



 slington college
(इस्लिङ्टन कलेज)

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I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a marks of zero will be awarded.

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Introduction

XML is an autonomous device developed and designed to store and transfer information. XML stands for Xtensible Markup Language, identical to HTML, a lightweight text format derived from SGML. The XML language is a W3C recommended which has no predefined labels. There are many languages based on XML such as XHTML, MathML, SVG, XUL, XBL, RSS and RDF. The XML document is validated against a Document Type Definition (DTD) and schema to ensure it is “Well Formed” and “Valid” and conforms to the rules of a DTD and schema respectively. (tutorialspoint, 2020)

There are two types of data types in XML schema.

- Simple Type

The Simple Type lets you have elements based on text. It has less features, less child elements and cannot be left blank.

- Complex Type

The Complex Type lets you keep multiple elements and attributes. It may contain more sub-elements and may be left empty.

In this coursework, first I had to develop a Xml Schema in order to make a proper format for developing a Schema for a Kathmandu Automobile Center. I developed Schema for XML according to the requirement that had been given in the scenario. I have also included various CSS (Cascading Style Sheet) in order to make the view part of the xml document more attractive. I have also used different colors, more than two fonts, borders, etc. in my CSS in order to improve the view part of the XML document. The module emerging platform has helped me in order to understand more about XML, DTD and schema. The task which I have carried out meets all the requirements that are required for our coursework. In order to successfully carry out various tasks of this coursework I had to carry out various research on XML, Schema and CSS. I have taken help from various books, websites, etc. in order to successfully carry out this coursework.

Objectives

The main objective of the coursework of this coursework was:

- Construct the tree diagram of Kathmandu Automobile Center.
- Validate the XML file to ensure the XML file is well formed and valid.
- Style the XML file with the help of CSS.
- Obtain an identical type XML file through multiple checks.

XML Content

Tree Diagram

An XML document is still informative. The tree structure is also Known as XML Tree. It plays an essential role in easily representing any XML document. The tree structure diagram includes the root (parent) element, child elements etc. You can get to know all succeeding branches and sub-branches starting from the root by using tree structure. (w3schools, 2020)

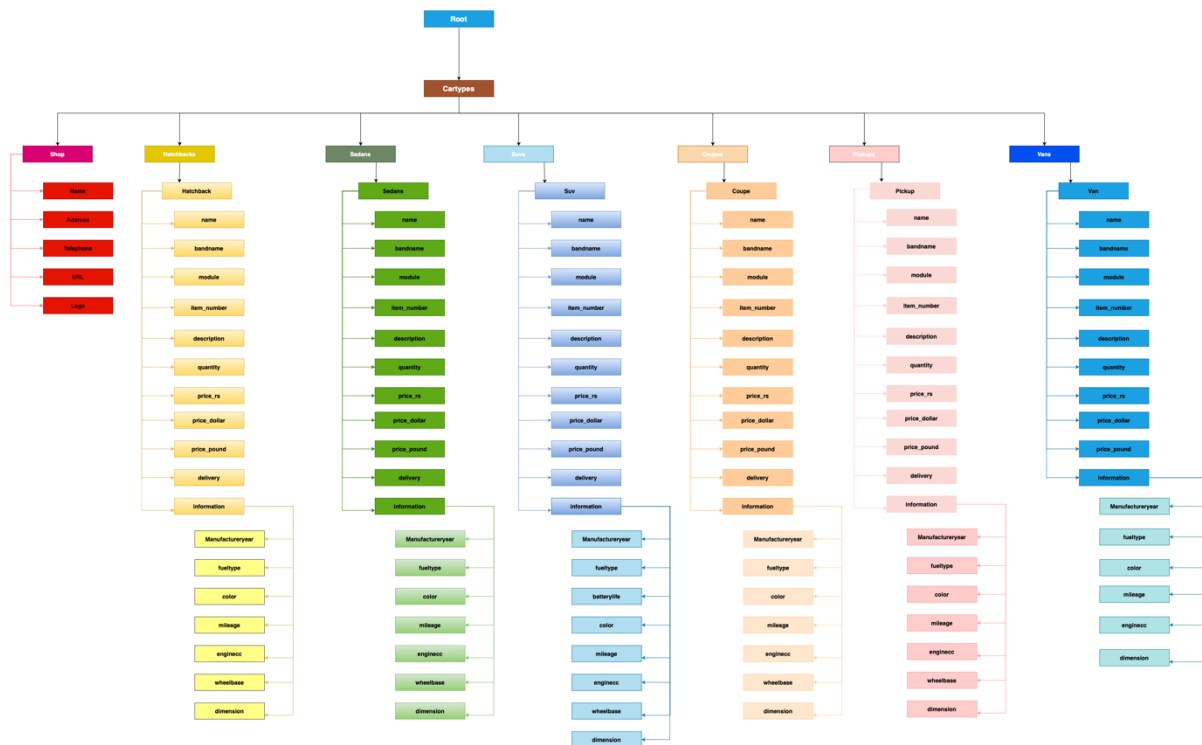


Figure 1: Tree Diagram

XML Content

XML

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

```
<!--
```

Author: Johan Tandukar

Group: C15

Londonmet ID: 18030039

```
-->
```

```
<?xml-stylesheet type = "text/css" href="catalog_18030039.css"?>
```

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

```
    xsi:noNamespaceSchemaLocation="catalog_18030039.xsd">
```

```
    <shop>
```

```
        <Name>Kathmandu Automobile Center</Name>
```

```
        <Address>Tangal Marg, Kathmandu</Address>
```

```
        <Telephone>+977-014420555</Telephone>
```

```
        <URL>www.kathmanduautomobiles.com.np</URL>
```

```
        <logo></logo>
```

```
    </shop>
```

```
    <cartypes>
```

```
        <Hatchbacks>
```

```
            <Hatchback>
```

```
                <name>Toyota Corolla LX</name>
```

```
                <bandname> Toyota </bandname>
```

```
                <module>Corolla LX</module>
```

```
                <item_number>11001</item_number>
```

```
                <description><![CDATA[ Toyota Corolla is a range of subcompact and compact automobiles manufactured by Toyota, Japan. It was launched in 1966, the Corolla was by 1974
```

the best-selling vehicle globally, and has since become one of the world's best-selling vehicles. In 1997 the Corolla was the world's best-selling nameplate, surpassing the Volkswagen Beetle. Toyota has surpassed the 44 million corollas mark sold twelve generations in 2016. The series has undergone several major redesigns.]]></description>

<quantity>1</quantity>

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<price_pound>£ 12088.41</price_pound>

<delivery>Free Delivery</delivery>

<information>

<manufactureryear>2011</manufactureryear>

<fueltype>Petrol</fueltype>

<color>Golden</color>

<mileage>21.43 kmpl</mileage>

<enginecc>1794 CC</enginecc>

<wheelbase>2700 millimeter</wheelbase>

<dimension unit="mm">4651L x 1775W x 1455H </dimension>

</information>

</Hatchback>

<Hatchback>

<name>Suzuki Wagon R Vxi</name>

<bandname>Suzuki</bandname>

<module>Wagon R Vxi</module>

<item_number>12001</item_number>

<description><![CDATA[The Suzuki Wagon R is a kei car which has been developed and sold by Suzuki since 1993. The R in name reflects Transformation and Relaxing. Wagon R uses a "big truck" layout to optimize cabin room inside the dimensional constraints of kei vehicles. Wagon R is a well-proven vehicle and the immense appearance on roads shows the same..]]></description>

<quantity>3</quantity>

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<price_pound>£11196.86</price_pound>

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<manufactureryear>2019</manufactureryear>

<fueltype>Petrol</fueltype>

<color>Matte White</color>

<mileage>22 Kmpl</mileage>

<enginecc>1197 CC</enginecc>

<wheelbase>2400 millimeter</wheelbase>

<dimension unit="mm">3539L x 2400W x 1670H </dimension>

</information>

</Hatchback>

<Hatchback>

<name>Facelift Hyundai i20 Magna</name>

<bandname>Hyundai</bandname>

<module>i20 Magna</module>

<item_number>12222</item_number>

<description><![CDATA[Toyota Corolla is a range of subcompact and compact Toyota, Japanese-made cars. It was introduced in 1966, the Corolla was the best-selling car worldwide by 1974, and has been one of the best-selling cars in the world since. The Corolla was the best-selling nameplate in the world in 1997, surpassing the Volkswagen Beetle.]]></description>

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<price_dollar>\$ 15500.89</price_dollar>

<price_pound>£14253.06</price_pound>

<delivery>Free Delivery</delivery>

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```

```
<manufactureryear>2013</manufactureryear>
```

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<fueltype>Petrol</fueltype>
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```
<color>Grey</color>
```

```
<mileage>42 kmpl</mileage>
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```
<enginecc>1200</enginecc>
```

```
<wheelbase>2570 millimeter</wheelbase>
```

```
<dimension unit="mm">3985L x 1734W x 1505H </dimension>
```

```
</information>
```

```
</Hatchback>
```

```
</Hatchbacks>
```

```
<Sedans>
```

```
<sedan>
```

```
<name>VERNA</name>
```

```
<bandname>Hyundai</bandname>
```

```
<module>VERNA</module>
```

```
<item_number>15001</item_number>
```

```
<description><![CDATA[ The Hyundai Verna focuses on Hyundai's fluidic architecture that makes the Verna the best-looking sedan in this segment. The cascading grille and graphic architectural language offer a sporty stance to the Verna. The Verna arrives with one diesel engine and two gasoline engines. This allows Hyundai to cater to a wider audience wanting a vehicle that can cross several frames.]]></description>
```

```
<quantity>2</quantity>
```

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<price_rs rcurrency="Rs">4256000</price_rs>
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```
<price_pound>&#163; 27822.25</price_pound>
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<delivery>Express Delivery</delivery>
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<information>
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```
<manufactureryear>2017</manufactureryear>
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<fueltype>Petrol and Diseal</fueltype>
```

```

        <color>Black</color>

        <mileage>22 Kmpl</mileage>

        <enginecc>1582 CC</enginecc>

        <wheelbase>2600 millimeter</wheelbase>

        <dimension unit="mm">4440L x 1729W x 1475H </dimension>

    </information>

</sedan>

<sedan>

    <name>Hyundai Xcent S</name>

    <bandname>Hyundai</bandname>

    <module>Xcent</module>

    <item_number>15002</item_number>

    <description><![CDATA[Hyundai Xcent S is an excellent car one would
like to purchase. It features a rather elegant design, strong engine and awesome performance. Hyundai
Xcent S's beautiful, elegant profile is just amazing. Hyundai boasts a very strong performance on both
diesel and gas fuel choices, with a performance of 19.1 KMPL on gas and a remarkable 24 km per liter on
diesel.]]></description>

    <quantity>2</quantity>

    <price_rs rscurrency="Rs"> 2896000</price_rs>

    <price_pound>&#163; 18931.68</price_pound>

    <delivery>Express Delivery</delivery>

    <information>

        <manufactureryear>2014</manufactureryear>

        <fueltype>Petrol and Diesel</fueltype>

        <color>Orange</color>

        <mileage>19.1 Kmpl and 24 Kmpl</mileage>

        <enginecc>1197 CC</enginecc>

        <wheelbase>2585 millimeter</wheelbase>

        <dimension unit="mm">3995L x 1660W x 1520H </dimension>

    </information>

</sedan>

```

<sedan>

<name>Honda Amaze</name>

<bandname>Honda</bandname>

<module>Amaze</module>

<item_number>15003</item_number>

<description><![CDATA[A few months ago, at the 2018 Auto Expo, Honda Amaze was exhibited and the Japanese carmaker is planning to unleash the vehicle in India. The Honda Amaze is an all-new vehicle, designed on a modern platform particularly for India. For the Amaze, Honda is investing high, and the compact sedan is already a sure shot winner. This is the first time that Honda sells the diesel engine with a CVT gearbox.]]></description>

<quantity>3</quantity>

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<delivery>Express Delivery</delivery>

<information>

<manufactureryear>2013</manufactureryear>

<fueltype>Petrol</fueltype>

<color>White</color>

<mileage>27.4 Kmpl</mileage>

<enginecc>1200 CC</enginecc>

<wheelbase>2470 millimeter</wheelbase>

<dimension unit="mm">3995L x 1695W x 1501H </dimension>

</information>

</sedan>

</Sedans>

<Suvs>

<suv>

<name>Suv MG ZS EV</name>

<bandname>MG Motors</bandname>

<module>MG ZS</module>

<item_number>14001</item_number>

<description><![CDATA[The new MG ZS EV is the family-friendly electric vehicle, designed without compromising on practicality or aesthetics for those who want all the advantages of a zero emission automobile. The ZS EV blends beautiful design with superb technology, taking maximum advantage of our extensive experience in the manufacturing of hybrid cars and engines, battery buses and engines.]]> </description>

<quantity>1</quantity>

<price_rs rscurrency="Rs">4999000</price_rs>

<price_pound>£ 37591.06</price_pound>

<delivery>Express Delivery</delivery>

<information>

<manufactureryear>2019</manufactureryear>

<fueltype>Electric</fueltype>

<batterylife>9 hr </batterylife>

<color>Red</color>

millimeter</dimension>

</information>

</suv>

<suv>

<name>Volkswagen Vento Highilne</name>

<bandname>Volkswagen</bandname>

<module>Vento</module>

<item_number>14010</item_number>

<description><![CDATA[The Volkswagen Vento Highlines is a SUV that comes in three variants of diesel and three of petrol. It starts at Rs.7.29 lakh for base petrol model and goes up to Rs.9.89 lakh for top-end diesel edition. The Vento is a Volkswagen sedan abundant in style and plenty of snob appeal. It has very high construction standards, decent handling and a powerful, efficient petrol engine..]]> </description>

<quantity>3</quantity>

<price_rs rscurrency="Rs">2675000</price_rs>

```
<price_pound>&#163; 20115.24</price_pound>
```

```
<information>
```

```
<manufactureryear>2015</manufactureryear>
```

```
<fueltype>Petrol</fueltype>
```

```
<color>Silver</color>
```

```
<enginecc>1600 CC</enginecc>
```

```
<wheelbase>2685 millimeter</wheelbase>
```

```
<dimension unit="mm">4390L x 1699W x 1467H </dimension>
```

```
</information>
```

```
</suv>
```

```
<suv>
```

```
<name>Mitsubishi Outlander</name>
```

```
<bandname>Mitsubishi</bandname>
```

```
<module>Outlander</module>
```

```
<item_number>14016</item_number>
```

```
<description><![CDATA[The Mitsubishi Outlander is a crossover SUV that can seat up to 7 passengers. The car can be driven either in front-wheel drive or all-wheel drive setup. Crossover SUVs are a growing segment and are designed to carry families. The Outlander is having a lot of competition inside this group. There are a variety of reasons why the strongest choice might be the Outlander.]]> </description>
```

```
<quantity>3</quantity>
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```
<price_rs rscurrency="Rs">1000000</price_rs>
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```
<price_dollar>$ 8177.69</price_dollar>
```

```
<price_pound>&#163; 6537.18</price_pound>
```

```
<information>
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```
<manufactureryear>2018</manufactureryear>
```

```
<fueltype>Petrol</fueltype>
```

```
<color>Silver</color>
```

```
<mileage>10.2 Kmpl</mileage>
```

```

        <enginecc>1600 CC</enginecc>

        <wheelbase>2670 millimeter</wheelbase>

        <dimension unit="mm">4695L x 1810W x 1710H </dimension>

    </information>

</suv>

</Suvs>

<Coupes>

    <Coupe ref = "MB200">

        <name>Mercedes Benz E 200</name>

        <bandname>Mercedes Benz</bandname>

        <module>E-Class</module>

        <item_number>13001</item_number>

        <description><![CDATA[ The Mercedes-Benz E-Class is a collection of
premium executive vehicles, launched in 1993. An automobile of this type is sure to please, somewhat
more roomy than a big family car. The following section provides a short description of the various
benefits the Mercedes E-Class has to deliver. The 2015 models earned a small facelift from the 2014
models.]]></description>

        <quantity>2</quantity>

        <price_rs rscurrency="Rs">26000000</price_rs>

        <price_dollar>$ 212619.94</price_dollar>

        <price_pound>&#163;195512.62</price_pound>

    </Coupe>

</Coupes>

<information>

    <manufactureryear>2014</manufactureryear>

    <fueltype>Petrol</fueltype>

    <color>Circongruen Pearl</color>

    <mileage>12 Kmpl</mileage>

    <enginecc>1991 CC</enginecc>

    <wheelbase>2939 millimeter</wheelbase>

```

```

        <dimension unit="mm">5063L x 1860W x 1494H </dimension>

    </information>

</Coupe>

<Coupe ref = "MB350">

    <name>Mercedes Benz S 350 CDI</name>

    <bandname>Mercedes Benz</bandname>

    <module>S-Class</module>

    <item_number>13002</item_number>

    <description><![CDATA[The 2014 Mercedes-Benz S-Class (codenamed
W222) was introduced in May 2013 at the Sindelfingen factory of the German automaker and launched in
Jan for the Market in the form of the S500. This vehicle, the S 350 CDI, was released in June and is the
more affordable edition, mind you, when you're thinking about a vehicle like the S-Class the word
affordable is very subjective.  ]]></description>

    <quantity>5</quantity>

    <price_rs rscurrency="Rs">50000000</price_rs>

    <price_dollar>$ 408884.50</price_dollar>

    <price_pound>&#163;375985.82</price_pound>

    <information>

        <manufactureryear>2014</manufactureryear>

        <fueltype>Diseal</fueltype>

        <color>Kristal Green</color>

        <mileage>13.5 Kmpl</mileage>

        <enginecc>2987 CC</enginecc>

        <wheelbase>3035 millimeter</wheelbase>

        <dimension unit="mm">5096L x 2120W x 1485H </dimension>

    </information>

</Coupe>

<Coupe ref = "MB500">

    <name>Mercedes Benz S 500</name>

```


<bandname>Mercedes Benz</bandname>

<module>S-Class</module>

<item_number>13003</item_number>

<description><![CDATA[The Mercedes-Benz S-Class 2020 is part of a series launched for the 2014 model year. Older versions would potentially cost a lot less than a modern S-Class. Only be mindful that, over the years, this Mercedes has had several big improvements. The S-Class coupe and a hybrid plug-in sedan launched in 2015, followed by a convertible variant in 2017.]]></description>

<quantity>4</quantity>

<price_rs rscurrency="Rs">50000000</price_rs>

<price_dollar>\$ 408884.50</price_dollar>

<price_pound>£375985.82</price_pound>

<information>

<manufactureryear>2014</manufactureryear>

<fueltype>Petrol</fueltype>

<color>Calcite Yellow</color>

<mileage>10 Kmpl</mileage>

<enginecc>4663 CC</enginecc>

<wheelbase>3365 millimeter</wheelbase>

<dimension unit="mm">5096L x 2120W x 1485H </dimension>

</information>

</Coupe>

</Coupes>

<Pickups>

<pickup id = "MM101">

<name>Mahindra Maxximo Plus Vx</name>

<bandname>Mahindra</bandname>

<module>Maxximo Plus Vx</module>

<item_number>16001</item_number>

<description><![CDATA[Maxximo is powered by the pioneering 2-cylinder C2 CRDe engine with DOHC technology and 4 valves per cylinder, making it the world's first of its kind. It generates a best-in-class power of 18.4 kW (25 HP) and offers fuel economy of 21.9 kmpl. The Maximo boasts of superior pick-up, in-gear acceleration and gradeability. A large loading area of 3.2 sq. mt. (35 sq. ft.) coupled with 850 kg of rated payload mean that the customer can carry more load in one trip, leading to improved earnings.]]></description>

<quantity>2</quantity>

<price_rs rscurrency="Rs">1235000</price_rs>

<price_dollar>\$ 10099.45</price_dollar>

<price_pound>£ 8073.42</price_pound>

<delivery>Express Delivery</delivery>

<information>

<manufactureryear>2018</manufactureryear>

<fueltype>Diesel</fueltype>

<color>Blue</color>

<mileage>21.9 Kmpl</mileage>

<enginecc>909 CC</enginecc>

<dimension unit="mm">2205L x 1465W x 330H </dimension>

</information>

</pickup>

<pickup id = "TA200">

<name>Tata ACE Ht2</name>

<bandname>Tata Motors</bandname>

<module>ACE Ht2</module>

<item_number>16002</item_number>

<description><![CDATA[Tata ACE Ht2 with powerful and effective diesel engine is economical and fuel intensive. High ground clearance and high loading ability added to its success, offering superior style and comfort in its unique architecture. The lightweight 4 wheel mini truck is built especially for steep terrain. The Ace HT is packed with deep gear ratios, which gives it the strong torque required to scale steep slopes with remarkable ease.]]></description>

<quantity>3</quantity>

<price_rs rscurrency="Rs">1345000</price_rs>

<price_dollar>\$ 10998.99</price_dollar>

<price_pound>£ 8792.51 </price_pound>

<delivery>Express Delivery</delivery>

<information>

<manufactureryear>2019</manufactureryear>

<fueltype>Diesel</fueltype>

<color>White</color>

<mileage>21.9 Kmpl</mileage>

<enginecc>702 CC</enginecc>

<dimension unit="mm">3800L x 1500W x 1861H </dimension>

</information>

</pickup>

<pickup id = "TA200">

<name>Tata ACE Ht High Deck Pickup</name>

<bandname>Tata Motors</bandname>

<module>ACE Ht High Deck</module>

<item_number>16003</item_number>

<description><![CDATA[Tata ACE Ht High Deck Pickup with powerful and effective motor is economical and fuel intensive. High ground clearance and high loading ability added to its success, offering outstanding design and convenience in its unique architecture. Tata Ace High Deck Pickup that you pick from day one to begin earning. With a powerful and dependable diesel engine, it is inexpensive and fuel-efficient.]]></description>

<quantity>2</quantity>

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<price_pound>£ 8400.28</price_pound>

<information>

<manufactureryear>2019</manufactureryear>

<fueltype>Diesel</fueltype>

<color>Cream</color>

<mileage>21.9 Kmpl</mileage>

<enginecc>702 CC</enginecc>

```
<dimension unit="mm">3800L x 1500W x 1861H </dimension>

</information>

</pickup>

</Pickups>

<Vans>

  <Van>

    <name>Maruti Suzuki Omni Cargo Van</name>

    <bandname>Maruti Suzuki</bandname>

    <module>Omni Cargo</module>

    <item_number>16001</item_number>

    <description><![CDATA[Maruti Omni MPI CARGO returns a pretty good
mileage and thus has a good fuel economy. Furthermore, the car provides ample cabin space. Maruti
Omni MPI CARGO is a little wobbly at high speeds due to disproportionate height and wheelbase ratio.
Maruti Suzuki Omni has been proved to be a very efficient and a low-maintenance car for years. It is
available in different variants which include a cargo model, a family car with 5 and 8-seater option and an
ambulance which fulfills the needs of many. Engine performance of Omni is well proven, and it is fuel
efficient also..]]></description>

    <quantity>3</quantity>

    <price_rs rscurrency="Rs">939000</price_rs>

    <price_pound>&#163; 6138.42</price_pound>

    <information>

      <manufactureryear>2014</manufactureryear>

      <fueltype>Petrol</fueltype>

      <color>Blue</color>

      <mileage>16.8 Kmpl</mileage>

      <enginecc>796 CC</enginecc>

      <dimension unit="mm">3370L x 1410W x 1640H </dimension>

    </information>

  </Van>
```

</Vans>

</cartypes>

</root>

Schema Content

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<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="root">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="shop">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="Name" type="xs:string" />
              <xs:element name="Address" type="xs:string" />
              <xs:element name="Telephone" type="xs:string" />
              <xs:element name="URL" type="xs:anyURI"/>
              <xs:element name="logo" type="xs:string"/>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="cartypes">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="Hatchbacks">
                <xs:complexType>
                  <xs:sequence>
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                      <xs:complexType>
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                          <xs:element name="bandname" type="xs:string" />
                          <xs:element name="module" type="xs:string" />
                          <xs:element name="item_number" type="xs:string" />
                          <xs:element name="description" type="xs:string" />
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                          <xs:element name="price_rs">
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      <xs:attribute name="rscurrency" type="xs:string" use="optional"/>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
</xs:element>
<xs:element name="price_dollar" type="xs:string" />
<xs:element name="price_pound" type="xs:string" />
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<xs:element name="information">
  <xs:complexType>
    <xs:sequence>
      <xs:element name="manufactureryear" type="xs:short" />
      <xs:element name="fueltype" type="xs:string" />
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      <xs:element name="mileage" type="xs:string" />
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      <xs:element name="wheelbase" type="xs:string" />
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          </xs:simpleContent>
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```

```
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            <xs:element name="item_number" type="xs:string" />
            <xs:element name="description" type="xs:string" />
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                </xs:simpleContent>
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            </xs:element>
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                  <xs:element name="mileage" type="xs:string" />
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              </xs:complexType>
            </xs:element>
          </xs:sequence>
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      </xs:element>
    </xs:choice>
  </xs:complexType>
</xs:element>
```



```
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<xs:element name="dimension">
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    <xs:simpleContent>
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        <xs:attribute name="unit" type="xs:string" use="optional"/>
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    </xs:simpleContent>
  </xs:complexType>
</xs:element>
</xs:sequence>
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</xs:complexType>
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    <xs:sequence>
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          <xs:sequence>
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            <xs:element name="description" type="xs:string" />
            <xs:element name="quantity" type="xs:integer" />
            <xs:element name="price_rs">
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```

```
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    <xs:attribute type="xs:string" name="rscurrency" use="optional"/>
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<xs:element name="price_pound" type="xs:string" />
<xs:element name="delivery" type="xs:string" minOccurs="0"/>
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      <xs:element name="color" type="xs:string" />
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maxOccurs="unbounded"/>
      <xs:element name="enginecc" type="xs:string" minOccurs="0"
maxOccurs="unbounded"/>
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maxOccurs="unbounded"/>
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```

```
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```

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        <xs:complexType>
          <xs:sequence>
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```

```
<xs:element name="module" type="xs:string"/>
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    <xs:simpleContent>
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  </xs:complexType>
</xs:element>
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maxOccurs="unbounded"/>
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<xs:element name="delivery" type="xs:string" minOccurs="0"
maxOccurs="unbounded"/>
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    <xs:sequence>
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      <xs:element name="enginecc" type="xs:string" />
      <xs:element name="dimension">
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            </xs:extension>
          </xs:simpleContent>
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      </xs:element>
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```

```
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  </xs:element>
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</xs:complexType>
</xs:element>
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            <xs:element name="bandname" type="xs:string" />
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            <xs:element name="item_number" type="xs:short" />
            <xs:element name="description" type="xs:string" />
            <xs:element name="quantity" type="xs:integer" />
            <xs:element name="price_rs">
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                    <xs:attribute name="rscurrency" type="xs:string" />
                  </xs:extension>
                </xs:simpleContent>
              </xs:complexType>
            </xs:element>
            <xs:element name="price_pound" type="xs:string" />
            <xs:element name="information">
```

[illegible]

Testing**Test 1**

Test No.	1
Input	catlog_180030039.xml file and catlog_180030039.xsd file was sent for validation checking.
Excepted Output	A message “no error were found” should be displayed.
Actual Output	A message “no error were found” was been displayed.
Test Result	Test was successful.

Table 1: Table of Test 1

Validate an XML file

Read here how to [validate your XML files \(including referenced DTDs\)](#) online with just a few mouse clicks.

Please copy your XML document in here:

Or upload it:

catalog_18030039.xml

The validation check is performed against any XML schema or DTD declared inside the XML document.
If neither an XML schema nor a DTD is declared, only a syntax check is performed.
To validate the XML document against an external XML schema, click below.

☐ **Validate against external XML schema**

Figure 2: Validation Input of XML

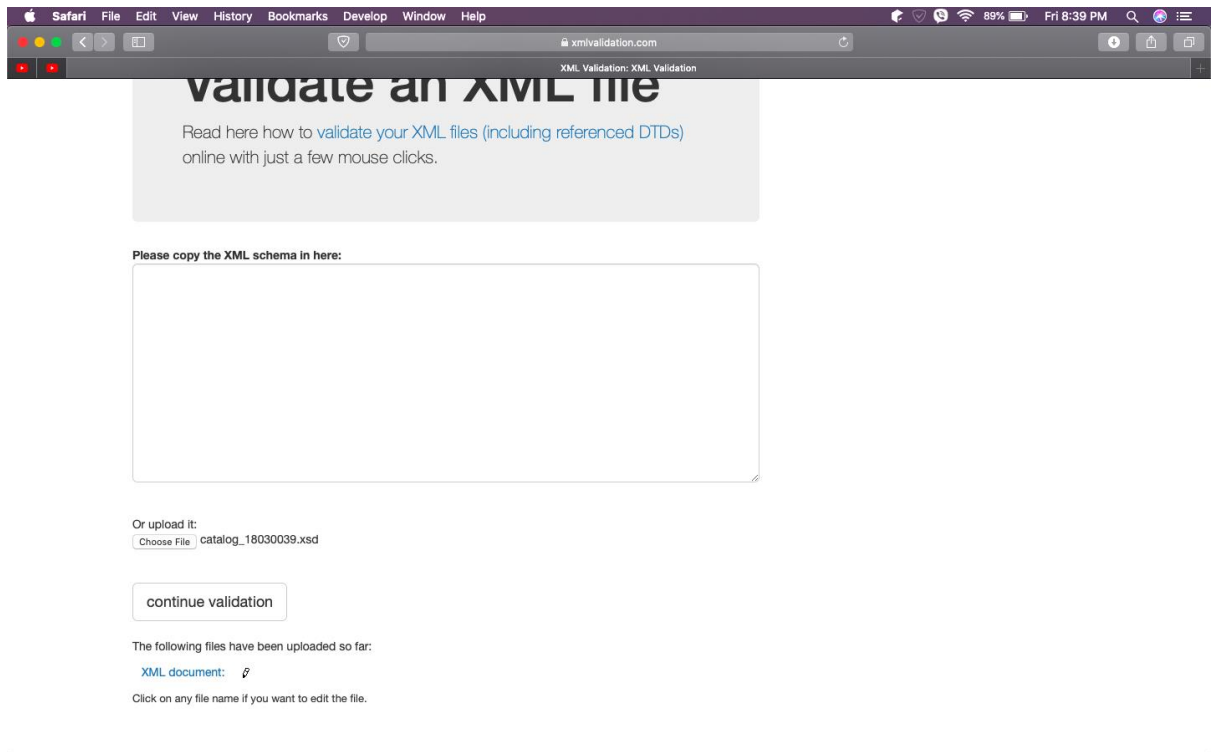


Figure 3: Validation Input of Schema

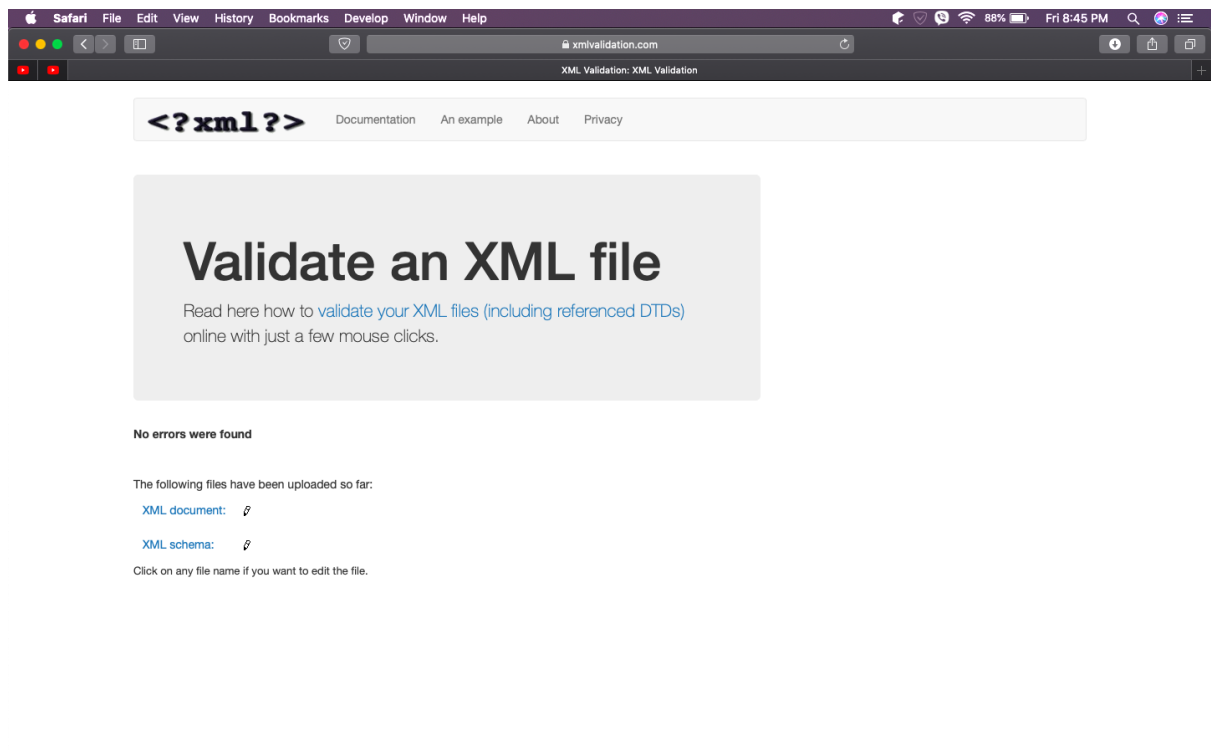


Figure 4: Validation Output

Test 2

Test No.	2
Input	catlog_180030039.xml file was run on Web Brower.
Excepted Output	catlog_180030039.xml file content should be displayed with proper CSS.
Actual Output	catlog_180030039.xml file content was displayed with proper CSS.
Test Result	Test was successful.

Table 2: Table of Test 2

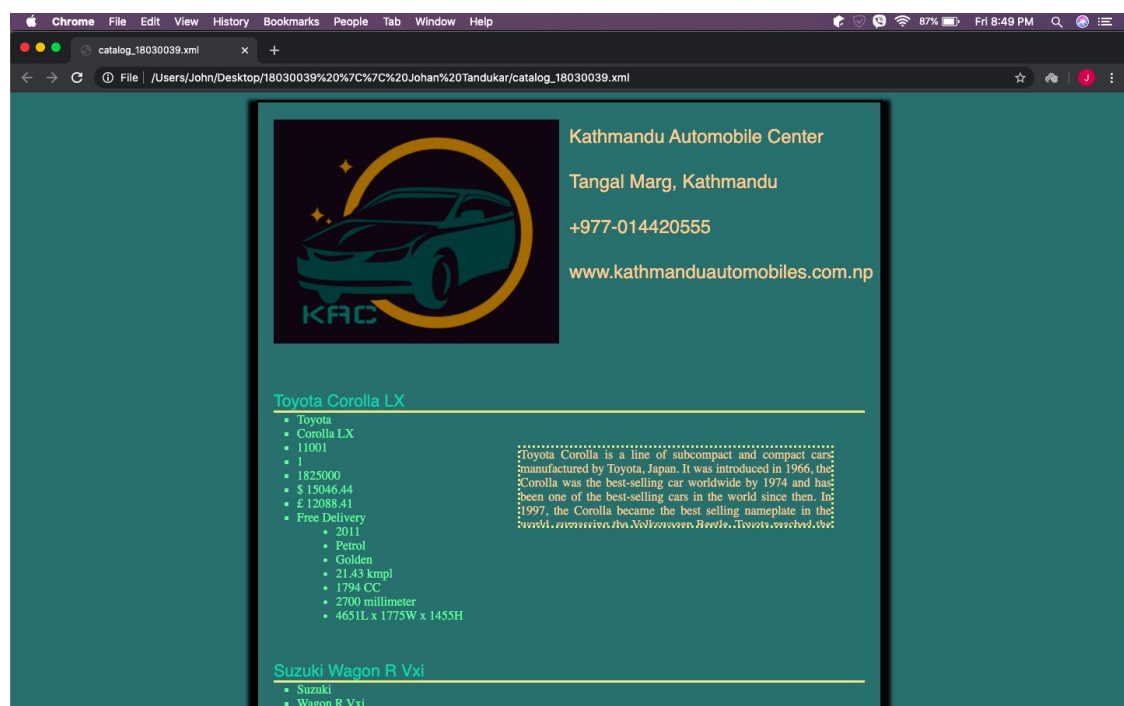


Figure 5: Test 2: CSS join with Xml file

Test 3

Test No.	3
Input	Scrolling down description for more information.
Expected Output	Description detail should be scrolled down for more information of car.
Actual Output	Description detail was scrolled down for more information of car.
Test Result	Test was successful.

Table 3: Table of Test 3

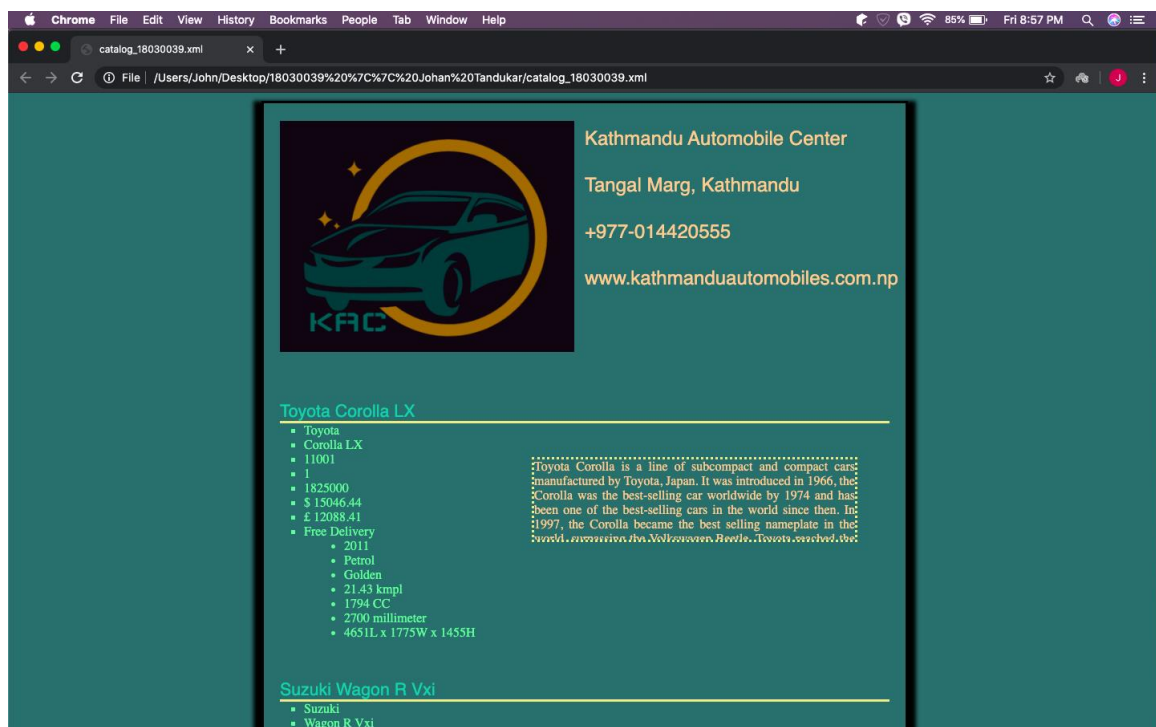


Figure 6: Before Scrolling Description

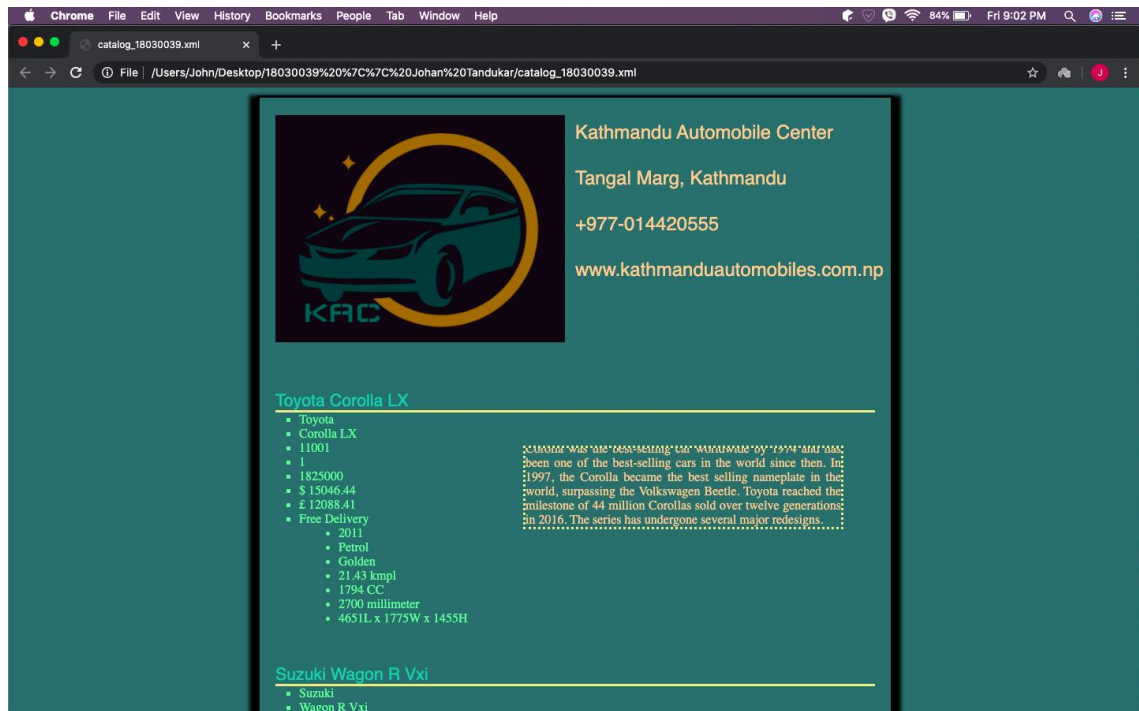


Figure 7: After Scrolling Description

Test 4

Test No.	4
Input	Pointing mouse on name of car
Expected Output	Car name should be hover while pointing.
Actual Output	Car name was hovered while pointing.
Test Result	Test was successful.

Table 4: Table of Test 4

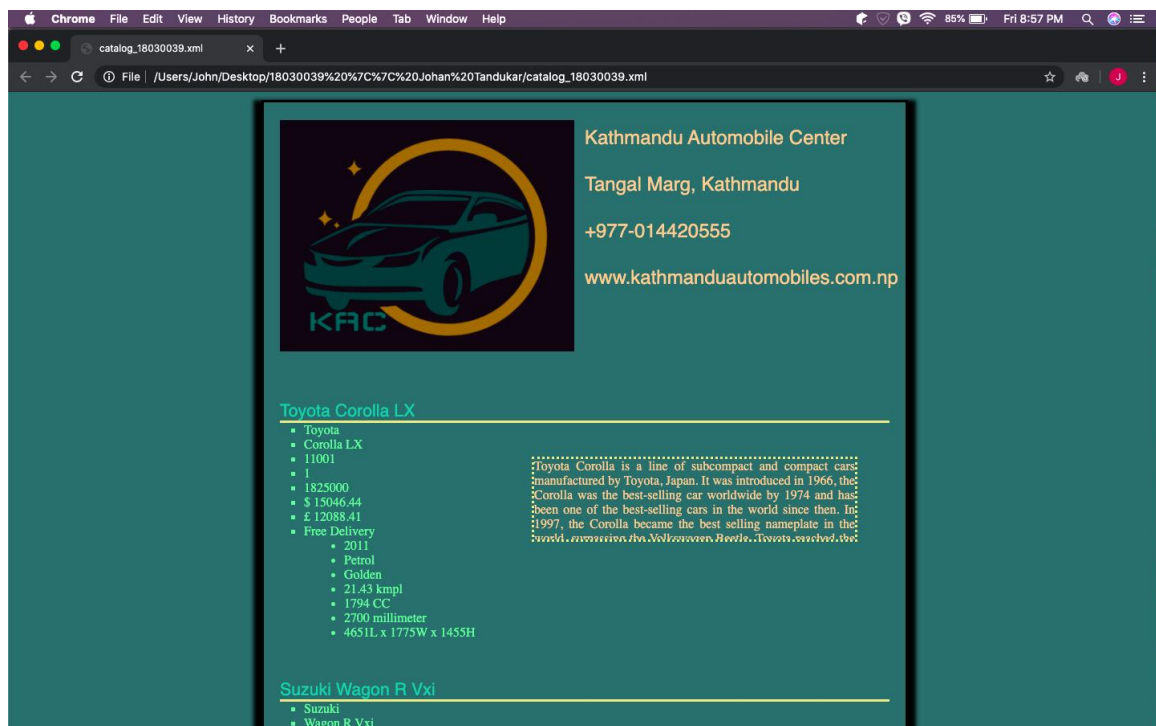


Figure 8: Before pointing mouse on car name

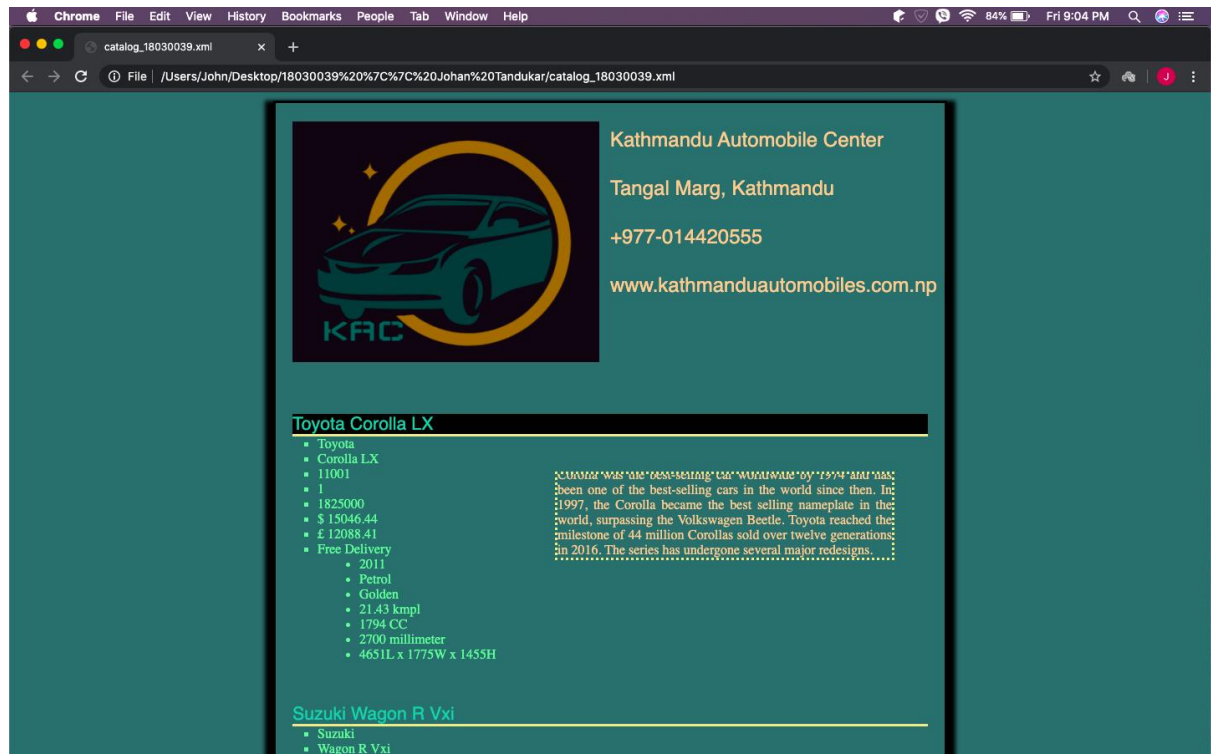


Figure 9: After pointing mouse on car name

Test 5

Test No.	5
Input	Not entering optional data on catalog_18030039.xml file and checking output.
Excepted Output	Optional element should not be displayed. Only given data should be displayed.
Actual Output	Optional element was not displayed. Only given data was displayed.
Test Result	Test was successful.

Table 5: Table of Test 5

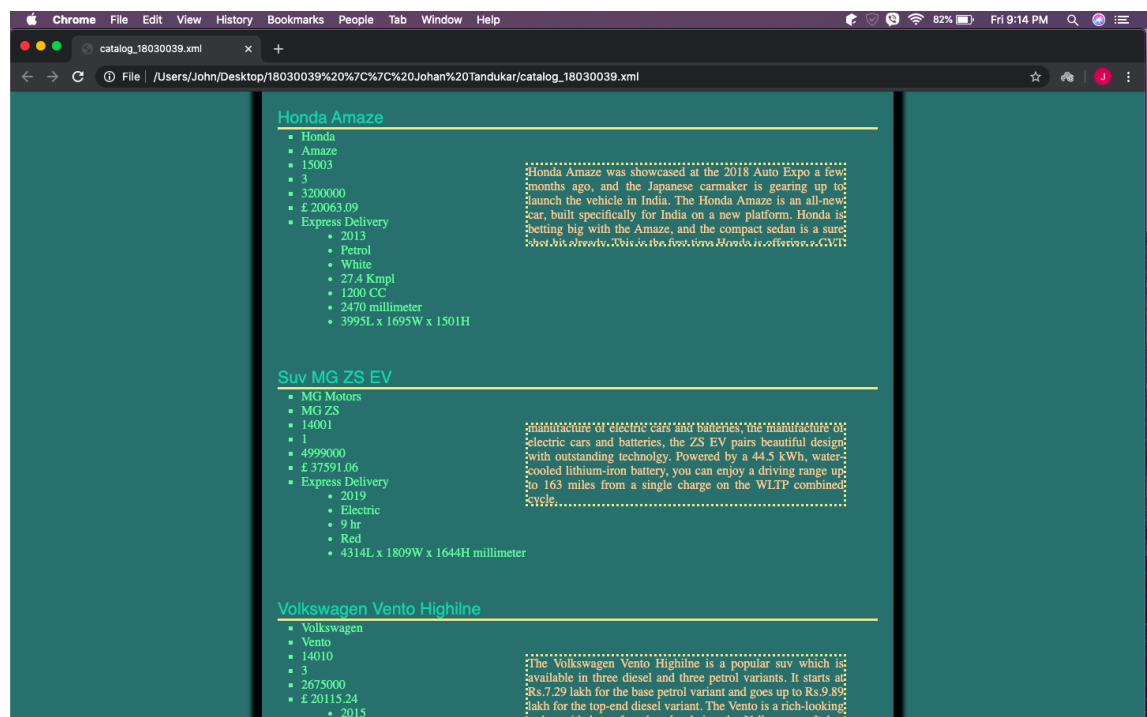


Figure 10: Testing of Optional Element

Development of coursework

First, I evaluated our coursework situation. I created a method after evaluating the situation for the coursework to complete the course work successfully within a given time period. I had researched more about xml and schema on the internet and books to gain more knowledge. After my research, I had made a tree diagram which helps me to do this coursework in good flow.

I used different methods to finish this coursework successfully. I used the text sub lime as my text editor for my coursework. I created my Schema, XML and CSS content files using Sublime Text.

This coursework was basic but very useful as it expanded our knowledge in the XML field. The coursework did not require any extremely costly hardware or software. The coursework requirement included XAMPP, a text editor and a compatible web browser. The tools used in the coursework is listed out below with brief description: -

- **Google Chrome**

The open source Chromium project is based on an open source software for accessing the World Wide Web and running Web-based applications. It is compliant with operating systems such as MAC OS X, Linux, Android and iOS. It takes a Network security philosophy based on sandboxing and supports Web standards such as HTML and CSS.

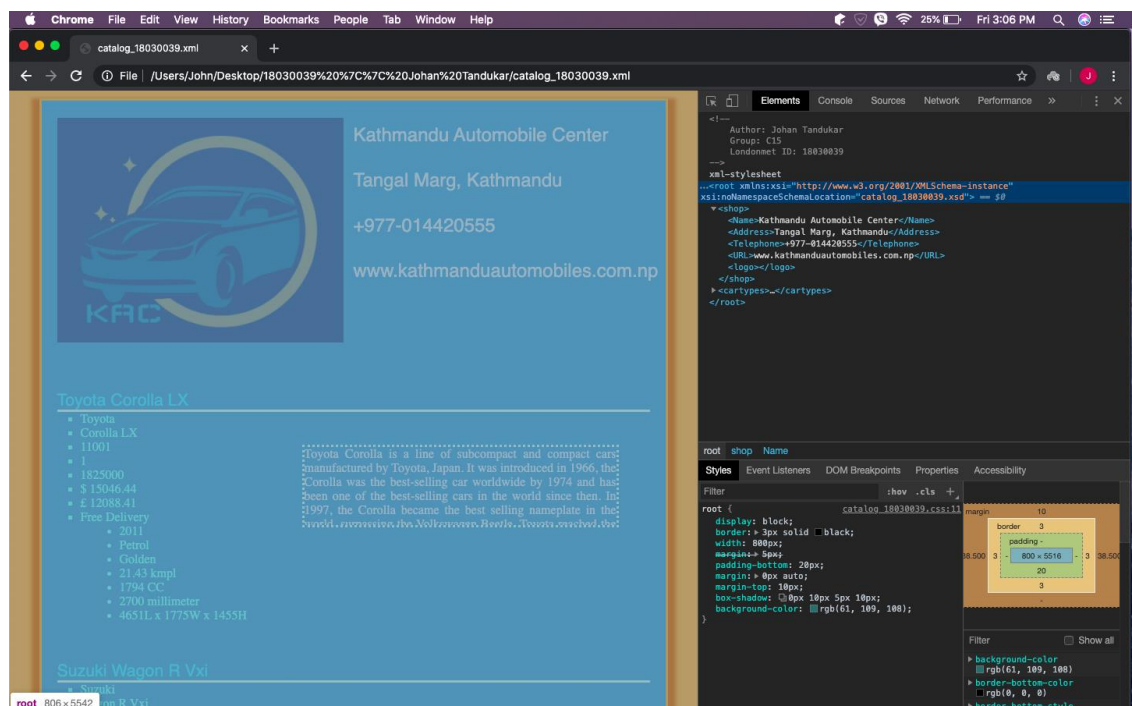


Figure 11: Inspecting CSS from Google Chrome

- **Sublime Text**

Sublime Text Editor is a complex word editor commonly used by developers. It includes wide-ranging features such as Syntax Highlight, Auto Indentation, File Type Recognition, Toolbar, Macros, Plug-in and Packages that make dealing with code base fast. This tutorial offers you a detailed rundown of Sublime Text principles and makes it simple to use with your web applications. (sublimetext, 2020)

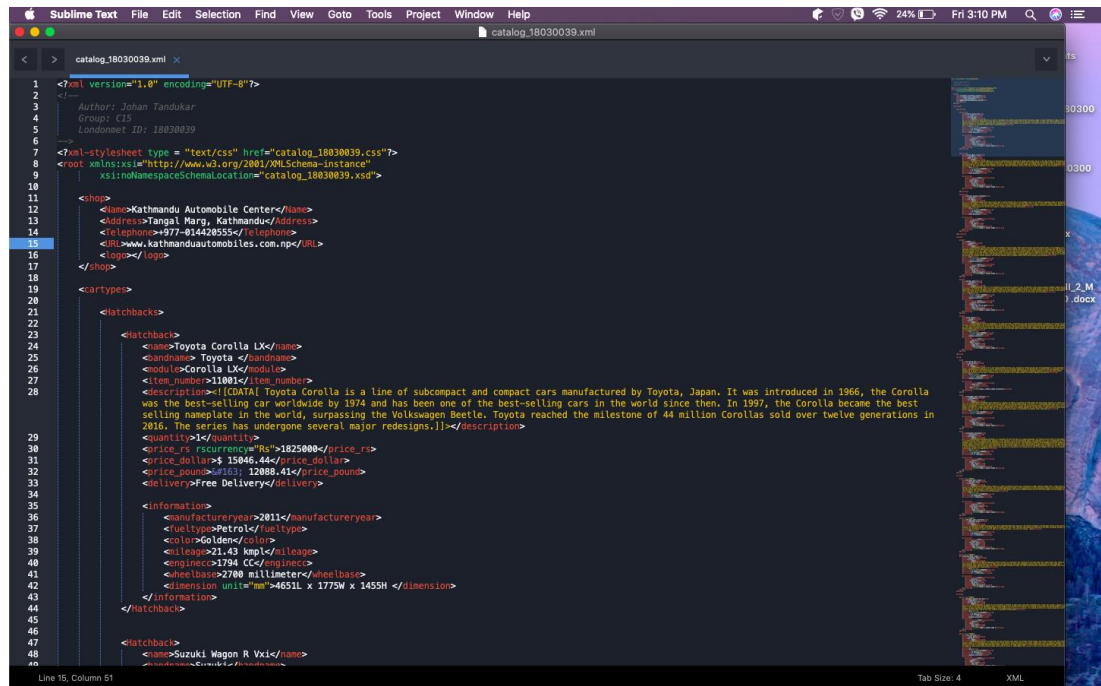


Figure 12: Sublime Text 3

Limitation of DTD and CSS

DTD

Document Type Definition (DTD), is used to precisely describe the XML language. It is classified into two types: Internal DTD and external DTD similar to CSS. It describes the elements of a CML file, their syntax, optional and mandatory elements and whether the attributes can have default values. It certifies the formation and validation of the XML file against the grammatical rules of the appropriate XML language.

Limitation of DTD are listed below:

- It does not support namespaces.
- It only supports text string data type.
- The concept of inheritances cannot be applied on DTDs.
- Data Typing is impossible in DTD.
- The larger DTD files are difficult to read
- The quantity of the cardinality for elements is limited.
- The control of white space is limited. (tutorialspoint, 2020)

CSS

Cascading Style Sheets is used to specify website formats along with the set of rules that help developers control the website's appearance and display. The CSS styling includes font size, image position, background color, layout, HTML document formatting and display. It will make consistent changes to all a website's pages.

Limitation of CSS are listed below:

- It has limited initial scope and works is fragmentation
- Cross browser issues, as every browser does not support media features uniformly
- Lack of security as it is an open text-based system
- The control of flexible layout is not good
- There is limitation in vertical control (Safari, 2020)

Critical Evaluation

In this coursework, it was very easy while doing xml and CSS because I had some knowledge about it. We had html in first year and it is similar and easy to understand so that it was easy to understand for me. I have developed a Schema for an XML document. I had faced various problems while carrying out this task but due to various research and guidance of a teacher I have been able to successfully complete this coursework.

The conditions that had been included in the scenario had also been tricky in some places due to which I had to carry out lots of research in order to overcome the problems. For example: Some element should have optional information. It was very hard to decide which one should be an optional element. Developing a Schema with these type conditions was difficult.

I had faced some problems while adding images in XML file which was one of the requirements of the coursework. According to the requirement of the coursework, the file had to be in XML format therefore, I could not directly give the path of my image. Thus, after some research I gained knowledge that the image could be kept through external CSS by using background-image and then giving the URL of the image. For example: `logo-image: URL("logo.png");`

Time had also been one of the major problems in completion of coursework. There had been a deadline of other coursework due to which time management had also been a major issue for completion of coursework. If there had been more time, I could have added more CSS and included more contents for the XML file.

I had also faced some problems in testing part of the coursework. I had been able to view the output of my XML file after adding CSS in it but there was an error of ID reference in Schema. Thus, it was a difficult task for me to know how to solve that error as each time I would try to validate my Schema in online validation tools it would show error. Therefore, I had to carry out research and take guidance from a tutor teacher in order to solve my validation issues.

I am glad I have been able to solve these challenges and complete the course work successfully. I had undertaken various studies and had taken the help of our tutor teacher to complete this course work successfully on given time.

Conclusion

I had to face various problems while carrying out this coursework. I had to research various things about Schema and CSS in order to successfully complete this coursework. I had taken help from various websites, books, etc. in order to successfully complete this coursework.

The errors were XML was the result of poor formation of Schema file. The Schema file was properly made with proper understanding of Schema and XML. Any issue of XML was solved with the help of proper formed Schema. The XML was further styled with external CSS. The CSS made the XML information presentable and more understandable. The CSS styling required a test and runs to conclude with a final style.

In this coursework, I have developed an external Schema for a Kathmandu automobile center according to the given scenario. According to the developed Schema, an xml file is created which consists of contents of various products of a vehicle shop and at last an external CSS has been developed for the file in order to view the contents of the file in proper format.

There were various requirements that had been defined in order to successfully carry out this coursework. At first there occurred various errors in validating tasks, in order to remove these errors, I have taken references from various books, websites, etc. Our tutor teacher also guided us for our successful completion of this coursework.

I have been able to know the importance of Schema, XML, DTD and CSS, limitation of DTD and CSS after carrying out this coursework. I have also obtained knowledge about how XML documents are descriptive than another HTML. I have also been able to figure out the difference between HTML and XML after carrying out this coursework. This coursework helped me to understand the importance of DTD, Schema, CSS and XML. I found creating a Schema and that's an interesting task. To complete this course work I showed my full commitment. Even in future days I would like to do this kind of coursework. This coursework helped me learn more about Schema, XML and CSS.

Reference

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