OOPS Project Code

**Main():**

package JavaProject;

import java.sql.\*;

import java.util.\*;

public class Main extends Exception

{

Main() {}

Main(String str) {super(str);}

public static void main(String[] args)

{

Main loge;

System.out.println("\t\t\t\t\t\tWelcome To Our College Management System");

Scanner s = new Scanner(System.in);

String user,passw,user\_type= "";

String inresult="";

int logch,loginbool=0,userch=0;

try

{

System.out.println("Enter\n1. For Sign In\n2. for Sign up");

logch = s.nextInt();

if(logch!=1 && logch!=2)

{

loge = new Main("Enter a valid input for Sign in/up");

throw loge;

}

do {

System.out.println("Enter your Username: ");

user = s.next();

System.out.println("Enter your Password: ");

passw = s.next();

System.out.println("Choose your User type:\n1. Student\n2. Staff\n3. Admin");

userch = s.nextInt();

int bool=0;

switch(userch)

{

case 1: user\_type = "Student";break;

case 2: user\_type = "Faculty";break;

case 3: user\_type = "Admin";break;

default: bool=1;

}

if(bool==1)

{

loge = new Main("Enter a valid input for User type");

throw loge;

}

Login log = new Login(user,passw,user\_type);

if(logch==1)

{

inresult = log.signin();

if(inresult!="")

{

System.out.println("Login Successfull!!!");

loginbool=1;

break;

}

else

{

System.out.println("Enter a valid Username and Password");

}

}

if(logch==2)

{

log.signup();

break;

}

}while(true);

if(loginbool==1)

{

Student std;

int studentch=0;

if("STD".equals(inresult.substring(0,3)))

{

if("STDUG".equals(inresult.substring(0,5)))

std = new ug\_student(inresult);

else

std = new pg\_student(inresult);

do

{

System.out.print("Enter:\n1. for Paying your fees\n2. for Viewing Marks\n3. for Viewing your personal details\n4. for Accessing the Library\n5. for Viewing your house LeaderBoard\n6. for Allocating a new house(Works only for newcomers)\n7. for Modifying your address\n8. for accessing course registration\n");

int stdch = s.nextInt();

address a=new address();

switch(stdch)

{

case 1: std.payfees();break;

case 2: std.view\_marks();break;

case 3: std.view\_student\_details();std.load\_address(a,1);break;

case 4: std.access\_library();break;

case 5: std.sh.view\_leader\_board();break;

case 6: std.allocate\_house();break;

case 7: std.load\_address(a,2);break;

case 8: std.access\_course\_reg();break;

default: System.out.println("Invalid Input");

}

System.out.println("\n\nDo you want to perform any other functions?(1-yes,2-no)");

studentch = s.nextInt();

}while(studentch==1);

}

staff stf;

int staffch=0;

if("STF".equals(inresult.substring(0,3)))

{

if("STFT".equals(inresult.substring(0,4)))

stf = new teaching\_staff(inresult);

else

stf = new support\_staff(inresult);

do

{

System.out.print("Enter:\n1. for Allocating Marks\n2. for Accessing Leaderboard\n3. for Viewing your personal details\n4. for accessing library\n5. for modifying your address\n");

int stfch = s.nextInt();

address a=new address();

switch(stfch)

{

case 1: stf.allocate\_marks();break;

case 2: stf.access\_leaderboard();break;

case 3: stf.view\_staff\_details();stf.load\_address(a,1);break;

case 4: stf.access\_library();break;

case 5: stf.load\_address(a,2);break;

default: System.out.println("Invalid Input");

}

System.out.println("\n\nDo you want to perform any other functions?(1-yes,2-no)");

staffch = s.nextInt();

}while(staffch==1);

}

if("ADM".equals(inresult.substring(0,3)))

{

admin adm;

adm = new admin(inresult);

int admch=0;

int adminch=0;

do {

System.out.println("Enter:\n1. for Viewing Details\n2. for Accessing Hosteller");

admch = s.nextInt();

switch(admch)

{

case 1: adm.view\_all\_details();break;

case 2: adm.access\_hosteller();break;

}

System.out.println("Do you want to perform any other function(1-yes/2-no)");

adminch = s.nextInt();

}while(adminch==1);

}

}

System.out.println("Thank You!!!");

}

catch(Main e)

{

e.printStackTrace();

}

}

}

**Login():**

package JavaProject;

import java.sql.\*;

import java.util.\*;

class Login extends Exception

{

private String Username;

private String Password;

private String Type\_of\_user;

Login(String Username,String Password,String Type\_of\_user)

{

this.Username = Username;

this.Password = Password;

this.Type\_of\_user = Type\_of\_user;

}

Login(String s){super(s);}

public String signin()

{

String ret="";

try

{

Connection myConn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement mystmt = myConn.createStatement();

ResultSet myRs = mystmt.executeQuery("select \* from Login");

while(myRs.next())

{

if((Username.equals(myRs.getString(1)))&&(Password.equals(myRs.getString(2)))&&(Type\_of\_user.equals(myRs.getString(4))))

{

ret = myRs.getString(3);

return ret;

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

return ret;

}

public void signup()

{

Scanner s = new Scanner(System.in);

Login lo;

String ref\_id;

try

{

System.out.println("Confirm Password");

String cpassword = s.next();

if(!Password.equals(cpassword))

{

lo = new Login("Enter the same password");

throw lo;

}

System.out.println("Enter your reference\_id(Student roll\_no/ Staff\_id/ Admin\_id)");

ref\_id = s.next();

try

{

Connection myConn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement mystmt = myConn.createStatement();

ResultSet myRs = mystmt.executeQuery("select \* from Login");

while(myRs.next())

{

if(ref\_id.equals(myRs.getString(3)))

{

lo = new Login("Account already exists");

throw lo;

}

}

mystmt.executeUpdate("insert into login values('"+Username+"','"+Password+"','"+ref\_id+"','"+Type\_of\_user+"');");

if(Type\_of\_user=="Student")

{

final String campus="Coimbatore";

System.out.println("Enter your Name");

String name = s.next();

System.out.println("Enter your Section Ex: (ECE-A)");

String section = s.next();

mystmt.executeUpdate("insert into Student values ('"+name+"','"+ref\_id+"','"+section+"','"+campus+"',false)");

System.out.println("Enter\n1. for UG student\n2. for PG student");

int ugch = s.nextInt();

if(ugch!=1 && ugch!=2)

{

lo = new Login("Enter a valid option for UG/PG choice");

throw lo;

}

if(ugch==1)

{

System.out.println("Enter the number of certified courses you have done");

int cert = s.nextInt();

mystmt.executeUpdate("insert into UG\_Student values ('"+ref\_id+"',"+cert+")");

}

else if(ugch==2)

{

System.out.println("Enter the number of research papers you have published");

int pub = s.nextInt();

mystmt.executeUpdate("insert into PG\_Student values ('"+ref\_id+"',"+pub+")");

}

System.out.print("Sign in Succesfull");

}

else if(Type\_of\_user=="Faculty")

{

final float incent=5000;

System.out.println("Enter your Name");

String name = s.next();

System.out.println("Enter your Department Ex: (ECE,CSE)");

String dept = s.next();

System.out.println("Enter your Salary");

float staff\_pay = s.nextFloat();

mystmt.executeUpdate("insert into Staff values ('"+ref\_id+"','"+name+"','"+dept+"',"+staff\_pay+","+incent+")");

System.out.println("Enter\n1. for Teaching Staff\n2. for Non-Teaching Staff");

int staffch = s.nextInt();

if(staffch!=1 && staffch!=2)

{

lo = new Login("Enter a valid input for staff choice");

throw lo;

}

else if(staffch==1)

{

System.out.println("Enter your Subscrption allotement");

Float subs = s.nextFloat();

mystmt.executeUpdate("insert into teaching\_staff values ('"+ref\_id+"',"+subs+")");

}

System.out.print("Sign in Succesfull");

}

else if(Type\_of\_user=="Admin")

{

System.out.println("Enter your name");

String name = s.next();

mystmt.executeUpdate("insert into Admin\_ values ('"+ref\_id+"','"+name+"')");

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

catch(Login e)

{

e.printStackTrace();

}

}

}

**Address():**

package JavaProject;

import java.util.\*;

public class address

{

private String street;

private String city;

private int pincode;

address()

{

street="";

city="";

pincode=-1;

}

public String get\_street()

{

return street;

}

public String get\_city()

{

return city;

}

public int get\_pincode()

{

return pincode;

}

public void set\_street(String street)

{

this.street = street;

}

public void set\_city(String city)

{

this.city = city;

}

public void set\_pincode(int pincode)

{

this.pincode = pincode;

}

public void modify\_address()

{

Scanner s = new Scanner(System.***in***);

System.***out***.println("Enter your new Address:");

System.***out***.println("Enter your street:");

street = s.next();

System.***out***.println("Enter your city");

city = s.next();

System.***out***.println("Enter your pincode");

pincode = s.nextInt();

}

}

Admin():

package JavaProject;

import java.sql.\*;

import java.util.\*;

public class admin

{

protected String admin\_id;

protected String admin\_name;

protected Boy\_Hosteller boy;

protected Girl\_Hosteller girl;

admin(String admin\_id)

{

this.admin\_id = admin\_id;

try

{

Connection myConn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement mystmt = myConn.createStatement();

ResultSet myRs = mystmt.executeQuery("select \* from admin\_;");

while(myRs.next())

{

if(admin\_id.equals(myRs.getString(1)))

{

admin\_name = myRs.getString(2);

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void view\_all\_details()

{

Scanner sc = new Scanner(System.in);

System.out.println("Enter:\n1. for Student Detail\n2. for Staff details\n3. for Hosteller Details");

int admch= sc.nextInt();

String ref\_id;

int contich=0;

if(admch==1)

{

do

{

System.out.println("Enter the roll\_no of the student");

ref\_id = sc.next();

if("STDUG".equals(ref\_id.substring(0,5)))

{

ug\_student ug = new ug\_student(ref\_id);

ug.view\_student\_details();

}

else if("STDPG".equals(ref\_id.substring(0,5)))

{

pg\_student pg = new pg\_student(ref\_id);

pg.view\_student\_details();

}

System.out.println("Do you want to see the details of any other student?(1-Yes/2-No)");

contich = sc.nextInt();

}while(contich==1);

}

else if(admch==2)

{

do

{

System.out.println("Enter the staff id of the staff");

ref\_id = sc.next();

if("STFT".equals(ref\_id.substring(0,4)))

{

teaching\_staff ts = new teaching\_staff(ref\_id);

ts.view\_staff\_details();

}

else if("STFS".equals(ref\_id.substring(0,4)))

{

support\_staff ss = new support\_staff(ref\_id);

ss.view\_staff\_details();

}

System.out.println("Do you want to see the details of any other staff?(1-Yes/2-No)");

contich = sc.nextInt();

}while(contich==1);

}

else if(admch==3)

{

try

{

Connection myConn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement mystmt = myConn.createStatement();

ResultSet myRs = mystmt.executeQuery("select \* from Hosteller;");

String gen="";

do

{

System.out.println("Enter the roll\_no of the Hosteller");

ref\_id = sc.next();

while(myRs.next())

{

if(ref\_id.equals(myRs.getString(1)))

{

gen = myRs.getString(5);

}

}

if("M".equals(gen))

{

Boy\_Hosteller bo = new Boy\_Hosteller(ref\_id);

bo.view\_details();

}

else if("F".equals(gen))

{

Girl\_Hosteller gl = new Girl\_Hosteller(ref\_id);

gl.view\_details();

}

System.out.println("Do you want to see the details of any other Hosteller?(1-Yes/2-No)");

contich = sc.nextInt();

}while(contich==1);

}

catch(Exception e)

{

e.printStackTrace();

}

}

}

public void access\_hosteller()

{

Scanner s = new Scanner(System.in);

System.out.println("1. for Check\_out\n2. for Check\_in\n3. for Viewing whether the Hosteller is In/Out");

int hostch = s.nextInt();

String roll\_no="";

int cho=0;

try

{

Connection myConn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement mystmt = myConn.createStatement();

if(hostch==1)

{

do

{

System.out.println("Enter the roll\_no of the Hosteller for check out:");

roll\_no = s.next();

mystmt.executeUpdate("insert into check\_in\_out values('"+roll\_no+"',CURRENT\_TIMESTAMP,null)");

System.out.println("Check out successfull!!!");

System.out.println("Do you want to enter check in details for any other Hosteller?(1-yes/2-no)");

cho = s.nextInt();

}while(cho==1);

}

else if(hostch==2)

{

int bool;

do

{

bool=0;

System.out.println("Enter the roll\_no of the Hosteller for check in:");

roll\_no = s.next();

ResultSet myRs = mystmt.executeQuery("select \* from check\_in\_out;");

while(myRs.next())

if(roll\_no.equals(myRs.getString(1)))

if(myRs.getTime(3)==null)

bool=1;

if(bool==0)

{

System.out.println("The Hosteller is currently checked in already!!!");

break;

}

System.out.println("Do you want to check roll no: "+roll\_no+" in? (1-yes/2-no)");

cho = s.nextInt();

if(cho==1)

{

mystmt.executeUpdate("update check\_in\_out set check\_out\_time=CURRENT\_TIMESTAMP");

System.out.println("Update Succesfull!!!");

}

System.out.println("Do you want to check in any other Hostellers?(1-Yes/2-No)");

cho = s.nextInt();

}while(cho==1);

}

else if(hostch==3)

{

int bool;

do

{

bool=0;

System.out.println("Enter the roll\_no of the Hosteller for checking whether the Hosteller is In/Out");

roll\_no = s.next();

ResultSet myRs = mystmt.executeQuery("select \* from check\_in\_out;");

while(myRs.next())

if(roll\_no.equals(myRs.getString(1)))

if(myRs.getTime(3)==null)

bool=1;

if(bool==1)

{

System.out.println("The Hosteller is currently checked out ");

}

else if(bool==0)

{

System.out.println("The Hosteller is currently checked In");

}

System.out.println("Do you want to Continue?(1-yes/2-no)");

cho = s.nextInt();

}while(cho==1);

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

}

Boy\_Hosteller():

package JavaProject;

import java.sql.\*;

public class Boy\_Hosteller implements Hosteller

{

protected String roll\_no;

protected String block\_no;

protected String room\_no;

Boy\_Hosteller(String roll\_no)

{

this.roll\_no = roll\_no;

try

{

Connection myConn = DriverManager.*getConnection*("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement mystmt = myConn.createStatement();

ResultSet myRs = mystmt.executeQuery("select \* from Hosteller;");

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(1)))

{

block\_no = myRs.getString(2);

room\_no = myRs.getString(3);

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void view\_details()

{

System.***out***.println("Roll No: "+roll\_no);

System.***out***.println("Block No: "+block\_no);

System.***out***.println("Room No: "+room\_no);

System.***out***.println("Rules:"+***boys\_hostel\_rules***);

}

}

Course\_Registration:

package JavaProject;

import java.sql.\*;

import java.util.\*;

public class course\_registration

{

String roll\_no;

static String[] course\_id\_list = {"CSE-203","CSE-205","CSE-201","ECE-204","CSE-204","MEE-181","CSE-202","EEE-301","PHY-401","CUL-101"};

protected HashMap<String, String> course\_map = new HashMap<>();

course\_registration(String roll\_no)

{

this.roll\_no = roll\_no;

course\_map.put(course\_id\_list[0],"CS Essentials");

course\_map.put(course\_id\_list[1],"UI design");

course\_map.put(course\_id\_list[2],"Advanced Programming");

course\_map.put(course\_id\_list[3],"Digital Electronics");

course\_map.put(course\_id\_list[4],"Object Oriented Programming");

course\_map.put(course\_id\_list[5],"Manufacturing Practices");

course\_map.put(course\_id\_list[6],"DBMS");

course\_map.put(course\_id\_list[7],"EEE");

course\_map.put(course\_id\_list[8],"Engineering Physics");

course\_map.put(course\_id\_list[9],"Cultural Education");

}

public void delete\_prev\_course()

{

Scanner s = new Scanner(System.in);

try

{

Connection myConn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement mystmt = myConn.createStatement();

System.out.println("Do you want to un-enroll from the previous courses?(1 for Yes/2 for No)");

int ch= s.nextInt();

if(ch==1)

{

mystmt.executeUpdate("DELETE FROM COURSE\_REGISTRATION WHERE ROLL\_NO='"+roll\_no+"';");

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void add\_new\_course()

{

Scanner s= new Scanner(System.in);

try

{

Connection myConn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement mystmt = myConn.createStatement();

ResultSet Rs = mystmt.executeQuery("select \* from course\_registration");

while(Rs.next())

{

if(roll\_no.equals(Rs.getString(1)))

{

System.out.println("Un-enroll from the previous courses");

return;

}

}

System.out.println("List of courses available:");

for(int i=0;i<course\_id\_list.length;i++)

{

System.out.println((i+1)+". for "+course\_map.get(course\_id\_list[i]));

}

System.out.println("Enter the number associated with the course name to enroll in that course(Enter 5 valid numbers)");

int coursech=0;

for(int i=0;i<5;i++)

{

System.out.println("Enter the value for Course: "+(i+1));

coursech=s.nextInt();

coursech=coursech-1;

mystmt.executeUpdate("Insert into course\_registration values('"+roll\_no+"','"+course\_id\_list[coursech]+"');");

}

System.out.println("Course registration successfull!!!");

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void view\_courses()

{

try

{

Connection myConn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement mystmt = myConn.createStatement();

ResultSet myRs = mystmt.executeQuery("Select \* from course\_registration where roll\_no='"+roll\_no+"';");

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(1)))

{

System.out.println(myRs.getString(2)+" "+course\_map.get(myRs.getString(2)));

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

}

Girl\_Hosteller():

package JavaProject;

import java.sql.\*;

public class Girl\_Hosteller implements Hosteller

{

protected String roll\_no;

protected String block\_no;

protected String room\_no;

Girl\_Hosteller(String roll\_no)

{

this.roll\_no = roll\_no;

try

{

Connection myConn = DriverManager.*getConnection*("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement mystmt = myConn.createStatement();

ResultSet myRs = mystmt.executeQuery("select \* from Hosteller;");

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(1)))

{

block\_no = myRs.getString(2);

room\_no = myRs.getString(3);

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void view\_details()

{

System.***out***.println("Roll No: "+roll\_no);

System.***out***.println("Block No: "+block\_no);

System.***out***.println("Room No: "+room\_no);

System.***out***.println("Rules:"+***girls\_hostel\_rules***);

}

}

Hosteller():

package JavaProject;

public interface Hosteller

{

public static float ***hostel\_fees*** = 110000.f;

public static String ***boys\_hostel\_rules***="No Phones,No High Electrical Gadgets,No Ragging";

public static String ***girls\_hostel\_rules***="No Phones,Entry close at 10PM";

public abstract void view\_details();

}

Library():

package JavaProject;

import java.util.\*;

import java.sql.\*;

public class Library

{

protected String user\_ref\_id;

protected String user\_name;

final static protected float premium\_fees = 500;

protected String[] book\_list= {"BID-1002","BID-1007","BID-1256","BID-2004","BID-324","BID-604","BID-682","BID-906","BID-1024","BID-1010"};

Stack<String> book\_stack = new Stack<String>();

Library(String user\_ref\_id,String user\_name)

{

this.user\_ref\_id = user\_ref\_id;

this.user\_name = user\_name;

for(int i=0;i<book\_list.length;i++)

{

book\_stack.add(book\_list[i]);

}

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from library\_;");

while(myRs.next())

{

if(myRs.getBoolean(5)==false)

{

boolean res = book\_stack.remove(myRs.getString(3));

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void borrowbook()

{

try

{

int bool=0;

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from library\_;");

while(myRs.next())

{

if(user\_ref\_id.equals(myRs.getString(1)))

{

if(myRs.getBoolean(5)==false)

{

bool=1;

}

}

}

if(bool==1)

{

System.out.print("You have not returned the previous book\nKindly return the previous book to boorow a new one");

return;

}

System.out.println("List of books available:");

for(int i=0;i<book\_stack.size();i++)

{

System.out.println((i+1)+". "+book\_stack.elementAt(i));

}

Scanner s = new Scanner(System.in);

System.out.println("Enter the index next to the book id");

int bookch = s.nextInt();

bookch--;

stmt.executeUpdate("insert into library\_ values('"+user\_ref\_id+"','"+user\_name+"','"+book\_stack.elementAt(bookch)+"',CURRENT\_DATE,false);");

System.out.println("Borrow succesfull!!!");

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void returnbook()

{

try

{

Scanner s = new Scanner(System.in);

int bool=0;

String borrowedbook="";

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from library\_;");

while(myRs.next())

{

if(user\_ref\_id.equals(myRs.getString(1)))

{

if(myRs.getBoolean(5)==false)

{

bool=1;

borrowedbook = myRs.getString(3);

}

}

}

if(bool==0)

{

System.out.println("You do not have any borrowed book currently");

return;

}

System.out.println("Are you sure You need to return the Book: "+borrowedbook);

System.out.println("Enter: 1-Yes/2-No");

int userch = s.nextInt();

if(userch==1)

{

System.out.println("Book returned Successfully!!!");

stmt.executeUpdate("update library\_ set returned=true where book\_id='"+borrowedbook+"';");

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

}

Pg\_student():

package JavaProject;

import java.sql.\*;

public class pg\_student extends Student

{

protected String roll\_no;

protected int no\_of\_research\_papers;

pg\_student(String roll\_no)

{

super(roll\_no);

this.roll\_no = roll\_no;

try

{

Connection conn = DriverManager.*getConnection*("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from pg\_student");

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(1)))

{

this.no\_of\_research\_papers = myRs.getInt(2);

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void view\_student\_details()

{

super.view\_student\_details();

System.***out***.println("No of research papers done: "+no\_of\_research\_papers);

}

}

Sports\_house():

package JavaProject;

import java.sql.\*;

import java.util.\*;

public class sports\_house

{

protected String[] house\_id\_list= {"HD01","HD02","HD03","HD04"};

protected HashMap<String, String> house\_map = new HashMap<>();

final static float max\_points = 100f;

sports\_house()

{

house\_map.put(house\_id\_list[0],"Amritamayi");

house\_map.put(house\_id\_list[1],"Anandamayi");

house\_map.put(house\_id\_list[2],"Chinmayi");

house\_map.put(house\_id\_list[3],"Jyothimayi");

}

public void view\_leader\_board()

{

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from sports\_house order by house\_points desc");

int i=0;

while(myRs.next())

{

i++;

System.out.println(i+". "+myRs.getString(1)+" "+house\_map.get(myRs.getString(1))+" "+myRs.getFloat(3));

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void modify\_leader\_board()

{

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

Scanner s = new Scanner(System.in);

int userch=0;

float tempval=0f;

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

{

System.out.println("Do you want to change the points for: "+house\_map.get(house\_id\_list[i])+" 1-Yes/2-No");

userch = s.nextInt();

if(userch==1)

{

System.out.println("Enter the modified points:");

tempval = s.nextFloat();

stmt.executeUpdate("update sports\_house set house\_points="+tempval+" where house\_id='"+house\_id\_list[i]+"';");

}

}

System.out.println("Updated Succesfully!!!");

}

catch(Exception e)

{

e.printStackTrace();

}

}

}

Staff():

package JavaProject;

import java.sql.\*;

import java.util.\*;

public abstract class staff

{

protected String staff\_id;

protected String name;

protected String staff\_dept;

protected float staff\_pay;

static protected float staff\_incentive=5000.0f;

sports\_house sh;

Library libr;

staff(String staff\_id)

{

this.staff\_id = staff\_id;

sh = new sports\_house();

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from staff");

while(myRs.next())

{

if(staff\_id.equals(myRs.getString(1)))

{

name = myRs.getString(2);

staff\_dept = myRs.getString(3);

staff\_pay = myRs.getFloat(4);

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

libr = new Library(staff\_id,name);

}

public void view\_staff\_details()

{

System.out.println("Staff id: "+staff\_id);

System.out.println("Name: "+name);

System.out.println("Department: "+staff\_dept);

System.out.println("staff Pay: "+staff\_pay);

System.out.println("staff Incentive: "+staff\_incentive);

}

public void access\_library()

{

Scanner s = new Scanner(System.in);

System.out.println("Enter\n1. If you want to Borrow Book\n2. If you want to Return book");

int libch = s.nextInt();

if(libch==1)

{

libr.borrowbook();

}

else if(libch==2)

{

libr.returnbook();

}

}

public void access\_leaderboard()

{

Scanner s = new Scanner(System.in);

sh.view\_leader\_board();

System.out.println("Do you want to edit leader board?(1-Yes/2-No)");

int editch = s.nextInt();

if(editch==1)

{

sh.modify\_leader\_board();

System.out.println("Updated Leaderboard:");

sh.view\_leader\_board();

}

}

public void load\_address(address a,int choice)

{

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from address;");

while(myRs.next())

{

if(staff\_id.equals(myRs.getString(1)))

{

a.set\_city(myRs.getString(3));

a.set\_pincode(myRs.getInt(4));

a.set\_street(myRs.getString(2));

}

}

if(choice==1)

{

System.out.println("Address: "+a.get\_street()+" "+a.get\_city()+" "+a.get\_pincode());

}

else if(choice==2)

{

a.modify\_address();

stmt.executeUpdate("Update address set street='"+a.get\_street()+"',city='"+a.get\_city()+"',pincode="+a.get\_pincode()+" where reference\_id='"+staff\_id+"';");

System.out.println("Update Succesfull!!!");

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void allocate\_marks()

{

try

{

int ch=0;

do

{

Stack<String> stack = new Stack<String>();

float[] marks = new float[5];

Scanner sc = new Scanner(System.in);

System.out.println("Enter the roll no of the student whose marks you want to enter:");

String roll\_no = sc.next();

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from course\_registration;");

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(1)))

{

boolean aa = stack.add(myRs.getString(2));

}

}

if(stack.isEmpty())

{

System.out.println("Student has not enrolled in any courses");

}

else

{

for(int i=0;i<5;i++)

{

System.out.println("Enter the mark for the subject: "+stack.elementAt(i));

marks[i] = sc.nextFloat();

}

stmt.executeUpdate("Update marks set mark1="+marks[0]+" where roll\_no='"+roll\_no+"';");

stmt.executeUpdate("Update marks set mark2="+marks[1]+" where roll\_no='"+roll\_no+"';");

stmt.executeUpdate("Update marks set mark3="+marks[2]+" where roll\_no='"+roll\_no+"';");

stmt.executeUpdate("Update marks set mark4="+marks[3]+" where roll\_no='"+roll\_no+"';");

stmt.executeUpdate("Update marks set mark5="+marks[4]+" where roll\_no='"+roll\_no+"';");

System.out.println("Updated values:");

for(int i=0;i<5;i++)

{

System.out.println(roll\_no+"'s Mark in the Subject: "+stack.elementAt(i)+" is: "+marks[i]);

}

}

System.out.println("Do you want to enter marks for any other student?(1-Yes/2-No)");

ch = sc.nextInt();

}while(ch==1);

}

catch(Exception e)

{

e.printStackTrace();

}

}

}

Student():

package JavaProject;

import java.sql.\*;

import java.util.\*;

public abstract class Student

{

protected String roll\_no;

protected String name;

protected String std\_section;

protected static String std\_campus="Coimbatore";

course\_registration course;

public sports\_house sh;

public Library lib;

Student(String roll\_no)

{

this.roll\_no = roll\_no;

course = new course\_registration(roll\_no);

sh = new sports\_house();

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from student");

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(2)))

{

name = myRs.getString(1);

std\_section = myRs.getString(3);

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

lib = new Library(roll\_no,name);

}

public void view\_student\_details()

{

System.out.println("Roll no: "+roll\_no);

System.out.println("Name: "+name);

System.out.println("Section: "+std\_section);

System.out.println("Campus: "+std\_campus);

}

public void payfees()

{

Scanner s = new Scanner(System.in);

int bool=0;

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from student");

Statement st = conn.createStatement();

ResultSet rest = st.executeQuery("select \* from login");

boolean boo = false;

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(2)))

{

boo = myRs.getBoolean(5);

}

}

if(boo)

{

System.out.println("You have already paid the fees!!!");

return;

}

String passw="";

while(rest.next())

{

if(roll\_no.equals(rest.getString(3)))

{

passw = rest.getString(2);

}

}

System.out.println("Before Fees payment, Enter your Password:");

do

{

String password = s.next();

if(password.equals(passw))

bool=1;

else

System.out.println("Enter the correct password");

}while(bool==0);

System.out.println("Your tuition fees is: 2,00,000");

System.out.println("Enter your Card Number:");

long card\_no = s.nextLong();

System.out.println("Enter your cardholder name");

String card\_holder = s.next();

System.out.println("Enter your Pin number:");

int pin = s.nextInt();

System.out.println("Do you want to proceed to payment?(yes/no)");

String ch = s.next();

if(ch.equals("yes"))

{

System.out.print("Payment Successfull\nTransaction details:\nCard Number:"+card\_no+"\nCard Holder:"+card\_holder+"\nFees paid: 2,00,000");

stmt.executeUpdate("update student set fees\_paid=true where roll\_no='"+roll\_no+"';");

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void access\_course\_reg()

{

Scanner s = new Scanner(System.in);

System.out.print("Enter:\n1. for Removing previously registered courses\n2. for Registering new courses\n3. for viewing already registered courses\n");

int coursech = s.nextInt();

if(coursech==1)

{

course.delete\_prev\_course();

}

else if(coursech==2)

{

course.add\_new\_course();

}

else if(coursech==3)

{

course.view\_courses();

}

}

public void load\_address(address a,int choice)

{

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from address;");

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(1)))

{

a.set\_city(myRs.getString(3));

a.set\_pincode(myRs.getInt(4));

a.set\_street(myRs.getString(2));

}

}

if(choice==1)

{

System.out.println("Address: "+a.get\_street()+" "+a.get\_city()+" "+a.get\_pincode());

}

else if(choice==2)

{

a.modify\_address();

stmt.executeUpdate("Update address set street='"+a.get\_street()+"',city='"+a.get\_city()+"',pincode="+a.get\_pincode()+" where reference\_id='"+roll\_no+"';");

System.out.println("Update Succesfull!!!");

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void allocate\_house()

{

Random rand = new Random();

int rand\_house = rand.nextInt(4);

String house\_id=null;

switch(rand\_house)

{

case 0: house\_id = "HD01";

case 1: house\_id = "HD02";

case 2: house\_id = "HD03";

case 3: house\_id = "HD04";

}

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from alloted\_house;");

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(1)))

{

if(myRs.getString(2)!=null)

{

System.out.println("You are already allocated to a house");

return;

}

}

}

stmt.executeUpdate("update alloted\_house set house\_id='"+house\_id+"' where roll\_no='"+roll\_no+"';");

System.out.print("Allocation Successfull!!!\nYour allocated house is: "+house\_id);

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void access\_library()

{

Scanner s = new Scanner(System.in);

System.out.println("Enter\n1. If you want to Borrow Book\n2. If you want to Return book");

int libch = s.nextInt();

if(libch==1)

{

lib.borrowbook();

}

else if(libch==2)

{

lib.returnbook();

}

}

public void view\_marks()

{

Stack<String> stack = new Stack<String>();

float[] marks = new float[5];

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from course\_registration;");

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(1)))

{

boolean aa = stack.add(myRs.getString(2));

}

}

if(stack.isEmpty())

{

System.out.println("You have not enrolled in any of the courses");

return;

}

ResultSet Rs = stmt.executeQuery("select \* from marks;");

while(Rs.next())

{

if(roll\_no.equals(Rs.getString(1)))

{

for(int i=0;i<5;i++)

marks[i] = Rs.getFloat(i+2);

}

}

for(int i=0;i<5;i++)

{

System.out.println("Your Mark in the Subject: "+stack.elementAt(i)+" is: "+marks[i]);

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

}

Support\_staff:

package JavaProject;

import java.sql.\*;

import java.util.\*;

public class support\_staff extends staff

{

protected String staff\_id;

protected float overtime\_pay;;

support\_staff(String staff\_id)

{

super(staff\_id);

this.staff\_id = staff\_id;

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from support\_staff");

while(myRs.next())

{

if(staff\_id.equals(myRs.getString(1)))

{

overtime\_pay = myRs.getFloat(2);

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void view\_staff\_details()

{

super.view\_staff\_details();

System.out.println("Overtime Pay: "+overtime\_pay);

}

}

Teaching staff():

package JavaProject;

import java.sql.\*;

import java.util.\*;

public class teaching\_staff extends staff

{

protected String staff\_id;

protected float subscription\_allotment;

teaching\_staff(String staff\_id)

{

super(staff\_id);

this.staff\_id = staff\_id;

try

{

Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from teaching\_staff");

while(myRs.next())

{

if(staff\_id.equals(myRs.getString(1)))

{

subscription\_allotment = myRs.getFloat(2);

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void view\_staff\_details()

{

super.view\_staff\_details();

System.out.println("Subscription Allotment: "+subscription\_allotment);

}

}

UG\_student:

package JavaProject;

import java.sql.\*;

public class ug\_student extends Student

{

protected String roll\_no;

protected int no\_of\_cert\_courses;

ug\_student(String roll\_no)

{

super(roll\_no);

this.roll\_no = roll\_no;

try

{

Connection conn = DriverManager.*getConnection*("jdbc:mysql://localhost:8080/mydb","root","Mudeprab@04");

Statement stmt = conn.createStatement();

ResultSet myRs = stmt.executeQuery("select \* from ug\_student");

while(myRs.next())

{

if(roll\_no.equals(myRs.getString(1)))

{

no\_of\_cert\_courses = myRs.getInt(2);

}

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

public void view\_student\_details()

{

super.view\_student\_details();

System.***out***.println("No of certified courses done: "+no\_of\_cert\_courses);

}

}