Semantic Web

Lab Sheet 1

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1. Create an XML file for student admission procedure.

Admission.xml

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

<!DOCTYPE Admission SYSTEM "Admission.dtd">

<Admission>

    <Students>

        <Student>

            <ApplicationNo></ApplicationNo>

            <Name>

                <Firstname></Firstname>

                <Lastname></Lastname>

            </Name>

            <Address>

                <DoorNo></DoorNo>

                <Street></Street>

                <Locality></Locality>

                <City></City>

                <State></State>

                <Country></Country>

                <Pincode></Pincode>

            </Address>

            <Email></Email>

            <Phone></Phone>

            <DOB></DOB>

            <Age></Age>

            <Gender></Gender>

            <Nationality></Nationality>

            <IdentitficationMark></IdentitficationMark>

            <AEEERank></AEEERank>

            <JEERank></JEERank>

            <SSLCPercentage></SSLCPercentage>

            <HSCPercentage></HSCPercentage>

        </Student>

        <Parent>

            <Father>

                <Name></Name>

                <Occupation></Occupation>

                <Email></Email>

                <Phone></Phone>

            </Father>

            <Mother>

                <Name></Name>

                <Occupation></Occupation>

                <Email></Email>

                <Phone></Phone>

            </Mother>

        </Parent>

        <Branch>

            <BranchPreference1></BranchPreference1>

            <BranchPreference2></BranchPreference2>

            <BranchPreference3></BranchPreference3>

        </Branch>

    </Students>

</Admission>

Admission.dtd

<?xml version = "1.0"?>

<!DOCTYPE Admission

[

<!ELEMENT Admission (Students\*)>

<!ELEMENT Students (Student, Parent, Branch)>

<!ELEMENT Student (ApplicationNo, Name, Address, Email, Phone, DOB, Age, Gender, Nationality, IdentitficationMark, AEEERank, JEERank, SSLCPercentage, HSCPercentage)>

<!ELEMENT ApplicationNo (#PCDATA)>

<!ELEMENT Name (Firstname, Lastname)>

<!ELEMENT Firstname (#PCDATA)>

<!ELEMENT Lastname (#PCDATA)>

<!ELEMENT Address (DoorNo, Street, Locality, City, State, Country, Pincode)>

<!ELEMENT DoorNo (#PCDATA)>

<!ELEMENT Street (#PCDATA)>

<!ELEMENT Locality (#PCDATA)>

<!ELEMENT City (#PCDATA)>

<!ELEMENT State (#PCDATA)>

<!ELEMENT Country (#PCDATA)>

<!ELEMENT Pincode (#PCDATA)>

<!ELEMENT Email (#PCDATA)>

<!ELEMENT Phone (#PCDATA)>

<!ELEMENT DOB (#PCDATA)>

<!ELEMENT Age (#PCDATA)>

<!ELEMENT Gender (#PCDATA)>

<!ELEMENT Nationality (#PCDATA)>

<!ELEMENT IdentitficationMark (#PCDATA)>

<!ELEMENT AEEERank (#PCDATA)>

<!ELEMENT JEERank (#PCDATA)>

<!ELEMENT SSLCPercentage (#PCDATA)>

<!ELEMENT HSCPercentage (#PCDATA)>

<!ELEMENT Parent (Father, Mother)>

<!ELEMENT Father (Name, Occupation, Email, Phone)>

<!ELEMENT Mother (Name, Occupation, Email, Phone)>

<!ELEMENT Name (#PCDATA)>

<!ELEMENT Occupation (#PCDATA)>

<!ELEMENT Email (#PCDATA)>

<!ELEMENT Phone (#PCDATA)>

<!ELEMENT Branch (BranchPreference1, BranchPreference2, BranchPreference3)>

<!ELEMENT BranchPreference1 (#PCDATA)>

<!ELEMENT BranchPreference2 (#PCDATA)>

<!ELEMENT BranchPreference3 (#PCDATA)>

]>

2. Create an XML and DTD files for the Purchase order of a company

Purchase.xml

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

<!DOCTYPE PurchaseOrder SYSTEM "PurchaseOrder.dtd">

<PurchaseOrder>

    <PurchaseRequest>

        <PR\_Number></PR\_Number>

        <Supplier\_ID></Supplier\_ID>

        <Supplier\_Name></Supplier\_Name>

        <Delivery\_Date></Delivery\_Date>

    </PurchaseRequest>

    <Product>

        <Product\_No></Product\_No>

        <Product\_Name></Product\_Name>

        <Description></Description>

        <Quantity></Quantity>

        <UnitPrice></UnitPrice>

        <TotalPrice></TotalPrice>

        <SKUNo></SKUNo>

    </Product>

    <Address>

        <Shipping\_Address>

            <Contact\_Name></Contact\_Name>

            <DoorNo></DoorNo>

            <Street></Street>

            <Locality></Locality>

            <City></City>

            <State></State>

            <Country></Country>

            <Zipcode></Zipcode>

            <Company></Company>

            <Phone></Phone>

            <Fax></Fax>

            <Email></Email>

        </Shipping\_Address>

        <Billing\_Address>

            <Contact\_Name></Contact\_Name>

            <DoorNo></DoorNo>

            <Street></Street>

            <Locality></Locality>

            <City></City>

            <State></State>

            <Country></Country>

            <Zipcode></Zipcode>

            <Company></Company>

            <Phone></Phone>

            <Fax></Fax>

            <Email></Email>

        </Billing\_Address>

    </Address>

    <Payment>

        <Purchase\_Order>

            <Payment\_Type></Payment\_Type>

            <PO\_Number></PO\_Number>

        </Purchase\_Order>

        <Card>

            <Debit\_Card>

                <Card\_Number></Card\_Number>

                <Card\_Holder\_Name></Card\_Holder\_Name>

                <Expiry\_Month></Expiry\_Month>

                <Expiry\_Year></Expiry\_Year>

                <CVV></CVV>

                <PIN></PIN>

            </Debit\_Card>

            <Credit\_Card>

                <Card\_Number></Card\_Number>

                <Card\_Holder\_Name></Card\_Holder\_Name>

                <Expiry\_Month></Expiry\_Month>

                <Expiry\_Year></Expiry\_Year>

                <CVV></CVV>

                <PIN></PIN>

            </Credit\_Card>

        </Card>

    </Payment>

</PurchaseOrder>

Purchase.dtd

<?xml version = "1.0"?>

<!DOCTYPE PurchaseOrder

[

<!ELEMENT PurchaseOrder (PurchaseRequest, Product+, Address, Payment)>

<!ELEMENT PurchaseRequest (PR\_Number, Supplier\_ID, Supplier\_Name, Delivery\_Date)>

<!ELEMENT PR\_Number (#PCDATA)>

<!ELEMENT Supplier\_ID (#PCDATA)>

<!ELEMENT Supplier\_Name (#PCDATA)>

<!ELEMENT Delivery\_Date (#PCDATA)>

<!ELEMENT Product (Product\_No, Product\_Name, Description, Quantity, UnitPrice, TotalPrice, SKUNo)>

<!ELEMENT Product\_No (#PCDATA)>

<!ELEMENT Product\_Name (#PCDATA)>

<!ELEMENT Description (#PCDATA)>

<!ELEMENT Quantity (#PCDATA)>

<!ELEMENT UnitPrice (#PCDATA)>

<!ELEMENT TotalPrice (#PCDATA)>

<!ELEMENT SKUNo (#PCDATA)>

<!ELEMENT Address (Shipping\_Address, Billing\_Address)>

<!ELEMENT Shipping\_Address (Contact\_Name, DoorNo, Street, Locality, City, State, Country, Zipcode, Company, Phone, Fax, Email)>

<!ELEMENT Contact\_Name (#PCDATA)>

<!ELEMENT DoorNo (#PCDATA)>

<!ELEMENT Street (#PCDATA)>

<!ELEMENT Locality (#PCDATA)>

<!ELEMENT City (#PCDATA)>

<!ELEMENT State (#PCDATA)>

<!ELEMENT Country (#PCDATA)>

<!ELEMENT Zipcode (#PCDATA)>

<!ELEMENT Company (#PCDATA)>

<!ELEMENT Phone (#PCDATA)>

<!ELEMENT Fax (#PCDATA)>

<!ELEMENT Email (#PCDATA)>

<!ELEMENT Billing\_Address (Contact\_Name, DoorNo, Street, Locality, City, State, Country, Zipcode, Company, Phone, Fax, Email)>

<!ELEMENT Contact\_Name (#PCDATA)>

<!ELEMENT DoorNo (#PCDATA)>

<!ELEMENT Street (#PCDATA)>

<!ELEMENT Locality (#PCDATA)>

<!ELEMENT City (#PCDATA)>

<!ELEMENT State (#PCDATA)>

<!ELEMENT Country (#PCDATA)>

<!ELEMENT Zipcode (#PCDATA)>

<!ELEMENT Company (#PCDATA)>

<!ELEMENT Phone (#PCDATA)>

<!ELEMENT Fax (#PCDATA)>

<!ELEMENT Email (#PCDATA)>

<!ELEMENT Payment (Purchase\_Order, Card)>

<!ELEMENT Purchase\_Order (Payment\_Type, PO\_Number)>

<!ELEMENT Payment\_Type (#PCDATA)>

<!ELEMENT PO\_Number (#PCDATA)>

<!ELEMENT Card (Debit\_Card, Credit\_Card)>

<!ELEMENT Debit\_Card (Card\_Number, Card\_Holder\_Name, Expiry\_Month, Expiry\_Year, CVV, PIN)>

<!ELEMENT Card\_Number (#PCDATA)>

<!ELEMENT Card\_Holder\_Name (#PCDATA)>

<!ELEMENT Expiry\_Month (#PCDATA)>

<!ELEMENT Expiry\_Year (#PCDATA)>

<!ELEMENT CVV (#PCDATA)>

<!ELEMENT PIN (#PCDATA)>

<!ELEMENT Credit\_Card (Card\_Number, Card\_Holder\_Name, Expiry\_Month, Expiry\_Year, CVV, PIN)>

<!ELEMENT Card\_Number (#PCDATA)>

<!ELEMENT Card\_Holder\_Name (#PCDATA)>

<!ELEMENT Expiry\_Month (#PCDATA)>

<!ELEMENT Expiry\_Year (#PCDATA)>

<!ELEMENT CVV (#PCDATA)>

<!ELEMENT PIN (#PCDATA)>

]>

3. Create an XML and DTD files for the food menu in hotel

Menu.xml

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

<!DOCTYPE Menu SYSTEM "Menu.dtd">

<Menu>

    <Breakfast>

        <Category name = "Main">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Pastry">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Sharers">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Toasters">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Hot\_Drinks">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Fruit\_Drinks">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

    </Breakfast>

    <Lunch>

        <Category name = "Indian\_Dishes">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Sandwiches">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Speciality\_Soups">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Appetizers">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Thai\_Dishes">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Sea\_Food">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "From\_the\_Land">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Veal">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Salads">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

    </Lunch>

    <Dinner>

        <Category name = "Italian\_Cuisine">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Hot\_Dog\_and\_Coffee">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Fries\_and\_Coke">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Pizza\_and\_Coke">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "HamBurger\_and\_Coffee">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Tacos\_and\_Fries">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Desserts">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

        <Category name = "Bevarages">

            <Item>

                <Name></Name>

                <Price></Price>

                <Description></Description>

                <Calories></Calories>

            </Item>

        </Category>

    </Dinner>

</Menu>

Menu.dtd

<?xml version = "1.0"?>

<!DOCTYPE Menu

[

<!ELEMENT Menu (Breakfast, Lunch, Dinner)>

<!ELEMENT Breakfast (Category+)>

<!ELEMENT Lunch (Category+)>

<!ELEMENT Dinner (Category+)>

<!ATTLIST Category name ID #REQUIRED>

<!ELEMENT Category (Item+)>

<!ELEMENT Item (Name, Price, Description, Calories)>

<!ELEMENT Name (#PCDATA)>

<!ELEMENT Price (#PCDATA)>

<!ELEMENT Description (#PCDATA)>

<!ELEMENT Calories (#PCDATA)>

]>

Thankyou!!