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ROLL NO: CB.EN.U4CSE17453

1. XML Sample Data

```
<?xml version="1.0" encoding="UTF-8"?>
<root>
  <row>
    <Suburb>Williams Landing</Suburb>
    <Address>6 Wildebrand Av</Address>
    <Rooms>4</Rooms>
    <Type>h</Type>
    <Price>785000</Price>
    <Method>S</Method>
    <SellerG>hockingstuart</SellerG>
    <Date>30-12-2017</Date>
    <Postcode>3027</Postcode>
    <Regionname>Western Metropolitan</Regionname>
    <Propertycount>1999</Propertycount>
    <Distance>17.6</Distance>
    <CouncilArea>Wyndham City Council</CouncilArea>
  </row>
  <row>
    <Suburb>Kew East</Suburb>
    <Address>50 Windella Av</Address>
    <Rooms>3</Rooms>
    <Type>h</Type>
    <Price>2125000</Price>
    <Method>VB</Method>
    <SellerG>Jellis</SellerG>
    <Date>16-09-2017</Date>
    <Postcode>3102</Postcode>
    <Regionname>Southern Metropolitan</Regionname>
    <Propertycount>2671</Propertycount>
    <Distance>7.3</Distance>
    <CouncilArea>Boroondara City Council</CouncilArea>
  </row>
  <row>
    <Suburb>Kew East</Suburb>
    <Address>5 Woodlands Av</Address>
    <Rooms>2</Rooms>
    <Type>h</Type>
    <Price>1325000</Price>
    <Method>PI</Method>
    <SellerG>Jellis</SellerG>
    <Date>16-09-2017</Date>
    <Postcode>3102</Postcode>
    <Regionname>Southern Metropolitan</Regionname>
```

```

        <Propertycount>2671</Propertycount>
        <Distance>7.3</Distance>
        <CouncilArea>Boroondara City Council</CouncilArea>
    </row>
    <row>
        <Suburb>Kew East</Suburb>
        <Address>22 Woolcock Av</Address>
        <Rooms>3</Rooms>
        <Type>h</Type>
        <Price>1975000</Price>
        <Method>PI</Method>
        <SellerG>Lindellas</SellerG>
        <Date>16-09-2017</Date>
        <Postcode>3102</Postcode>
        <Regionname>Southern Metropolitan</Regionname>
        <Propertycount>2671</Propertycount>
        <Distance>7.3</Distance>
        <CouncilArea>Boroondara City Council</CouncilArea>
    </row>
    <row>
        <Suburb>Fitzroy North</Suburb>
        <Address>220 Clausen St</Address>
        <Rooms>4</Rooms>
        <Type>h</Type>
        <Price>2450000</Price>
        <Method>S</Method>
        <SellerG>Nelson</SellerG>
        <Date>12-05-2018</Date>
        <Postcode>3068</Postcode>
        <Regionname>Northern Metropolitan</Regionname>
        <Propertycount>6244</Propertycount>
        <Distance>3.6</Distance>
        <CouncilArea>Moreland City Council</CouncilArea>
    </row>
    <row>
        <Suburb>Doncaster East</Suburb>
        <Address>18 Silvana Ct</Address>
        <Rooms>4</Rooms>
        <Type>h</Type>
        <Price/>
        <Method>S</Method>
        <SellerG>hockingstuart</SellerG>
        <Date>06-01-2018</Date>
        <Postcode>3109</Postcode>
        <Regionname>Eastern Metropolitan</Regionname>
        <Propertycount>10999</Propertycount>
        <Distance>14.3</Distance>
        <CouncilArea>Manningham City Council</CouncilArea>
    </row>
    <row>

```

```

        <Suburb>Carrum</Suburb>
        <Address>2/32 Valetta St</Address>
        <Rooms>3</Rooms>
        <Type>h</Type>
        <Price>788000</Price>
        <Method>S</Method>
        <SellerG>Ray</SellerG>
        <Date>03-03-2018</Date>
        <Postcode>3197</Postcode>
        <Regionname>South-Eastern Metropolitan</Regionname>
        <Propertycount>1989</Propertycount>
        <Distance>31.2</Distance>
        <CouncilArea>Kingston City Council</CouncilArea>
    </row>
    <row>
        <Suburb>Carrum Downs</Suburb>
        <Address>21 Hellenic Ct</Address>
        <Rooms>4</Rooms>
        <Type>h</Type>
        <Price>562500</Price>
        <Method>S</Method>
        <SellerG>Harcourts</SellerG>
        <Date>03-03-2018</Date>
        <Postcode>3201</Postcode>
        <Regionname>South-Eastern Metropolitan</Regionname>
        <Propertycount>8060</Propertycount>
        <Distance>34.9</Distance>
        <CouncilArea>Frankston City Council</CouncilArea>
    </row>
    <row>
        <Suburb>Abbotsford</Suburb>
        <Address>49 Lithgow St</Address>
        <Rooms>3</Rooms>
        <Type>h</Type>
        <Price>1490000</Price>
        <Method>S</Method>
        <SellerG>Jellis</SellerG>
        <Date>01-04-2017</Date>
        <Postcode>3067</Postcode>
        <Regionname>Northern Metropolitan</Regionname>
        <Propertycount>4019</Propertycount>
        <Distance>3</Distance>
        <CouncilArea>Yarra City Council</CouncilArea>
    </row>
</root>

```

2. JDBC Code

```
3. import java.sql.*;
4. import java.io.*;
5. import java.util.*;
6. import javax.xml.parsers.DocumentBuilderFactory;
7. import javax.xml.xpath.XPath;
8. import javax.xml.xpath.XPathConstants;
9. import javax.xml.xpath.XPathFactory;
10. import javax.xml.parsers.DocumentBuilder;
11. import org.w3c.dom.Document;
12. import org.w3c.dom.NodeList;
13. import org.w3c.dom.Node;
14. import org.w3c.dom.Element;
15. import org.w3c.dom.NamedNodeMap;
16.
17. import java.sql.Connection;
18. import java.sql.DriverManager;
19. import java.sql.Statement;
20. public class XMLSQL {
21.
22.     static private String getAttrValue(Node node, String attrName) {
23.         if(!node.hasAttributes())
24.             return "";
25.         NamedNodeMap nmap = node.getAttributes();
26.         if(nmap == null)
27.             return "";
28.         Node n = nmap.getNamedItem(attrName);
29.         if(n == null)
30.             return "";
31.         return n.getNodeValue();
32.     }
33.
34.     static private String getTextContent(Node parentNode, String childName) {
35.         NodeList nlist = parentNode.getChildNodes();
36.         for(int i=0; i<nlist.getLength(); i++) {
37.             Node n = nlist.item(i);
38.             String name = n.getNodeName();
39.             if(name != null && name.equals(childName))
40.                 return n.getTextContent();
41.         }
42.         return "";
43.     }
44.     public static void main(String[] args) {
45.         try {
46.             Class.forName("com.mysql.cj.jdbc.Driver");
47.             String path_to_db = "jdbc:mysql://localhost:3306/NCP";
48.             String username = "root";
49.             String password = "root";
50.             String xml_file = "D:\\sem7\\NCP\\Lab - 8\\house_data.xml";
51.             Connection con = DriverManager.getConnection(path_to_db,
username, password);
52.
53.             File file = new File(xml_file);
54.             DocumentBuilderFactory factory =
DocumentBuilderFactory.newInstance();
55.             DocumentBuilder builder = factory.newDocumentBuilder();
56.             Document xmlDoc = builder.parse(file);
57.
58.             NodeList nlist = xmlDoc.getElementsByTagName("row");
59.
```

```

60.                XPath xpath = XPathFactory.newInstance().newXPath();
61.                Object res = xpath.evaluate("/root/row", xmlDoc,
XPathConstants.NODESET);
62.
63.                PreparedStatement stmt = con.prepareStatement("INSERT INTO
melbourne_housing_price("
64.                    + "Suburb, Address, Rooms, Type, Price, Method,
SellerG, Date, Postcode, Regionname, Propertycount, Distance, CouncilArea)"
65.                    + "VALUES(?, ?, ?, ?, ?, ?, ?, ?, str_to_date(?,
'%d-%m-%Y'), ?, ?, ?, ?, ?)");
66.
67.
68.                for(int i=0; i<nlist.getLength(); i++) {
69.                    Node node = nlist.item(i);
70.                    List<String> columns = Arrays.asList(
71.                        getTextContent(node, "Suburb"),
72.                        getTextContent(node, "Address"),
73.                        getTextContent(node, "Rooms"),
74.                        getTextContent(node, "Type"),
75.                        getTextContent(node, "Price"),
76.                        getTextContent(node, "Method"),
77.                        getTextContent(node, "SellerG"),
78.                        getTextContent(node, "Date"),
79.                        getTextContent(node, "Postcode"),
80.                        getTextContent(node, "Regionname"),
81.                        getTextContent(node, "Propertycount"),
82.                        getTextContent(node, "Distance"),
83.                        getTextContent(node, "CouncilArea")
84.                    );
85.                    for(int n=0; n<columns.size(); n++) {
86.                        if(columns.get(n) == "") {
87.                            stmt.setNull(n+1,
java.sql.Types.INTEGER);
88.                        }
89.                        else {
90.                            stmt.setString(n+1, columns.get(n));
91.                        }
92.                    }
93.                    stmt.execute();
94.                }
95.                con.close();
96.            }
97.            catch(Exception e) {
98.                System.out.println(e);
99.            }
100.        }
101.    }

```

3. MySQL Workbench

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

| | Suburb | Address | Room | Type | Price | Method | Seller | Date | Postcode | Region | Property | Distance | Council Area |
|---|------------------|-----------------|------|------|-------------------|--------|---------------|------------|----------|----------------|----------|----------|-------------------------|
| ▶ | Williams Landing | 6 Wildebrand Av | 4 | h | 785000 | S | hockingstuart | 2017-12-30 | 3027 | Western Me... | 1999 | 18 | Wyndham City Council |
| | Kew East | 50 Windella Av | 3 | h | 2125000 | VB | Jellis | 2017-09-16 | 3102 | Southern M... | 2671 | 7 | Boroondara City Council |
| | Kew East | 5 Woodlands Av | 2 | h | 1325000 | PI | Jellis | 2017-09-16 | 3102 | Southern M... | 2671 | 7 | Boroondara City Council |
| | Kew East | 22 Woolcock Av | 3 | h | 1975000 | PI | Lindellas | 2017-09-16 | 3102 | Southern M... | 2671 | 7 | Boroondara City Council |
| | Fitzroy North | 220 Clausen St | 4 | h | 2450000 | S | Nelson | 2018-05-12 | 3068 | Northern Me... | 6244 | 4 | Moreland City Council |
| | Doncaster East | 18 Silvana Ct | 4 | h | 190000 | S | hockingstuart | 2018-01-06 | 3109 | Eastern Met... | 10999 | 14 | Manningham City Council |
| | Carrum | 2/32 Valetta St | 3 | h | 788000 | S | Ray | 2018-03-03 | 3197 | South-Easte... | 1989 | 31 | Kingston City Council |
| | Carrum Downs | 21 Hellenic Ct | 4 | h | 562500 | S | Harcourts | 2018-03-03 | 3201 | South-Easte... | 8060 | 35 | Frankston City Council |
| | Abbotsford | 49 Lithgow St | 3 | h | 1490000 | S | Jellis | 2017-04-01 | 3067 | Northern Me... | 4019 | 3 | Yarra City Council |