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| **15CSE376**  21.09.2020 **Net Centric Programming Laboratory –XML/DTD/XSD** |

**Name: SANJAY THARAGESH R. S. Duration:** 2 hours

**Roll. No: CB.EN.U4CSE17453 Max. marks**: 20

**Dataset Link:** <https://www.kaggle.com/anthonypino/melbourne-housing-market>

**Google Drive Link (Containing all code):** <https://drive.google.com/drive/folders/1JIFB2ty0wmOD_pleOC8Hge2pD6pobeuS?usp=sharing>

**XML and DTD**

<?xml version="1.0" encoding="UTF-8"?>

<!DOCTYPE root [

<!ELEMENT root (row)+>

<!ELEMENT row (Suburb,Address,Rooms,Type,Price,Method,SellerG,Date,Postcode,Regionname,Propertycount,Distance,CouncilArea)>

<!ELEMENT Suburb (#PCDATA)>

<!ELEMENT Address (#PCDATA)>

<!ELEMENT Rooms (#PCDATA)>

<!ELEMENT Type (#PCDATA)>

<!ELEMENT Price (#PCDATA)>

<!ELEMENT Method (#PCDATA)>

<!ELEMENT SellerG (#PCDATA)>

<!ELEMENT Date (#PCDATA)>

<!ELEMENT Postcode (#PCDATA)>

<!ELEMENT Regionname (#PCDATA)>

<!ELEMENT Propertycount (#PCDATA)>

<!ELEMENT Distance (#PCDATA)>

<!ELEMENT CouncilArea (#PCDATA)>

]>

<root>

<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>

<row>

<Suburb>Brunswick East</Suburb>

<Address>1/164 Nicholson St</Address>

<Rooms>2</Rooms>

<Type>h</Type>

<Price>860000</Price>

<Method>S</Method>

<SellerG>Woodards</SellerG>

<Date>01-04-2017</Date>

<Postcode>3057</Postcode>

<Regionname>Northern Metropolitan</Regionname>

<Propertycount>5533</Propertycount>

<Distance>4</Distance>

<CouncilArea>Moreland City Council</CouncilArea>

</row>

<row>

<Suburb>Elwood</Suburb>

<Address>68 Tennyson St</Address>

<Rooms>4</Rooms>

<Type>h</Type>

<Price>2985000</Price>

<Method>S</Method>

<SellerG>Kay</SellerG>

<Date>01-04-2017</Date>

<Postcode>3184</Postcode>

<Regionname>Southern Metropolitan</Regionname>

<Propertycount>8989</Propertycount>

<Distance>7.2</Distance>

<CouncilArea>Port Phillip City Council</CouncilArea>

</row>

</root>

**XML with XSD reference to another file**

<?xml version="1.0" encoding="UTF-8"?>

<root

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:noNamespaceSchemaLocation="D:\sem7\NCP\Lab - 6\XSD\MELBOURNE\_HOUSE\_PRICES\_LESS - Copy.xsd">

<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>

<row>

<Suburb>Brunswick East</Suburb>

<Address>1/164 Nicholson St</Address>

<Rooms>2</Rooms>

<Type>h</Type>

<Price>860000</Price>

<Method>S</Method>

<SellerG>Woodards</SellerG>

<Date>01-04-2017</Date>

<Postcode>3057</Postcode>

<Regionname>Northern Metropolitan</Regionname>

<Propertycount>5533</Propertycount>

<Distance>4</Distance>

<CouncilArea>Moreland City Council</CouncilArea>

</row>

<row>

<Suburb>Elwood</Suburb>

<Address>68 Tennyson St</Address>

<Rooms>4</Rooms>

<Type>h</Type>

<Price>2985000</Price>

<Method>S</Method>

<SellerG>Kay</SellerG>

<Date>01-04-2017</Date>

<Postcode>3184</Postcode>

<Regionname>Southern Metropolitan</Regionname>

<Propertycount>8989</Propertycount>

<Distance>7.2</Distance>

<CouncilArea>Port Phillip City Council</CouncilArea>

</row>

</root>

**XSD**

<?xml version="1.0" encoding="UTF-8"?>

<xs:schema

xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified">

<xs:element name="root">

<xs:complexType>

<xs:sequence>

<xs:element maxOccurs="unbounded" ref="row"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="row">

<xs:complexType>

<xs:sequence>

<xs:element ref="Suburb"/>

<xs:element ref="Address"/>

<xs:element ref="Rooms"/>

<xs:element ref="Type"/>

<xs:element ref="Price"/>

<xs:element ref="Method"/>

<xs:element ref="SellerG"/>

<xs:element ref="Date"/>

<xs:element ref="Postcode"/>

<xs:element ref="Regionname"/>

<xs:element ref="Propertycount"/>

<xs:element ref="Distance"/>

<xs:element ref="CouncilArea"/>

</xs:sequence>

</xs:complexType>

</xs:element>

<xs:element name="Suburb" type="xs:string"/>

<xs:element name="Address">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:whiteSpace value="preserve"/>

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="Rooms">

<xs:simpleType>

<xs:restriction base="xs:integer">

<xs:minInclusive value="1"/>

<xs:maxInclusive value="31"/>

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="Type" type="houseType"/>

<xs:element name="Price" type="positiveType"/>

<xs:element name="Method" type="soldType"/>

<xs:element name="SellerG" type="xs:NCName"/>

<xs:element name="Date">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:pattern value="\d{2}[-]\d{2}[-]\d{4}"/>

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="Postcode">

<xs:simpleType>

<xs:restriction base="xs:string">

<xs:pattern value="[3][0-9][0-9][0-9]"/>

</xs:restriction>

</xs:simpleType>

</xs:element>

<xs:element name="Regionname" type="regionType"/>

<xs:element name="Propertycount" type="positiveType"/>

<xs:element name="Distance" type="positiveDecType"/>

<xs:element name="CouncilArea" type="xs:string"/>

<xs:simpleType name="houseType">

<xs:restriction base="xs:string">

<xs:enumeration value="h"/>

<xs:enumeration value="u"/>

<xs:enumeration value="t"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="soldType">

<xs:restriction base="xs:string">

<xs:enumeration value="S"/>

<xs:enumeration value="SP"/>

<xs:enumeration value="VB"/>

<xs:enumeration value="PI"/>

<xs:enumeration value="SA"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="regionType">

<xs:restriction base="xs:string">

<xs:enumeration value="Northern Metropolitan"/>

<xs:enumeration value="Western Metropolitan"/>

<xs:enumeration value="Southern Metropolitan"/>

<xs:enumeration value="South-Eastern Metropolitan"/>

<xs:enumeration value="Eastern Metropolitan"/>

<xs:enumeration value="Northern Victoria"/>

<xs:enumeration value="Western Victoria"/>

<xs:enumeration value="Eastern Victoria"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="positiveType">

<xs:restriction base="xs:integer">

<xs:minInclusive value="0"/>

</xs:restriction>

</xs:simpleType>

<xs:simpleType name="positiveDecType">

<xs:restriction base="xs:decimal">

<xs:minInclusive value="0"/>

</xs:restriction>

</xs:simpleType>

</xs:schema>

**THANK YOU**