

15CSE376

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Net Centric Programming Laboratory –XML/DTD/XSD

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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,Regionnam
e,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:sequence>
        </xs:complexType>
    </xs:element>

```

```

        <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