```java
package com.jiang.metadata;

import java.sql.*;

public class MeteDataDemo {
    public static void databaseMeteDate(){
        try {
            Class.forName("oracle.jdbc.OracleDriver");
            Connection conn=
DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:orcl","jiang","bjsxt");
            //数据元信息
            DatabaseMetaData dbMetaData=conn.getMetaData();
            String dbName=dbMetaData.getDatabaseProductName();
            System.out.println("数据库名"+dbName);
            String dbVersion=dbMetaData.getDatabaseProductVersion();
            System.out.println("数据库版本名"+dbVersion);
            String dbDriver=dbMetaData.getDriverName();
            System.out.println("驱动名"+dbDriver);
            String dbUrl=dbMetaData.getURL();
            System.out.println("URL为"+dbUrl);
            String userName=dbMetaData.getUserName();
            System.out.println("用户名为"+userName);
            ResultSet rs =dbMetaData.getPrimaryKeys(null,userName,"STUDENT");
            while(rs.next()){
                Object tableName=rs.getObject(3);  //表名
                Object columnName=rs.getObject(4);  //列名
                Object pkName=rs.getObject(6);   //主键的约束名
                System.out.println(tableName+"---"+columnName+"---"+pkName);
            }
        } catch (ClassNotFoundException | SQLException e) {
            e.printStackTrace();
        }
    }

    public static void parameterMetaData(){
        try {
            Class.forName("oracle.jdbc.OracleDriver");
            Connection
conn=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:orcl","jiang","bjsxt");

            PreparedStatement pstmt=conn.prepareStatement("select * from STUDENTINFO
where UNO=? and UNAME=?");
            ParameterMetaData metaData=pstmt.getParameterMetaData();
            int count=metaData.getParameterCount();
            System.out.println("参数元信息总数"+count);
            for(int i=1;i<=count;i++){
                String typeName=metaData.getParameterTypeName(i);
                System.out.println(typeName);
            }
```

```java
        } catch (ClassNotFoundException | SQLException e) {
            e.printStackTrace();
        }

    }

    public static void resultSetMetaData(){
        try {
            Class.forName("oracle.jdbc.OracleDriver");
            Connection
conn=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:orcl","jiang","bjsxt");

            PreparedStatement pstmt=conn.prepareStatement("select * from STUDENTINFO
where UNO=? and UNAME=?");
            ResultSet  rs=pstmt.executeQuery();
            ResultSetMetaData metaData=rs.getMetaData();
            int count=metaData.getColumnCount();
            System.out.println("结果集列数"+count);
            while(rs.next()){
                for(int i=1;i<=count;i++){
                    String columnName=metaData.getColumnName(i);
                    String columnTypeName=metaData.getColumnTypeName(i);
                    System.out.println(columnName+"-----"+columnTypeName);
                }
            }
        } catch (ClassNotFoundException | SQLException e) {
            e.printStackTrace();
        }

    }

    public static void main(String[] args) {
//      databaseMeteDate();
        parameterMetaData();
    }
}
```