail.com	Siva	2022-12-06 08:19:53
shiva28@gmail.com	NULL	sending mail to shiva	shiva123@gmail.com	Shiva	2022-12-06 08:19:53
shiva123@gmail.com	good morning	NULL	shiva28@gmail.com	Siva	2022-12-06 08:24:32
shiva28@gmail.com	NULL	good morning	shiva123@gmail.com	Shiva	2022-12-06 08:24:32

7 rows in set (0.00 sec)

## Username in mails table:

username
shiva123@gmail.com
shiva123@gmail.com
shiva123@gmail.com
shiva123@gmail.com
shiva28@gmail.com
shiva123@gmail.com
shiva28@gmail.com

Whenever we compose mail receiver mail id as well as sender mail id will stored here.

### Inbox and Sent:

inbox	sent
NULL	hello siva
NULL	hi
NULL	hello
sending mail to shiva	NULL
NULL	sending mail to shiva
good morning	NULL
NULL	good morning

When user1 send mail to user2, mail will stored in user1's sent and user2's inbox. User1's inbox will be null as well as User2's sent.

### Recipient mail and names:

recipient	name
shiva28@gmail.com	Siva
shiva28@gmail.com	Siva
shiva28@gmail.com	Siva
shiva28@gmail.com	Siva
shiva123@gmail.com	Shiva
shiva28@gmail.com	Siva
shiva123@gmail.com	Shiva

Here recipient in user1's mail id act as sender and user2's mail id act as receiver. Same as names.

### Date and Times:

time
2022-12-05 13:43:04
2022-12-05 13:48:31
2022-12-05 13:49:47
2022-12-06 08:19:53
2022-12-06 08:19:53
2022-12-06 08:24:32
2022-12-06 08:24:32

Here stores mail sending date & time and receiving date & time.

### Before Changing password:

Siva	B	28/12/2000	shiva28@gmail.com	shiva123@gmail.com	1247s	6383639571
------	---	------------	-------------------	--------------------	-------	------------

Before changing password,password was '1247s'

### After Changing password:

Siva	B	28/12/2000	shiva28@gmail.com	shiva123@gmail.com	shiva	6383639571
------	---	------------	-------------------	--------------------	-------	------------

After changing password,password was 'shiva'

### Table Structures:

#### For Users Table:

```
mysql> desc users;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| First_Name     | varchar(30)   | NO   |     | NULL    |       |
| Last_Name      | varchar(30)   | YES  |     | NULL    |       |
| Date_Of_Birth  | varchar(10)   | NO   |     | NULL    |       |
| Username       | varchar(20)   | NO   | PRI | NULL    |       |
| Alt_username   | varchar(20)   | NO   |     | NULL    |       |
| Password       | varchar(20)   | NO   |     | NULL    |       |
| Mobile_Num     | varchar(10)   | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.03 sec)
```

Here username is a primary key(unique) ,mobile number and last name are optional.

### For Mails Table:

```
mysql> desc mails;
```

Field	Type	Null	Key	Default	Extra
username	varchar(20)	YES		NULL	
inbox	varchar(150)	YES		NULL	
sent	varchar(150)	YES		NULL	
recipient	varchar(20)	YES		NULL	
name	varchar(20)	YES		NULL	
time	datetime	YES		CURRENT_TIMESTAMP	DEFAULT_GENERATED

6 rows in set (0.01 sec)

Here not used primary key or unique.