**NAME: Sanjay Tharagesh R. S.**

**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 Clauscen 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>

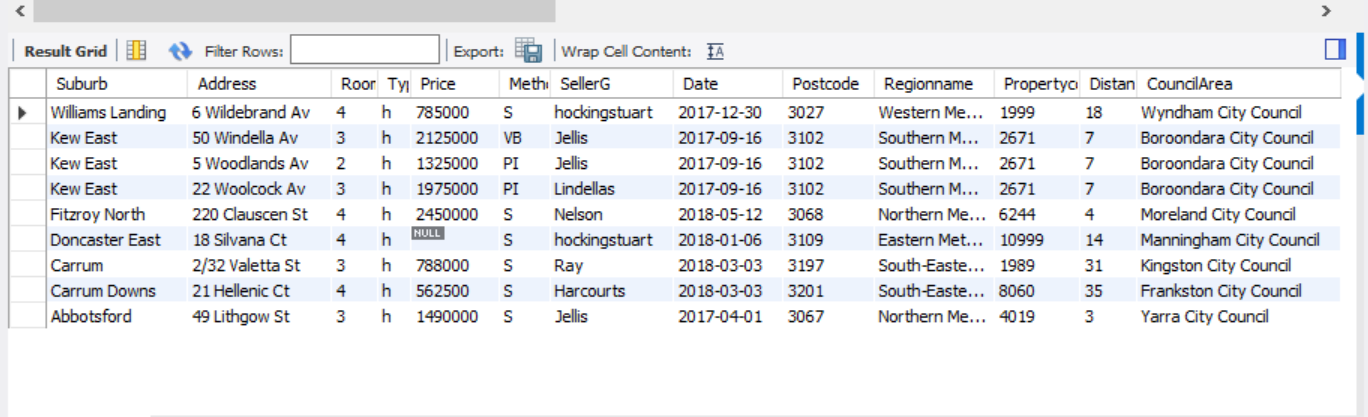
</row>

</root>

1. **JDBC Code**
2. import java.sql.\*;
3. import java.io.\*;
4. import java.util.\*;
5. import javax.xml.parsers.DocumentBuilderFactory;
6. import javax.xml.xpath.XPath;
7. import javax.xml.xpath.XPathConstants;
8. import javax.xml.xpath.XPathFactory;
9. import javax.xml.parsers.DocumentBuilder;
10. import org.w3c.dom.Document;
11. import org.w3c.dom.NodeList;
12. import org.w3c.dom.Node;
13. import org.w3c.dom.Element;
14. import org.w3c.dom.NamedNodeMap;
15. import java.sql.Connection;
16. import java.sql.DriverManager;
17. import java.sql.Statement;
18. public class XMLSQL {
20. static private String getAttrValue(Node node, String attrName) {
21. if(!node.hasAttributes())
22. return "";
23. NamedNodeMap nmap = node.getAttributes();
24. if(nmap == null)
25. return "";
26. Node n = nmap.getNamedItem(attrName);
27. if(n == null)
28. return "";
29. return n.getNodeValue();
30. }
32. static private String getTextContent(Node parentNode, String childName) {
33. NodeList nlist = parentNode.getChildNodes();
34. for(int i=0; i<nlist.getLength(); i++) {
35. Node n = nlist.item(i);
36. String name = n.getNodeName();
37. if(name != null && name.equals(childName))
38. return n.getTextContent();
39. }
40. return "";
41. }
42. public static void main(String[] args) {
43. try {
44. Class.forName("com.mysql.cj.jdbc.Driver");
45. String path\_to\_db = "jdbc:mysql://localhost:3306/NCP";
46. String username = "root";
47. String password = "root";
48. String xml\_file = "D:\\sem7\\NCP\\Lab - 8\\house\_data.xml";
49. Connection con = DriverManager.getConnection(path\_to\_db, username, password);
51. File file = new File(xml\_file);
52. DocumentBuilderFactory factory = DocumentBuilderFactory.newInstance();
53. DocumentBuilder builder = factory.newDocumentBuilder();
54. Document xmlDoc = builder.parse(file);
56. NodeList nlist = xmlDoc.getElementsByTagName("row");
58. XPath xpath = XPathFactory.newInstance().newXPath();
59. Object res = xpath.evaluate("/root/row", xmlDoc, XPathConstants.NODESET);
61. PreparedStatement stmt = con.prepareStatement("INSERT INTO melbourne\_housing\_price("
62. + "Suburb, Address, Rooms, Type, Price, Method, SellerG, Date, Postcode, Regionname, Propertycount, Distance, CouncilArea)"
63. + "VALUES(?, ?, ?, ?, ?, ?, ?, str\_to\_date(?, '%d-%m-%Y'), ?, ?, ?, ?, ?)");

66. for(int i=0; i<nlist.getLength(); i++) {
67. Node node = nlist.item(i);
68. List<String> columns = Arrays.asList(
69. getTextContent(node, "Suburb"),
70. getTextContent(node, "Address"),
71. getTextContent(node, "Rooms"),
72. getTextContent(node, "Type"),
73. getTextContent(node, "Price"),
74. getTextContent(node, "Method"),
75. getTextContent(node, "SellerG"),
76. getTextContent(node, "Date"),
77. getTextContent(node, "Postcode"),
78. getTextContent(node, "Regionname"),
79. getTextContent(node, "Propertycount"),
80. getTextContent(node, "Distance"),
81. getTextContent(node, "CouncilArea")
82. );
83. for(int n=0; n<columns.size(); n++) {
84. if(columns.get(n) == "") {
85. stmt.setNull(n+1, java.sql.Types.INTEGER);
86. }
87. else {
88. stmt.setString(n+1, columns.get(n));
89. }
90. }
91. stmt.execute();
92. }
93. con.close();
94. }
95. catch(Exception e) {
96. System.out.println(e);
97. }
98. }
99. }

**3. MySQL Workbench**

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