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import java.io.DataOutputStream;
import java.io.IOException;
import java.sql.*;
import java.util.Scanner;
public class database {
    public static      Connection con;
    public static      Statement st;

    public static void print(String s,int num)
    {
        {
            if(s==null)
                num=30-4;
            else
                num=num-s.length();

            System.out.print(" "+s);
            for(int i=0;i<num;i++)
            {
                System.out.print(" ");
            }
            System.out.print("|");
        }
    }

    public static void  queryexecute(String query)
    {
        try {
            ResultSet rs1 = st.executeQuery(query);
            ResultSetMetaData rsmd;
            rsmd = rs1.getMetaData();
            System.out.println();
            for(int j=0;j<30*rsmd.getColumnCount()
+rsmd.getColumnCount()+4;j++)
            {
                System.out.print("-");
            }
            System.out.println();
            for(int i=1;i<=rsmd.getColumnCount();i++)
            {
                if(i==1)
                    System.out.print("|");
                String s=rsmd.getColumnName(i);
                print(s,30);
            }
            System.out.println();
            for(int j=0;j<30*rsmd.getColumnCount()
+rsmd.getColumnCount()+4;j++)
            {
                System.out.print("-");
            }
            System.out.println();
            while(rs1.next())
            {
                for(int i=1;i<=rsmd.getColumnCount();i++)
                {
                    if(i==1)

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        System.out.print("|");
        // int len=rs1.getString(i).length();
        print(rs1.getString(i),30);
    }
    System.out.println();
}
for(int j=0;j<30*rsmd.getColumnCount()
+rsmd.getColumnCount()+4;j++)
{
    System.out.print("-");
}
    System.out.println();

    } catch (SQLException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }

}

public static void main(String[]args) throws Exception
{
    String query="";
    String url="jdbc:mysql://localhost:3306/professor";
    String uname="root";
    String pass="";
    //String query="select*from Customer where cust_no=2";
    Class.forName("com.mysql.cj.jdbc.Driver");
    con=DriverManager.getConnection(url, uname, pass);
    st=con.createStatement();

    String str="";
    Scanner sc=new Scanner(System.in);
    int ch,flag=0;
    while(true)
    {

        System.out.println("\n1 Find the professor details and
department details using NATURAL JOIN ");
        System.out.println("2 Find the prof_id, prof_name and
shif");
        System.out.println("3 List all the department details and
the corresponding names of professors in the same department");
        System.out.println("4 List all the professors and the
corresponding names of department");
        System.out.println("5 Display professor name, dept_name,
shift, salary where prof_id = 101");
        System.out.println("6 List the total number of professor in
each department");
        System.out.println("7 List the prof_id associated
department and the dept_name having name 'computer'");
        System.out.println("8 Find the names of all departments
where the professors joined in year 2015 (or date of joining is (1-1-2015))");
        System.out.println("9 Create view showing the professor and
shift details");
        System.out.println("10 Perform Manipulation on simple view-
Insert, update, delete, drop view");
        System.out.println("99 Exit\n");
        ch=sc.nextInt();
    }
}

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switch(ch)
{
case 1 : str="select *from Professors natural join
Departments;";
queryexecute(str);
break;
case 2 : str="select p.prof_id,p.prof_fname,s.shift from
Professors p , Shift s where p.prof_id=s.prof_id;";
queryexecute(str);
break;
case 3 : str="select
Departments.dept_id,Departments.dept_name,Professors.prof_fname from Departments
left join Professors on Departments.dept_id=Professors.dept_id order by
Departments.dept_id;";
queryexecute(str);
break;
case 4 : str="select
Professors.prof_fname,Professors.prof_lname,Departments.dept_name from Departments
inner join Professors on Departments.dept_id=Professors.dept_id;";
queryexecute(str);
break;
case 5 : str="select prof_fname,dept_name,shift,salary from
Professors inner join Departments using (dept_id) inner join Shift using(prof_id)
inner join Works using (prof_id) where prof_id=1;";
queryexecute(str);
break;
case 6 : break;
case 7 : str="select prof_id,dept_name from Professors
inner join Departments using(dept_id) where dept_name=\"Computer Engineering\"
order by prof_id;";
queryexecute(str);
break;
case 8 : str="select dept_name from Professors inner join
Departments using(dept_id) where doj=\"2015-01-01\";";
queryexecute(str);
break;
case 9 : str="";
queryexecute(str);
break;
case 10: str="";
queryexecute(str);
break;
case 99: flag=1;
break;
}
if(flag==1)
{
flag=0;
break;
}
}
st.close();
con.close();

}
}

```