Module Code & Module Title

CS5004NI Emerging Programming Platforms and Technologies

Assessment Weightage & Type

30% Individual Coursework

Year and Semester

2019-20 Autumn / 2020-21 Spring

Student Name: ASAL PANDEY

London Met ID: 20049387

College ID: NP01CP4S210179

Assignment Due Date: 5th May

Assignment Submission Date: 5th May

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 marks of zero will be awarded.

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Acknowledgement

I would like to express my deepest gratitude to my teachers from Islington College, who taught me many things throughout the entirety of this semester and helped me in every step by teaching me many new things. I am especially thankful to our tutor (Prithivi Maharjan) who helped me in every step while doing this coursework, and our module leader, lecturer and the entire Islington society for helping us at every point during this project and supervising everything. Also, I would like to want to grow my gratitude towards the individuals who have, directly and indirectly, guided me while doing this project including friends and my family

Abstract

this course was divided into 4 phases. In the first phase, basic XML code was written and then came the CSS. The schema was prepared in the next phase. and finally the documentation. CSS was used for styling and to render the XML document. The schema was done to show the structure of the code and then, here in this documentation, a summary of everything is shown

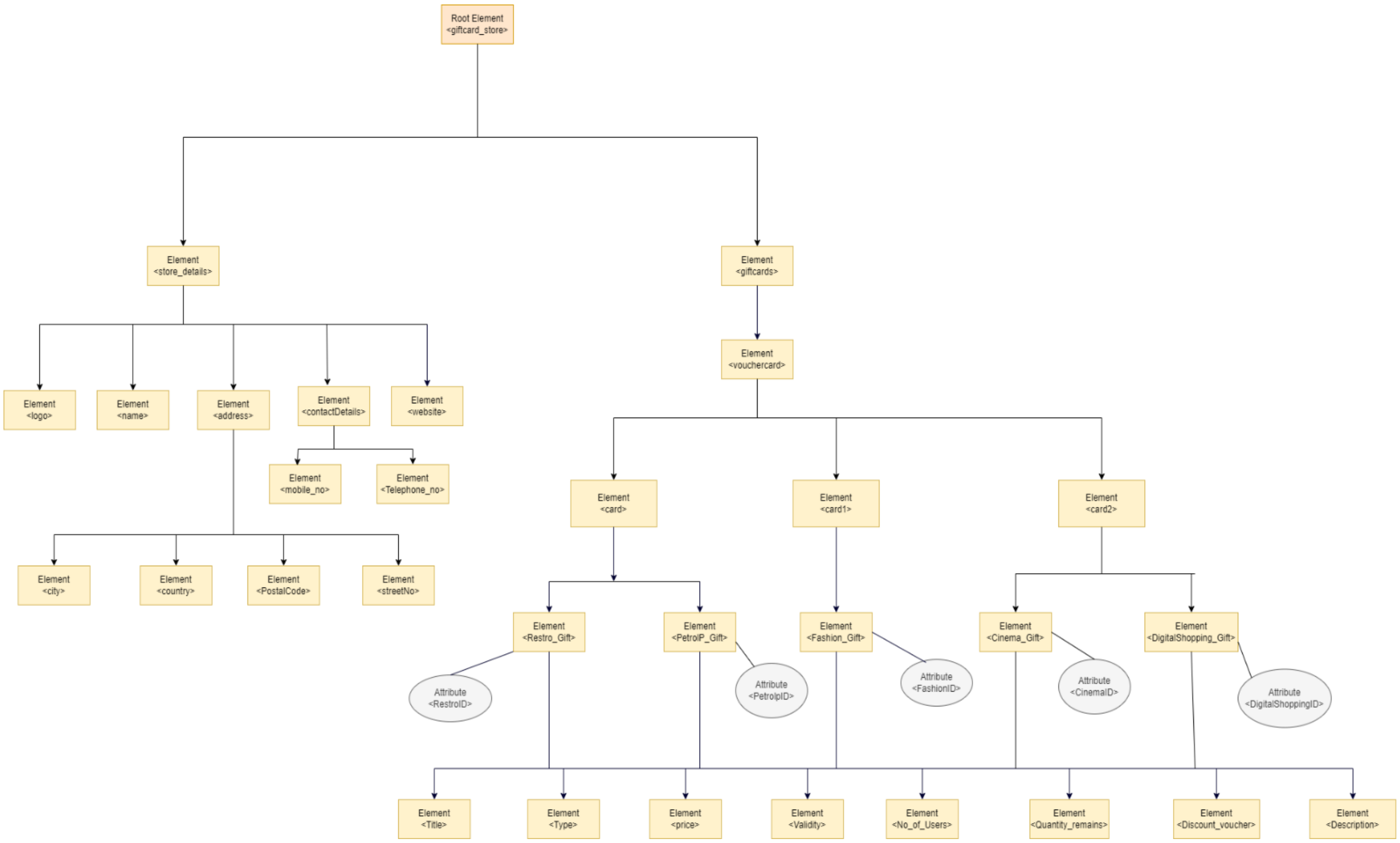
Introduction

This coursework was assigned to us on week20 and has to be submitted in week 26. The coursework assigned to in Emerging Programming Platforms and Technologies (CS5004NI) module is individual coursework and consists of 30% marks of the total yearly weightage. This is our second coursework on Emerging Programming Platforms and technologies. This coursework is a project which asks us to create a system for a gift shop located in London using XML. A tree diagram for XML was created before writing the code and the code was written accordingly. After coding for XML is completed, a CSS file is created to style and render the code, and a schema file was also written. XML was also validated against schema online. There are many objectives of this coursework, and some of them are as follows

- To model a system for a gift card store.
- To collect and organize the gift card digitally.
- To describe gift cards with different specifications.
- To develop the proper tree structure of XML data.
- To know about XML, its different functionalities and uses
- To define the attributes, data, etc. in the schema file.
- To design the webpage by using CSS

2. Tree Diagram of XML

A tree diagram is the visual representation of a hierarchy in a tree-like structure. It is prepared before coding to represent how the code has been stored. First, it starts with the Root element and the child element is connected with lines which are called branches that illustrate the relationships and connections between the members. And finally, end with the element which has no child elements. It describes the parent element, child element, and attributes of the element. It gives the knowledge of branches and sub-branches starting from the root. (w3school, n.d.)



In the tree diagram given above, the root element is the giftcard_store. The tree diagram traverses all the succeeding branches and sub-branches and leaf nodes starting from the root. The root element is further branched into two child elements: store_details and giftcards. The store element has its child elements: logo, name, address, contactDetails and website. The address is further sub branched into country, city, postal_code and street_no. The contactDetails is branched into telephone_no and mobile_no.The rectangle box represents elements where as the oval represents attributes. The giftcards element has a child voucher and voucher has child element: card, card1, card2. Which are even further divided into Resto_Gift, petrolP_Gift and fashion_Gift and cinema_Gift, digitalShopping_Gift respectively. And this all child elements have further common sub child elements which are: Title, type, price, validity, no_of_Users, Quantity_remains, Discount_voucher and Description. Those child elements which are extended from the same parent elements are also known as siblings.

1. List of data

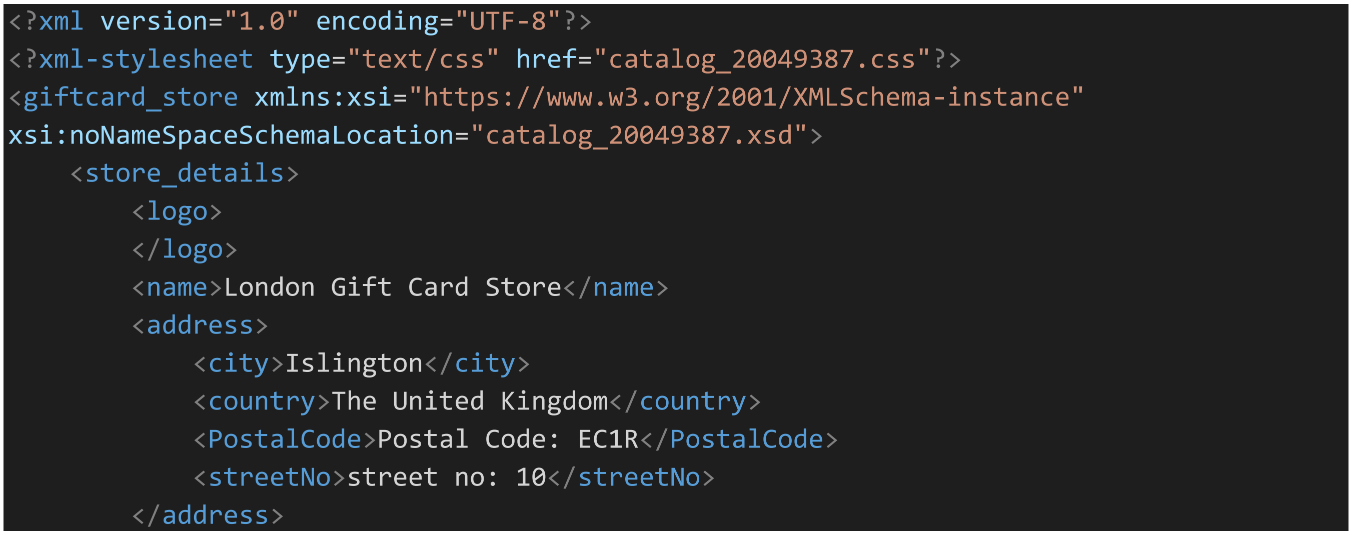
The proposed system contains a list of data that is to be implemented in the XMLdocument. They are listed below:

Data Element	Definition

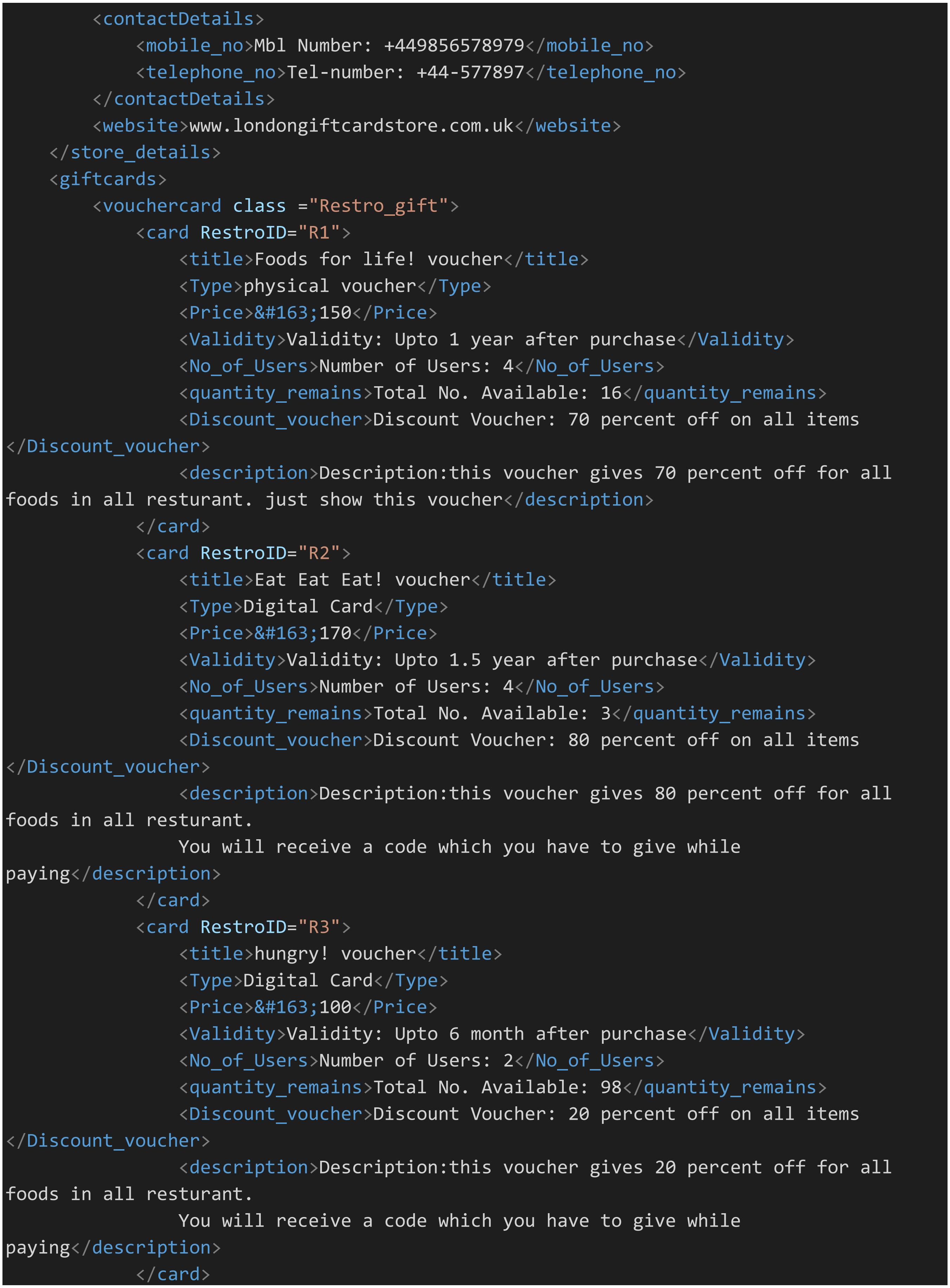
name	It stores the name of the store. . It is mandatory and can occur only one time. It is defined as a string in XSD whereas, in DTD,it is defined as PCDATA
country	It stores the country where the store is located. It is mandatory andcan occur only one time. It is defined as a string in XSD whereas, in DTD, it is defined as PCDATA
city	It stores the city data about where the store is located. It is mandatory andcan occur only one time. It is defined as a string in XSD whereas in DTD, it is defined as PCDATA
PostalCode	It stores the postal code of the store. It is optional and can occur at zero or one time. It is defined as an integer in XSD whereas, in DTD, it is defined as PCDATA.
streetNo	It stores the street number of the store. It is mandatory and can occur only one time. It is defined as an integer in XSD whereas in DTD, it is defined as PCDATA.
mobile_no	It stores the mobile number of the store owner. It is mandatory and can occur only one time. It is defined as an integer in XSD whereas, in DTD, it is defined as PCDATA.
telephone_no	It stores the telephone number of the store. It is mandatory and can occur only one time. It is defined as an integer in XSD whereas, in DTD, it is defined as PCDATA.
website	It stores the website of the store. It is mandatory and canoccur only one time. A certain pattern is designed in XSD whereas in DTD, it is defined as PCDATA.
title	It stores the title of the gift card. It is mandatory as every gift card has its title. It is defined as a string in XSD whereas in DTD is defined as PCDATA.
price	It stores the price of the gift card. It is mandatory, as every gift card has its price. It is defined as an integer in XSD whereas in DTD, it is defined as PCDATA.

validity	it stores the data about the expiration date for the voucher. It is mandatory as every gift card/voucher has an expiration date. It is defined as gYear in XSD whereas, in DTD, it is defined as PCDATA.
no_of_Users	it stores the data of how many users can use the voucher. It is mandatory as every gift card/voucher has its specification of max users. It is defined as a string in XSD whereas, in DTD, it is defined as PCDATA.
Quantity_remains	it stores the remaining quantity of the voucher. It is optional because voucher manufacturers may or may not choose to disclose this data. It is defined as an integer in XSD whereas, in DTD, it is defined as PCDATA.
Discount_voucher	it stores the discount data of the voucher. It is optional because vouchers can be used to purchase petrols too, which may or may not have discount data. It is defined as a string in XSD whereas, in DTD, it is defined as PCDATA.
Description	it stores the description of the card. It is mandatory as every gift card has a description of its content. It is defined as a string in XSD whereas, in DTD, it is defined as PCDATA.

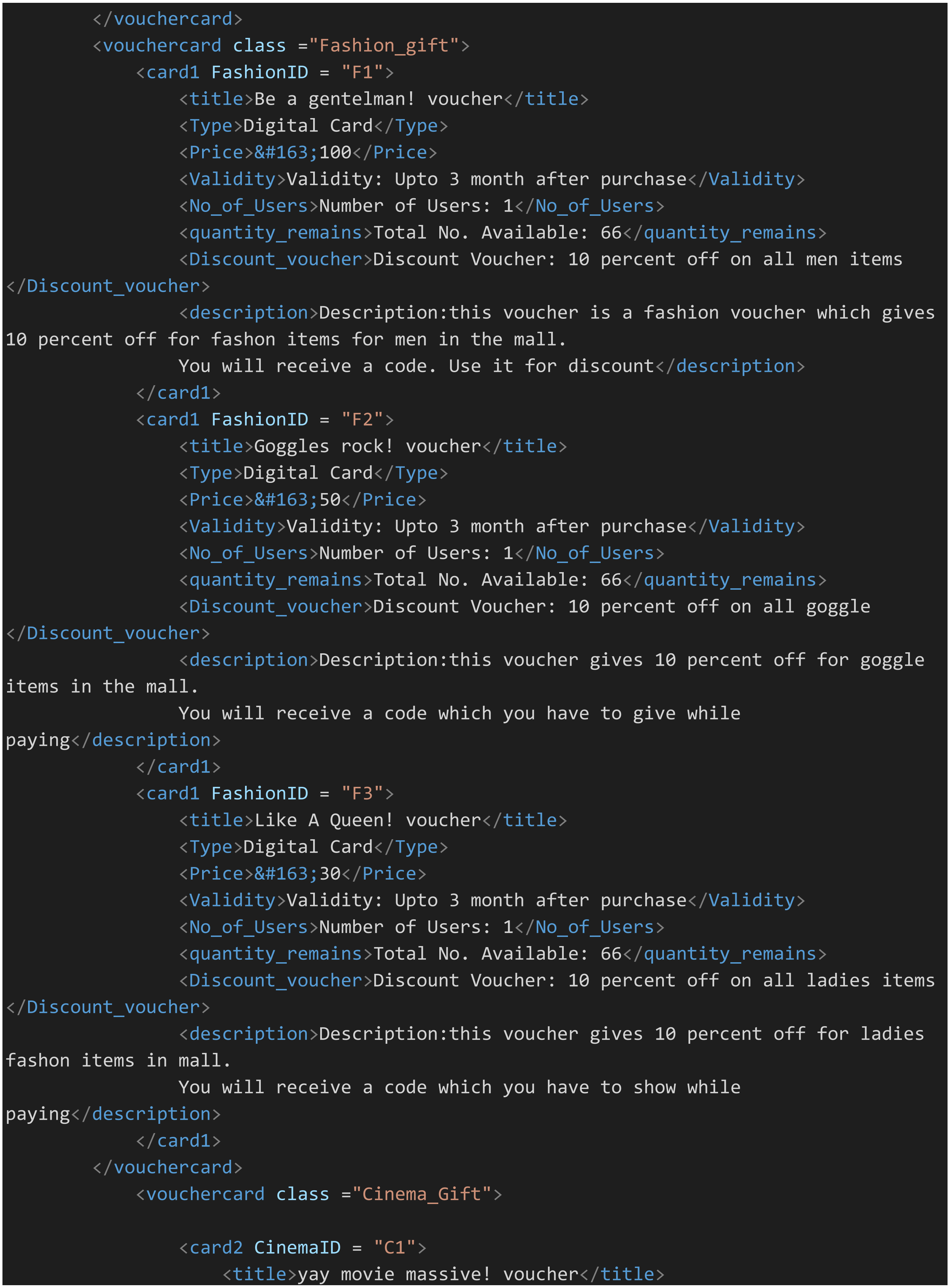
Xml content



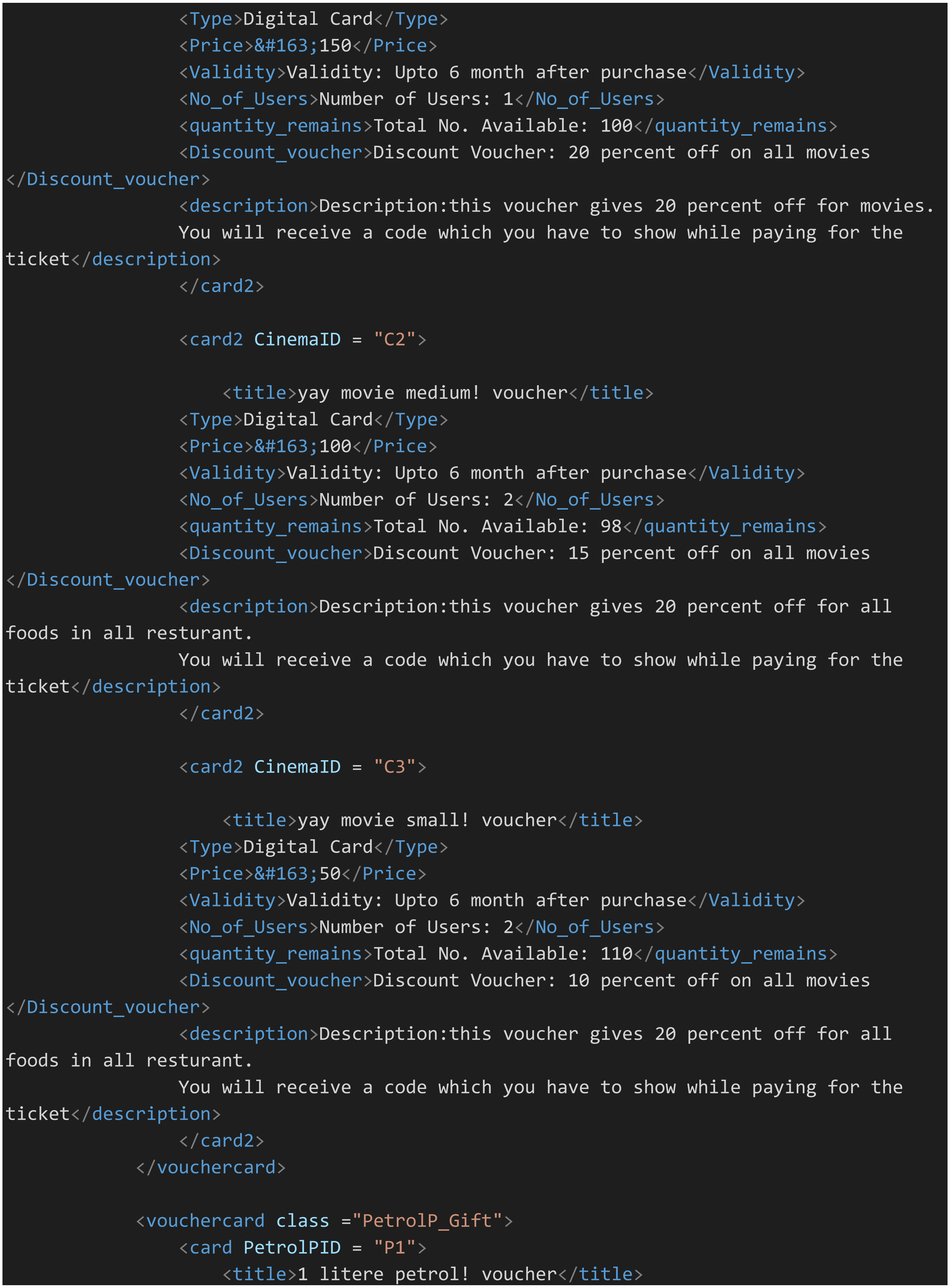
```xml
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/css" href="catalog_20049387.css"?>
<giftcard_store xmlns:xsi="https://www.w3.org/2001/XMLSchema-instance"
xsi:noNameSpaceSchemaLocation="catalog_20049387.xsd">
    <store_details>
        <logo>
        </logo>
        <name>London Gift Card Store</name>
        <address>
            <city>Islington</city>
            <country>The United Kingdom</country>
            <PostalCode>Postal Code: EC1R</PostalCode>
            <streetNo>street no: 10</streetNo>
        </address>
```



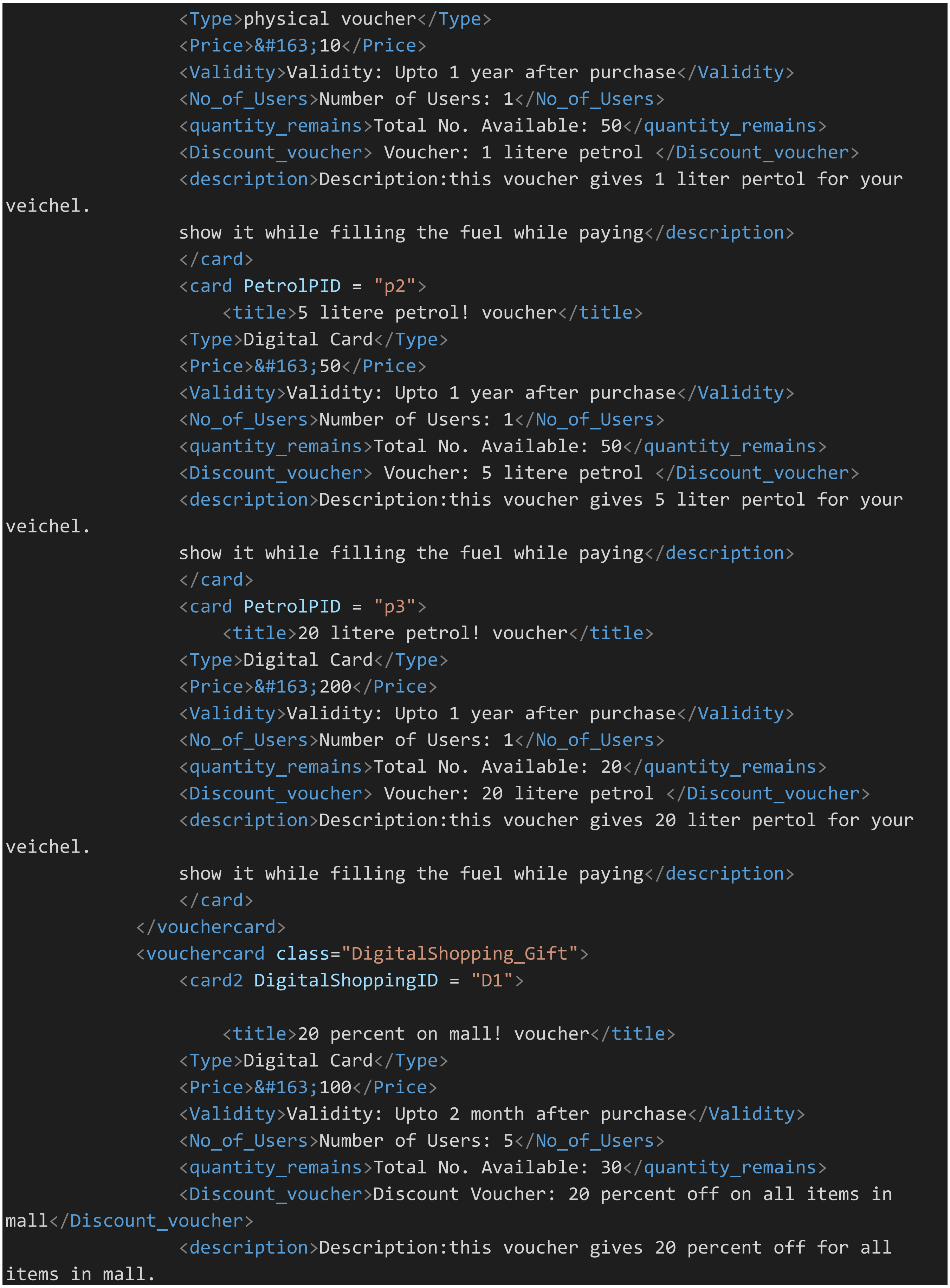
```
        <contactDetails>
            <mobile_no>Mbl Number: +449856578979</mobile_no>
            <telephone_no>Tel-number: +44-577897</telephone_no>
        </contactDetails>
        <website>www.londongiftcardstore.com.uk</website>
    </store_details>
    <giftcards>
        <vouchercard class ="Restro_gift">
            <card RestroID="R1">
                <title>Foods for life! voucher</title>
                <Type>physical voucher</Type>
                <Price>&#163;150</Price>
                <Validity>Validity: Upto 1 year after purchase</Validity>
                <No_of_Users>Number of Users: 4</No_of_Users>
                <quantity_remains>Total No. Available: 16</quantity_remains>
                <Discount_voucher>Discount Voucher: 70 percent off on all items
</Discount_voucher>
                <description>Description:this voucher gives 70 percent off for all
foods in all resturant. just show this voucher</description>
            </card>
            <card RestroID="R2">
                <title>Eat Eat Eat! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;170</Price>
                <Validity>Validity: Upto 1.5 year after purchase</Validity>
                <No_of_Users>Number of Users: 4</No_of_Users>
                <quantity_remains>Total No. Available: 3</quantity_remains>
                <Discount_voucher>Discount Voucher: 80 percent off on all items
</Discount_voucher>
                <description>Description:this voucher gives 80 percent off for all
foods in all resturant.
                You will receive a code which you have to give while
paying</description>
            </card>
            <card RestroID="R3">
                <title>hungry! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;100</Price>
                <Validity>Validity: Upto 6 month after purchase</Validity>
                <No_of_Users>Number of Users: 2</No_of_Users>
                <quantity_remains>Total No. Available: 98</quantity_remains>
                <Discount_voucher>Discount Voucher: 20 percent off on all items
</Discount_voucher>
                <description>Description:this voucher gives 20 percent off for all
foods in all resturant.
                You will receive a code which you have to give while
paying</description>
            </card>
```



```
        </vouchercard>
        <vouchercard class ="Fashion_gift">
            <card1 FashionID = "F1">
                <title>Be a gentelman! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;100</Price>
                <Validity>Validity: Upto 3 month after purchase</Validity>
                <No_of_Users>Number of Users: 1</No_of_Users>
                <quantity_remains>Total No. Available: 66</quantity_remains>
                <Discount_voucher>Discount Voucher: 10 percent off on all men items
</Discount_voucher>
                <description>Description:this voucher is a fashion voucher which gives
10 percent off for fashon items for men in the mall.
                You will receive a code. Use it for discount</description>
            </card1>
            <card1 FashionID = "F2">
                <title>Goggles rock! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;50</Price>
                <Validity>Validity: Upto 3 month after purchase</Validity>
                <No_of_Users>Number of Users: 1</No_of_Users>
                <quantity_remains>Total No. Available: 66</quantity_remains>
                <Discount_voucher>Discount Voucher: 10 percent off on all goggle
</Discount_voucher>
                <description>Description:this voucher gives 10 percent off for goggle
items in the mall.
                You will receive a code which you have to give while
paying</description>
            </card1>
            <card1 FashionID = "F3">
                <title>Like A Queen! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;30</Price>
                <Validity>Validity: Upto 3 month after purchase</Validity>
                <No_of_Users>Number of Users: 1</No_of_Users>
                <quantity_remains>Total No. Available: 66</quantity_remains>
                <Discount_voucher>Discount Voucher: 10 percent off on all ladies items
</Discount_voucher>
                <description>Description:this voucher gives 10 percent off for ladies
fashon items in mall.
                You will receive a code which you have to show while
paying</description>
            </card1>
        </vouchercard>
            <vouchercard class ="Cinema_Gift">

                <card2 CinemaID = "C1">
                    <title>yay movie massive! voucher</title>
```



```
                <Type>Digital Card</Type>
                <Price>&#163;150</Price>
                <Validity>Validity: Upto 6 month after purchase</Validity>
                <No_of_Users>Number of Users: 1</No_of_Users>
                <quantity_remains>Total No. Available: 100</quantity_remains>
                <Discount_voucher>Discount Voucher: 20 percent off on all movies
</Discount_voucher>
                <description>Description:this voucher gives 20 percent off for movies.
                You will receive a code which you have to show while paying for the
ticket</description>
                </card2>

                <card2 CinemaID = "C2">

                    <title>yay movie medium! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;100</Price>
                <Validity>Validity: Upto 6 month after purchase</Validity>
                <No_of_Users>Number of Users: 2</No_of_Users>
                <quantity_remains>Total No. Available: 98</quantity_remains>
                <Discount_voucher>Discount Voucher: 15 percent off on all movies
</Discount_voucher>
                <description>Description:this voucher gives 20 percent off for all
foods in all resturant.
                You will receive a code which you have to show while paying for the
ticket</description>
                </card2>

                <card2 CinemaID = "C3">

                    <title>yay movie small! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;50</Price>
                <Validity>Validity: Upto 6 month after purchase</Validity>
                <No_of_Users>Number of Users: 2</No_of_Users>
                <quantity_remains>Total No. Available: 110</quantity_remains>
                <Discount_voucher>Discount Voucher: 10 percent off on all movies
</Discount_voucher>
                <description>Description:this voucher gives 20 percent off for all
foods in all resturant.
                You will receive a code which you have to show while paying for the
ticket</description>
                </card2>
            </vouchercard>

            <vouchercard class ="PetrolP_Gift">
                <card PetrolPID = "P1">
                    <title>1 litere petrol! voucher</title>
```

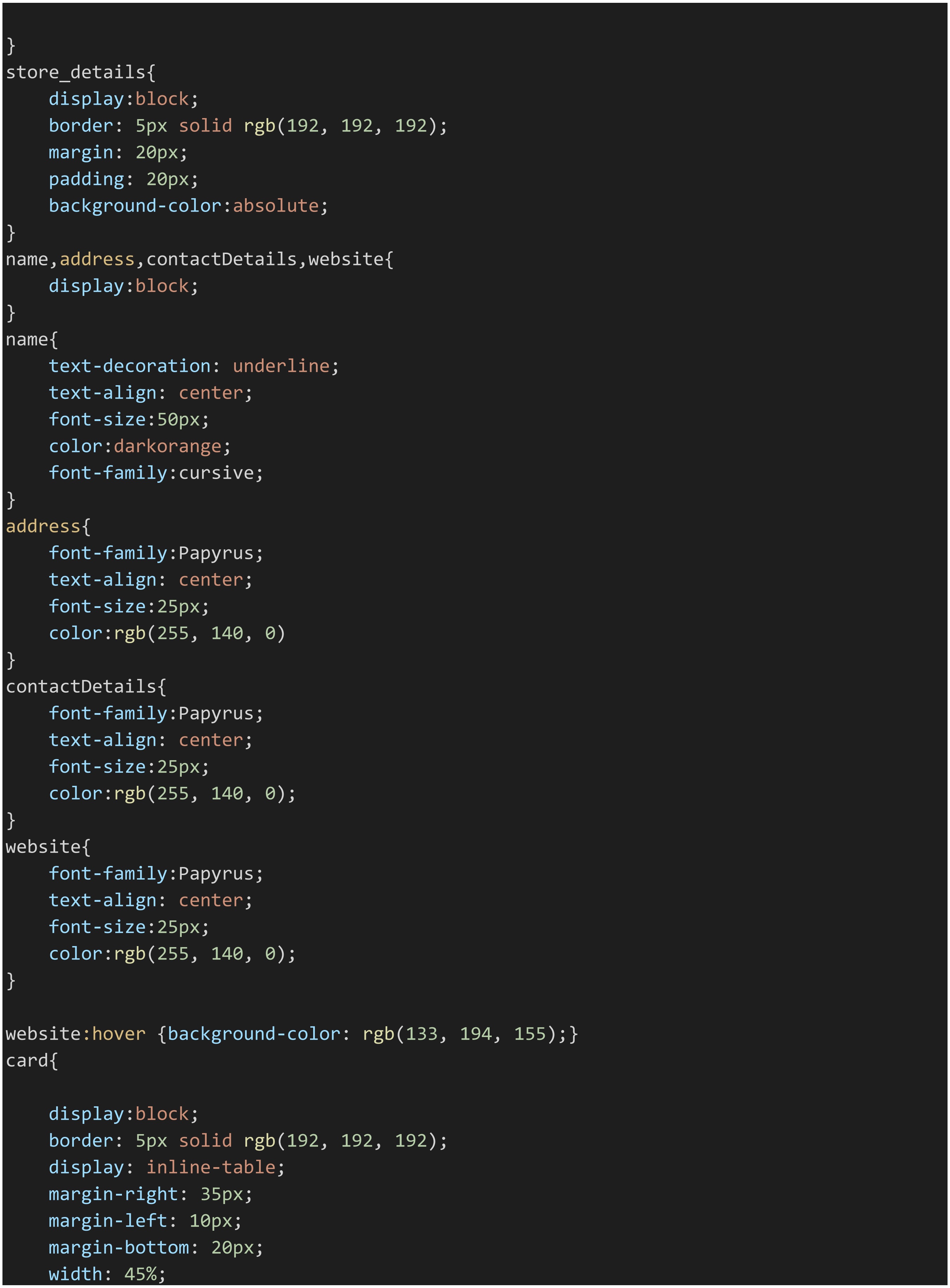


```
                <Type>physical voucher</Type>
                <Price>&#163;10</Price>
                <Validity>Validity: Upto 1 year after purchase</Validity>
                <No_of_Users>Number of Users: 1</No_of_Users>
                <quantity_remains>Total No. Available: 50</quantity_remains>
                <Discount_voucher> Voucher: 1 litere petrol </Discount_voucher>
                <description>Description:this voucher gives 1 liter pertol for your
veichel.
                show it while filling the fuel while paying</description>
                </card>
                <card PetrolPID = "p2">
                    <title>5 litere petrol! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;50</Price>
                <Validity>Validity: Upto 1 year after purchase</Validity>
                <No_of_Users>Number of Users: 1</No_of_Users>
                <quantity_remains>Total No. Available: 50</quantity_remains>
                <Discount_voucher> Voucher: 5 litere petrol </Discount_voucher>
                <description>Description:this voucher gives 5 liter pertol for your
veichel.
                show it while filling the fuel while paying</description>
                </card>
                <card PetrolPID = "p3">
                    <title>20 litere petrol! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;200</Price>
                <Validity>Validity: Upto 1 year after purchase</Validity>
                <No_of_Users>Number of Users: 1</No_of_Users>
                <quantity_remains>Total No. Available: 20</quantity_remains>
                <Discount_voucher> Voucher: 20 litere petrol </Discount_voucher>
                <description>Description:this voucher gives 20 liter pertol for your
veichel.
                show it while filling the fuel while paying</description>
                </card>
            </vouchercard>
            <vouchercard class="DigitalShopping_Gift">
                <card2 DigitalShoppingID = "D1">

                    <title>20 percent on mall! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;100</Price>
                <Validity>Validity: Upto 2 month after purchase</Validity>
                <No_of_Users>Number of Users: 5</No_of_Users>
                <quantity_remains>Total No. Available: 30</quantity_remains>
                <Discount_voucher>Discount Voucher: 20 percent off on all items in
mall</Discount_voucher>
                <description>Description:this voucher gives 20 percent off for all
items in mall.
```

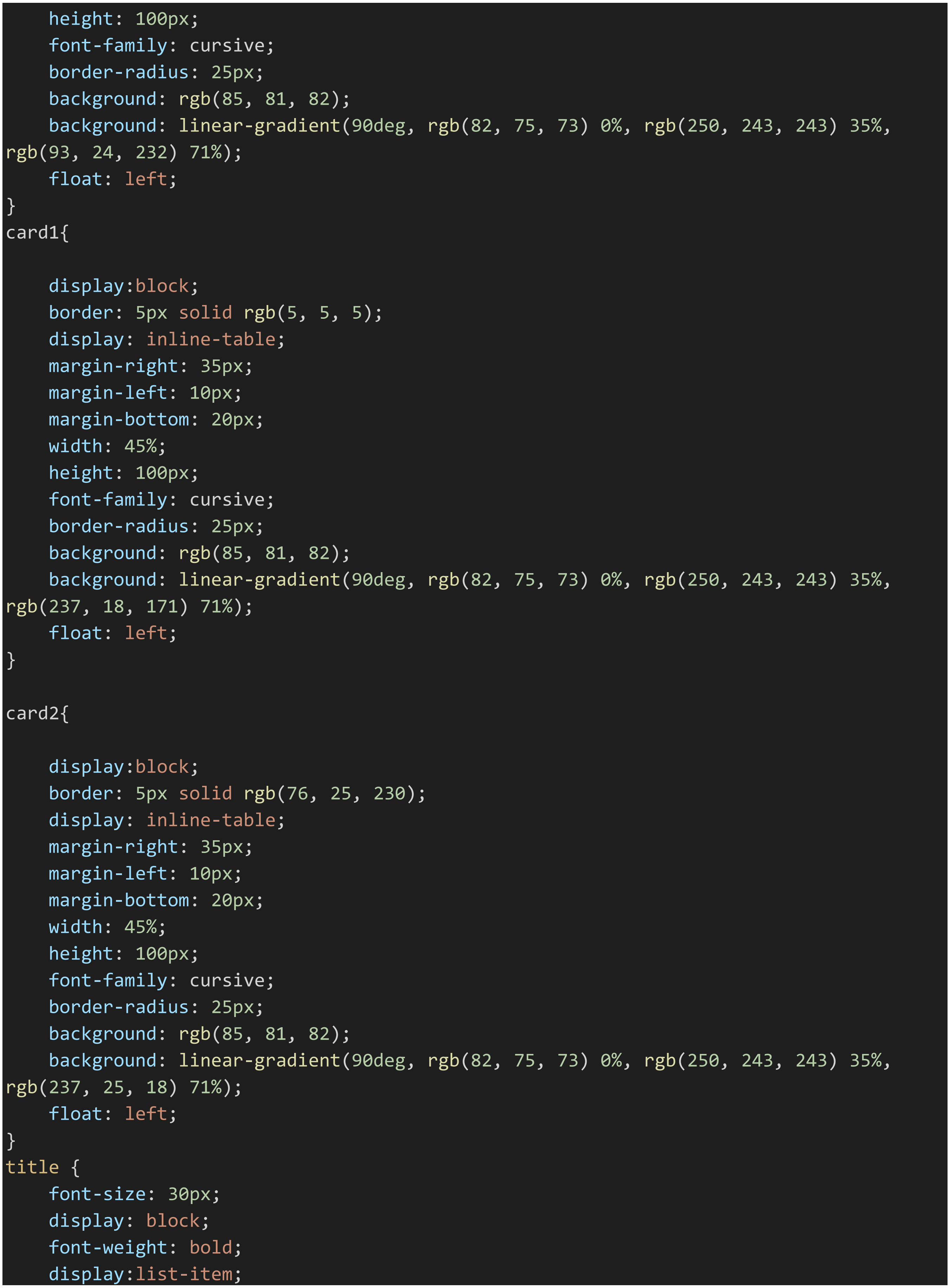
```
                You will receive a code which you have to show while 
paying</description>
                </card2>
                <card2 DigitalShoppingID = "D2">

                    <title>40 percent on mall! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;150</Price>
                <Validity>Validity: Upto 2 month after purchase</Validity>
                <No_of_Users>Number of Users: 5</No_of_Users>
                <quantity_remains>Total No. Available: 11</quantity_remains>
                <Discount_voucher>Discount Voucher: 40 percent off on all items in 
mall</Discount_voucher>
                <description>Description:this voucher gives 40 percent off for all 
items in mall.
                You will receive a code which you have to show while 
paying</description>
                </card2>
                <card2 DigitalShoppingID = "D3">

                    <title>50 percent on mall! voucher</title>
                <Type>Digital Card</Type>
                <Price>&#163;200</Price>
                <Validity>Validity: Upto 2 month after purchase</Validity>
                <No_of_Users>Number of Users: 5</No_of_Users>
                <quantity_remains>Total No. Available: 10</quantity_remains>
                <Discount_voucher>Discount Voucher: 50 percent off on all items in 
mall</Discount_voucher>
                <description>Description:this voucher gives 50 percent off for all 
items in mall.
                You will receive a code which you have to show while 
paying</description>
                </card2>
            </vouchercard>
        </giftcards>
</giftcard_store>
```

Css content

```
giftcard_store{
    display:block;
    background-image:linear-gradient(rgba(0,0,0,0.5), 
rgba(0,0,0,0.5)),url(Background.jpg);
    background-attachment: fixed;
    background-position: center;
    background-repeat: repeat-y;
    background-size: cover;
```



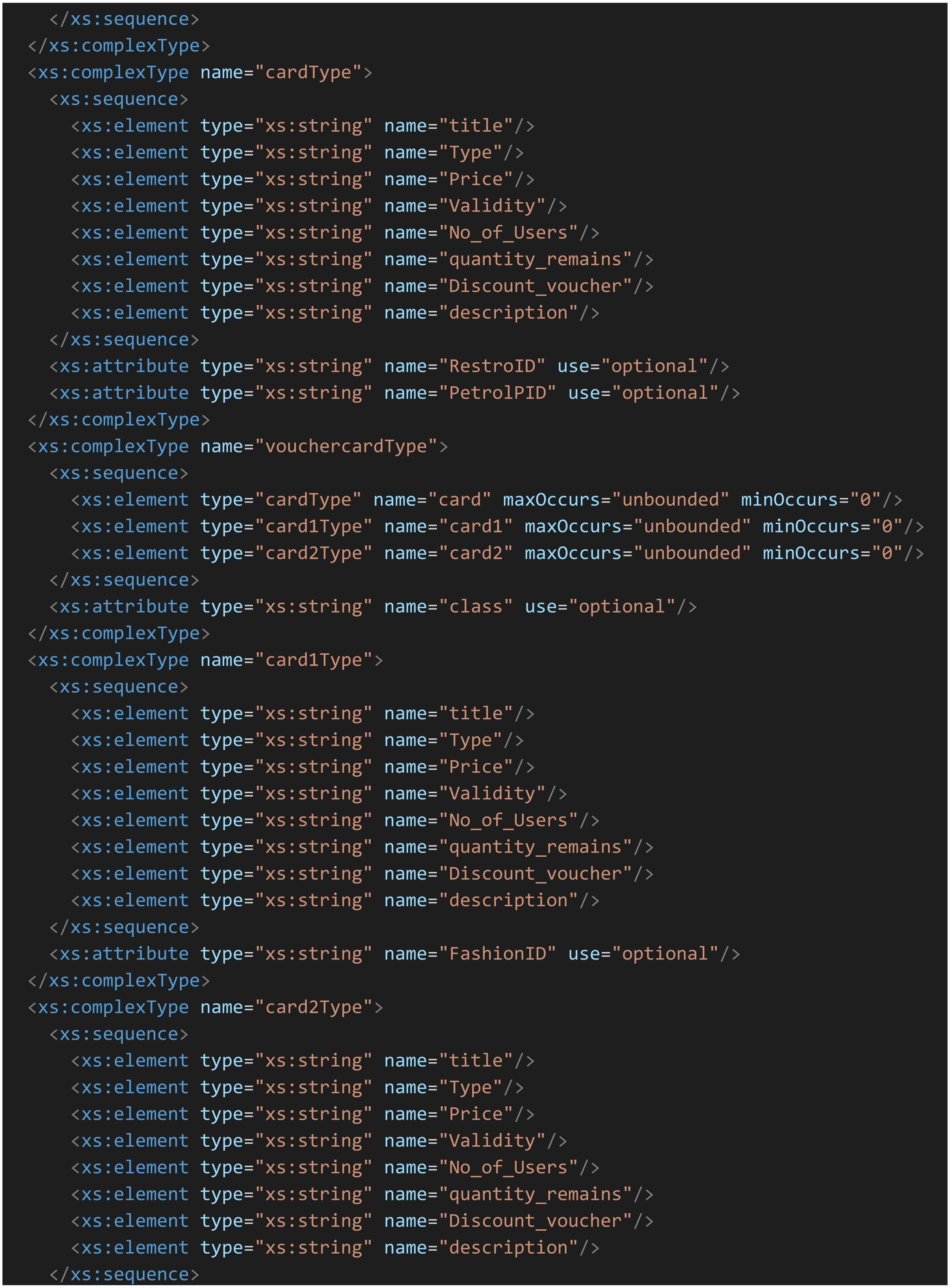
```
}
store_details{
    display:block;
    border: 5px solid rgb(192, 192, 192);
    margin: 20px;
    padding: 20px;
    background-color:absolute;
}
name,address,contactDetails,website{
    display:block;
}
name{
    text-decoration: underline;
    text-align: center;
    font-size:50px;
    color:darkorange;
    font-family:cursive;
}
address{
    font-family:Papyrus;
    text-align: center;
    font-size:25px;
    color:rgb(255, 140, 0)
}
contactDetails{
    font-family:Papyrus;
    text-align: center;
    font-size:25px;
    color:rgb(255, 140, 0);
}
website{
    font-family:Papyrus;
    text-align: center;
    font-size:25px;
    color:rgb(255, 140, 0);
}

website:hover {background-color: rgb(133, 194, 155);}
card{

    display:block;
    border: 5px solid rgb(192, 192, 192);
    display: inline-table;
    margin-right: 35px;
    margin-left: 10px;
    margin-bottom: 20px;
    width: 45%;
```



```
    height: 100px;
    font-family: cursive;
    border-radius: 25px;
    background: rgb(85, 81, 82);
    background: linear-gradient(90deg, rgb(82, 75, 73) 0%, rgb(250, 243, 243) 35%,
rgb(93, 24, 232) 71%);
    float: left;
}
card1{

    display:block;
    border: 5px solid rgb(5, 5, 5);
    display: inline-table;
    margin-right: 35px;
    margin-left: 10px;
    margin-bottom: 20px;
    width: 45%;
    height: 100px;
    font-family: cursive;
    border-radius: 25px;
    background: rgb(85, 81, 82);
    background: linear-gradient(90deg, rgb(82, 75, 73) 0%, rgb(250, 243, 243) 35%,
rgb(237, 18, 171) 71%);
    float: left;
}

card2{

    display:block;
    border: 5px solid rgb(76, 25, 230);
    display: inline-table;
    margin-right: 35px;
    margin-left: 10px;
    margin-bottom: 20px;
    width: 45%;
    height: 100px;
    font-family: cursive;
    border-radius: 25px;
    background: rgb(85, 81, 82);
    background: linear-gradient(90deg, rgb(82, 75, 73) 0%, rgb(250, 243, 243) 35%,
rgb(237, 25, 18) 71%);
    float: left;
}
title {
    font-size: 30px;
    display: block;
    font-weight: bold;
    display:list-item;
    list-style:circle inside;
    font-style: italic;

}
Type {
    font-size: 20px;
    font-weight: bold;
    display:list-item;
    list-style: square inside;
    padding-left:30px;
}
Price {
    font-size: 20px;
    font-weight: bold;
    display:list-item;
    list-style:square inside;
    padding-left:30px;
}
Validity {
    font-size: 20px;
    font-weight: bold;
    display:list-item;
    list-style:square inside;
    padding-left:30px;
}
No_of_Users {
    font-size: 20px;
    font-weight: bold;
    display:list-item;
    list-style:square inside;
    padding-left:30px;
}
quantity_remains {
    font-size: 20px;
    font-weight: bold;
    display:list-item;
    list-style:square inside;
    padding-left:30px;
}
Discount_voucher {
    font-size: 20px;
    font-weight: bold;
    display:list-item;
    list-style:square inside;
    padding-left:30px;
}

description {
    font-size: 20px;
    font-style: italic;
    display:list-item;
    padding-left:30px;
}
logo{
     position: absolute;
    margin-top: 50px;
    top: 0;
    float: left;
    display: grid;
    background-image: url("giftcardlogo.png");
    background-size: 200px;
    height: 300px;
    width: 300px;
    background-repeat: no-repeat;

}
```

Schema content

```
<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="giftcard_store" type="giftcard_storeType"/>
  <xs:complexType name="addressType">
    <xs:sequence>
      <xs:element type="xs:string" name="city"/>
      <xs:element type="xs:string" name="country"/>
      <xs:element type="xs:string" name="PostalCode"/>
      <xs:element type="xs:string" name="streetNo"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="contactDetailsType">
    <xs:sequence>
      <xs:element type="xs:string" name="mobile_no"/>
      <xs:element type="xs:string" name="telephone_no"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="store_detailsType">
    <xs:sequence>
      <xs:element type="xs:string" name="logo"/>
      <xs:element type="xs:string" name="name"/>
      <xs:element type="addressType" name="address"/>
      <xs:element type="contactDetailsType" name="contactDetails"/>
      <xs:element type="xs:anyURI" name="website"/>
```



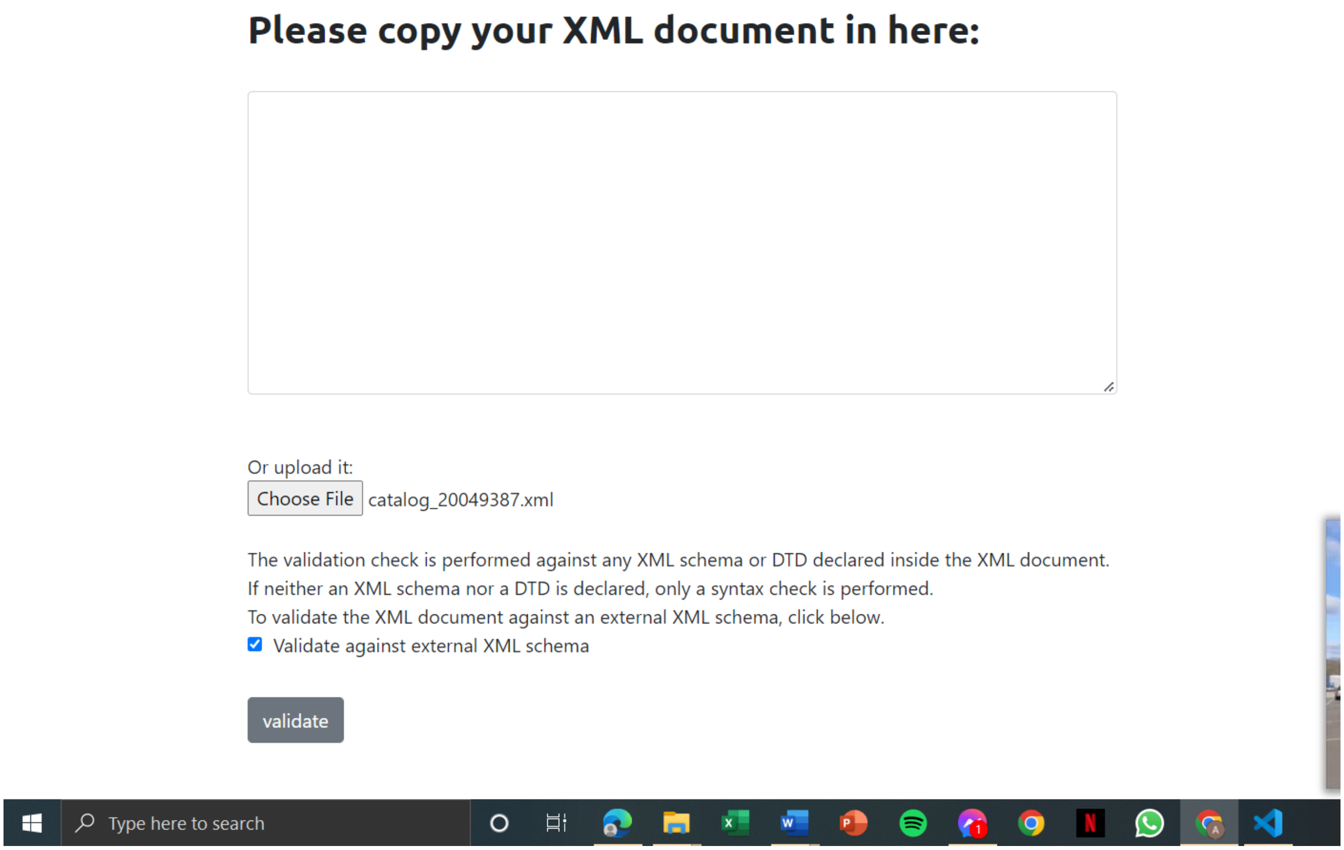
```
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="cardType">
    <xs:sequence>
      <xs:element type="xs:string" name="title"/>
      <xs:element type="xs:string" name="Type"/>
      <xs:element type="xs:string" name="Price"/>
      <xs:element type="xs:string" name="Validity"/>
      <xs:element type="xs:string" name="No_of_Users"/>
      <xs:element type="xs:string" name="quantity_remains"/>
      <xs:element type="xs:string" name="Discount_voucher"/>
      <xs:element type="xs:string" name="description"/>
    </xs:sequence>
    <xs:attribute type="xs:string" name="RestroID" use="optional"/>
    <xs:attribute type="xs:string" name="PetrolPID" use="optional"/>
  </xs:complexType>
  <xs:complexType name="vouchercardType">
    <xs:sequence>
      <xs:element type="cardType" name="card" maxOccurs="unbounded" minOccurs="0"/>
      <xs:element type="card1Type" name="card1" maxOccurs="unbounded" minOccurs="0"/>
      <xs:element type="card2Type" name="card2" maxOccurs="unbounded" minOccurs="0"/>
    </xs:sequence>
    <xs:attribute type="xs:string" name="class" use="optional"/>
  </xs:complexType>
  <xs:complexType name="card1Type">
    <xs:sequence>
      <xs:element type="xs:string" name="title"/>
      <xs:element type="xs:string" name="Type"/>
      <xs:element type="xs:string" name="Price"/>
      <xs:element type="xs:string" name="Validity"/>
      <xs:element type="xs:string" name="No_of_Users"/>
      <xs:element type="xs:string" name="quantity_remains"/>
      <xs:element type="xs:string" name="Discount_voucher"/>
      <xs:element type="xs:string" name="description"/>
    </xs:sequence>
    <xs:attribute type="xs:string" name="FashionID" use="optional"/>
  </xs:complexType>
  <xs:complexType name="card2Type">
    <xs:sequence>
      <xs:element type="xs:string" name="title"/>
      <xs:element type="xs:string" name="Type"/>
      <xs:element type="xs:string" name="Price"/>
      <xs:element type="xs:string" name="Validity"/>
      <xs:element type="xs:string" name="No_of_Users"/>
      <xs:element type="xs:string" name="quantity_remains"/>
      <xs:element type="xs:string" name="Discount_voucher"/>
      <xs:element type="xs:string" name="description"/>
    </xs:sequence>
    <xs:attribute type="xs:string" name="CinemaID" use="optional"/>
    <xs:attribute type="xs:string" name="DigitalShoppingID" use="optional"/>
  </xs:complexType>
  <xs:complexType name="giftcardsType">
    <xs:sequence>
      <xs:element type="vouchercardType" name="vouchercard" maxOccurs="unbounded"
minOccurs="0"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="giftcard_storeType">
    <xs:sequence>
      <xs:element type="store_detailsType" name="store_details"/>
      <xs:element type="giftcardsType" name="giftcards"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

Testing

Test 1

Table 1: test 1

Objective	Validation of XML using XSD
Action	XML file and XSD file both were uploaded and validated
Expected Results	There should not be any error in the XML file
Actual results	No errors were found
conclusion	Test was successful



Please copy your XML document in here:

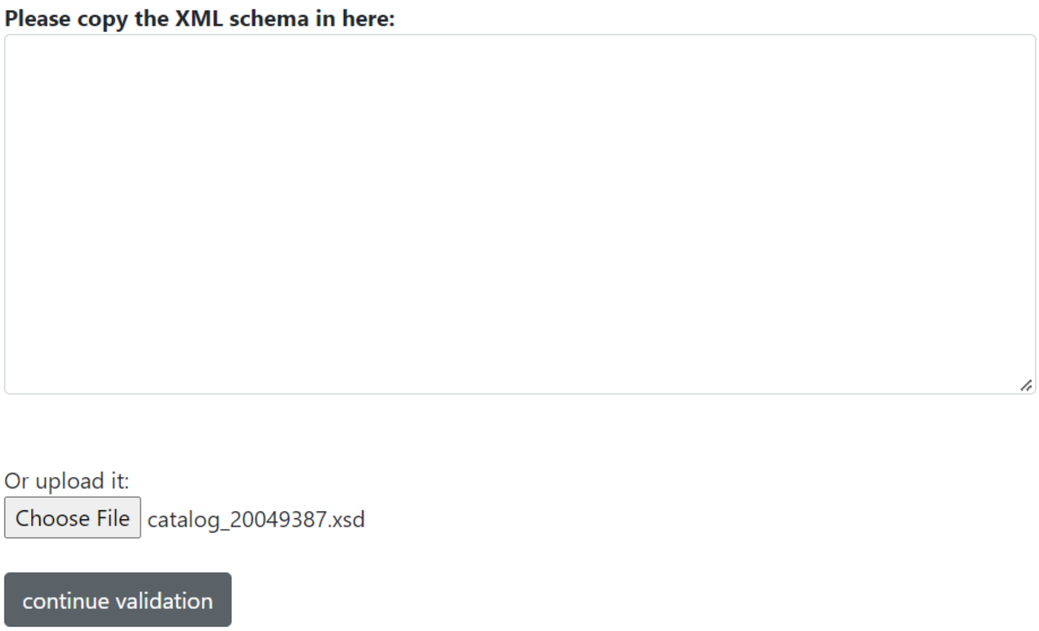
Or upload it:

Choose File catalog_20049387.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 1: choosing xml file

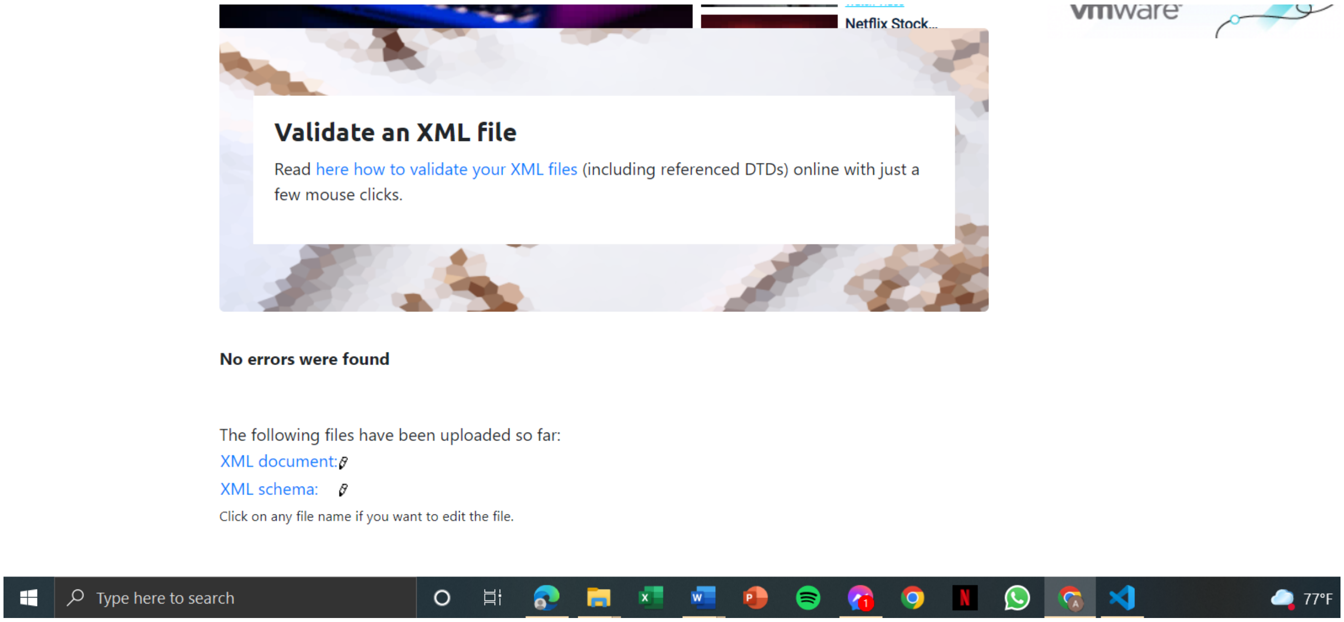


Please copy the XML schema in here:

Or upload it:

Choose File catalog_20049387.xsd

Figure 2:choosing the external schema



Validate an XML file

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

No errors were found

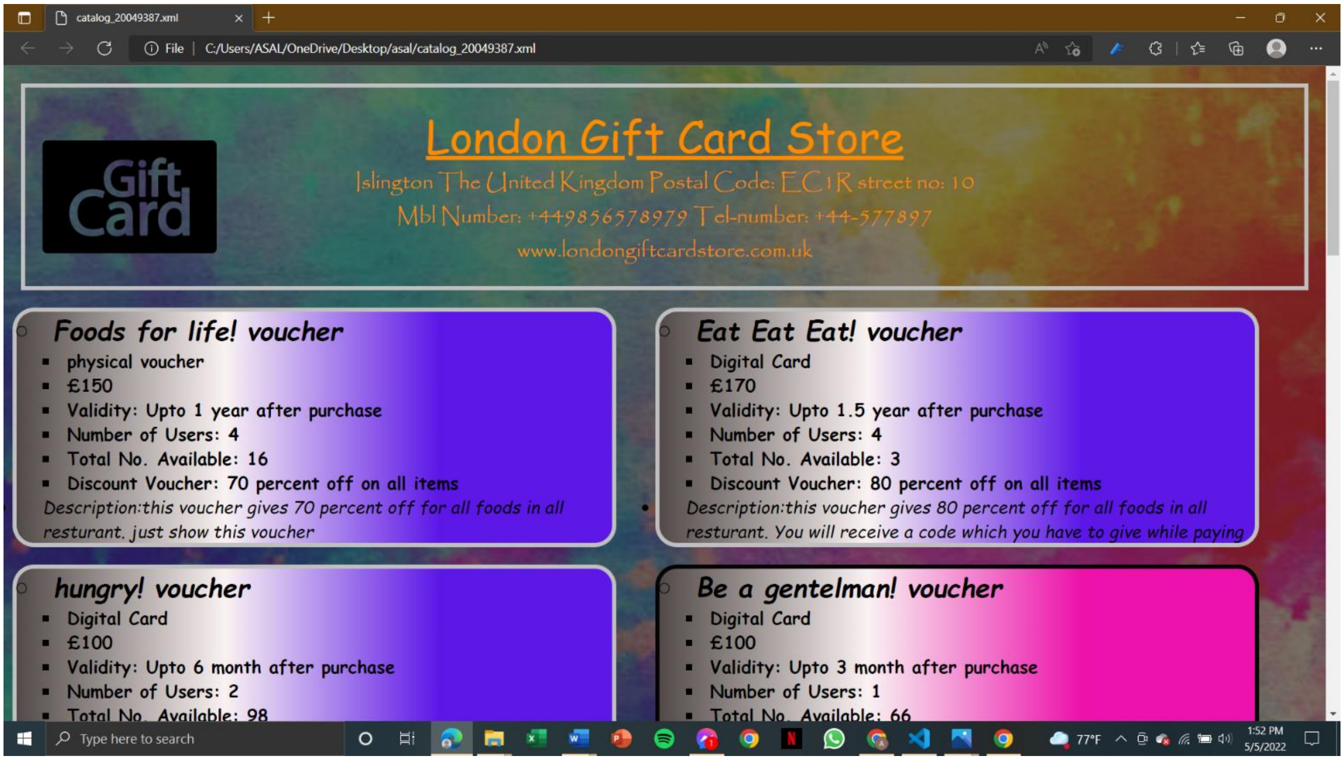
The following files have been uploaded so far:
XML document:
XML schema:
Click on any file name if you want to edit the file.

Figure 3: successful validation of xml against schema

Test 2

Table 2: test 2

Objective	Implementation of CSS
Action	XML file was opened in the web browser.
Expected Results	The XML document must appear in styled form with CSS, with different images, styles, fonts etc
Actual results	The document appears in the styled form
conclusion	Test was successful



London Gift Card Store

Islington The United Kingdom Postal Code: EC1R street no: 10
Mbl Number: +449856578979 Tel-number: +44-577897
www.londongiftcardstore.com.uk

Foods for life! voucher

- physical voucher
- £150
- Validity: Upto 1 year after purchase
- Number of Users: 4
- Total No. Available: 16
- Discount Voucher: 70 percent off on all items

Description:this voucher gives 70 percent off for all foods in all resturant. just show this voucher

Eat Eat Eat! voucher

- Digital Card
- £170
- Validity: Upto 1.5 year after purchase
- Number of Users: 4
- Total No. Available: 3
- Discount Voucher: 80 percent off on all items

Description:this voucher gives 80 percent off for all foods in all resturant. You will receive a code which you have to give while paying

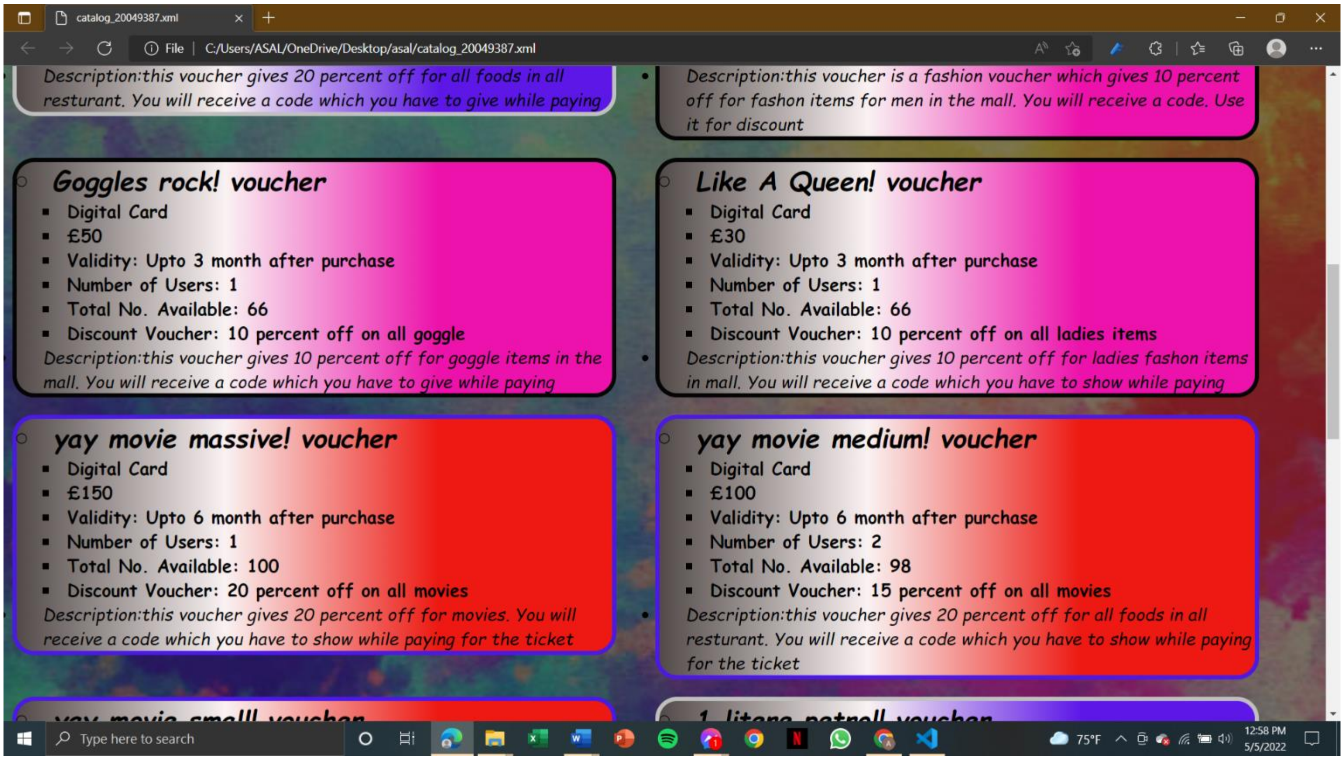
hungry! voucher

- Digital Card
- £100
- Validity: Upto 6 month after purchase
- Number of Users: 2
- Total No. Available: 98

Be a gentelman! voucher

- Digital Card
- £100
- Validity: Upto 3 month after purchase
- Number of Users: 1
- Total No. Available: 66

Figure 4: looks after rendering with CSS


catalog_20049387.xml
File | C:/Users/ASAL/OneDrive/Desktop/asal/catalog_20049387.xml
Type here to search
75°F
12:58 PM
5/5/2022

Description:this voucher gives 20 percent off for all foods in all resturant. You will receive a code which you have to give while paying

Description:this voucher is a fashion voucher which gives 10 percent off for fashon items for men in the mall. You will receive a code. Use it for discount

Goggles rock! voucher

- Digital Card
- £50
- Validity: Upto 3 month after purchase
- Number of Users: 1
- Total No. Available: 66
- Discount Voucher: 10 percent off on all goggle

Description:this voucher gives 10 percent off for goggle items in the mall. You will receive a code which you have to give while paying

Like A Queen! voucher

- Digital Card
- £30
- Validity: Upto 3 month after purchase
- Number of Users: 1
- Total No. Available: 66
- Discount Voucher: 10 percent off on all ladies items

Description:this voucher gives 10 percent off for ladies fashon items in mall. You will receive a code which you have to show while paying

yay movie massive! voucher

- Digital Card
- £150
- Validity: Upto 6 month after purchase
- Number of Users: 1
- Total No. Available: 100
- Discount Voucher: 20 percent off on all movies

Description:this voucher gives 20 percent off for movies. You will receive a code which you have to show while paying for the ticket

yay movie medium! voucher

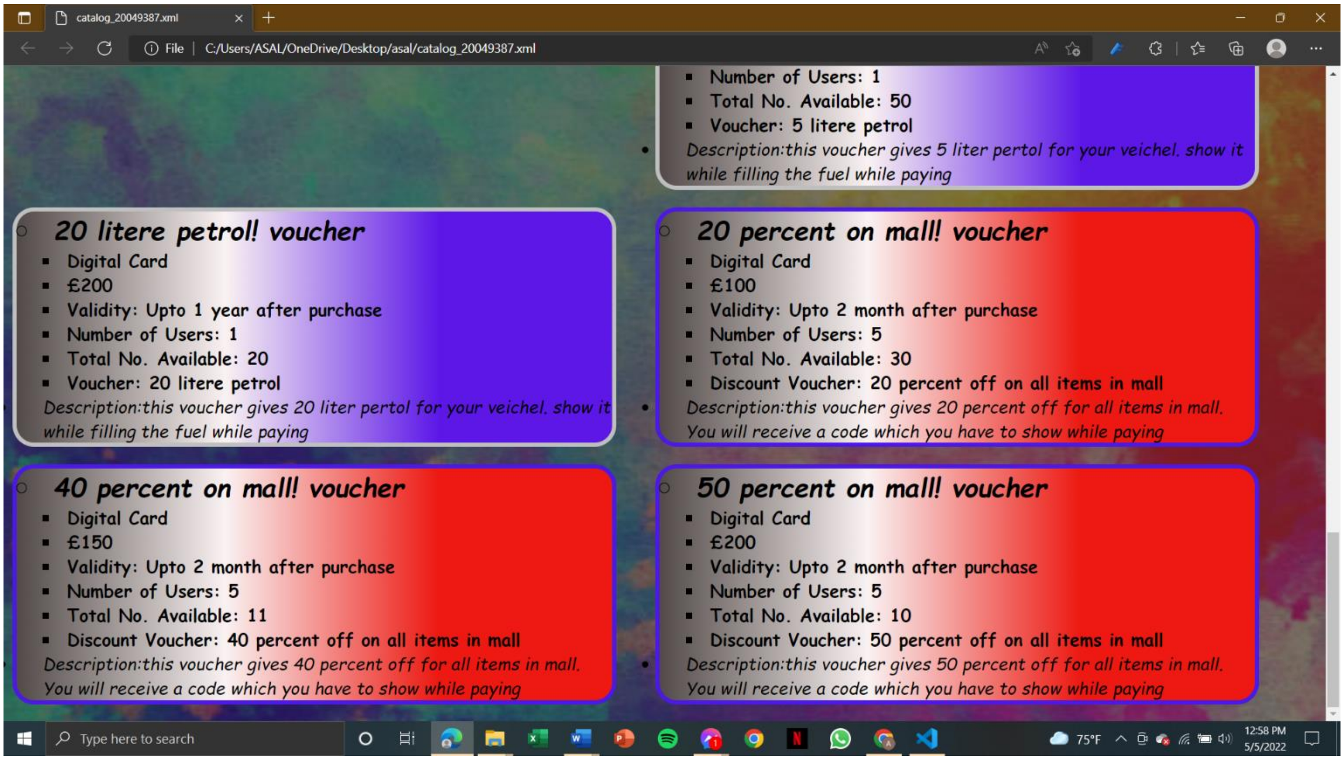
- Digital Card
- £100
- Validity: Upto 6 month after purchase
- Number of Users: 2
- Total No. Available: 98
- Discount Voucher: 15 percent off on all movies

Description:this voucher gives 20 percent off for all foods in all resturant. You will receive a code which you have to show while paying for the ticket

yay movie smalll voucher

1 litere petroll voucher

Figure 5:looks after rendering with CSS


catalog_20049387.xml
File | C:/Users/ASAL/OneDrive/Desktop/asal/catalog_20049387.xml
Type here to search
75°F
12:58 PM
5/5/2022

- Number of Users: 1
- Total No. Available: 50
- Voucher: 5 litere petrol

Description:this voucher gives 5 liter pertol for your veichel. show it while filling the fuel while paying

20 litere petrol! voucher

- Digital Card
- £200
- Validity: Upto 1 year after purchase
- Number of Users: 1
- Total No. Available: 20
- Voucher: 20 litere petrol

Description:this voucher gives 20 liter pertol for your veichel. show it while filling the fuel while paying

20 percent on mall! voucher

- Digital Card
- £100
- Validity: Upto 2 month after purchase
- Number of Users: 5
- Total No. Available: 30
- Discount Voucher: 20 percent off on all items in mall

Description:this voucher gives 20 percent off for all items in mall. You will receive a code which you have to show while paying

40 percent on mall! voucher

- Digital Card
- £150
- Validity: Upto 2 month after purchase
- Number of Users: 5
- Total No. Available: 11
- Discount Voucher: 40 percent off on all items in mall

Description:this voucher gives 40 percent off for all items in mall. You will receive a code which you have to show while paying

50 percent on mall! voucher

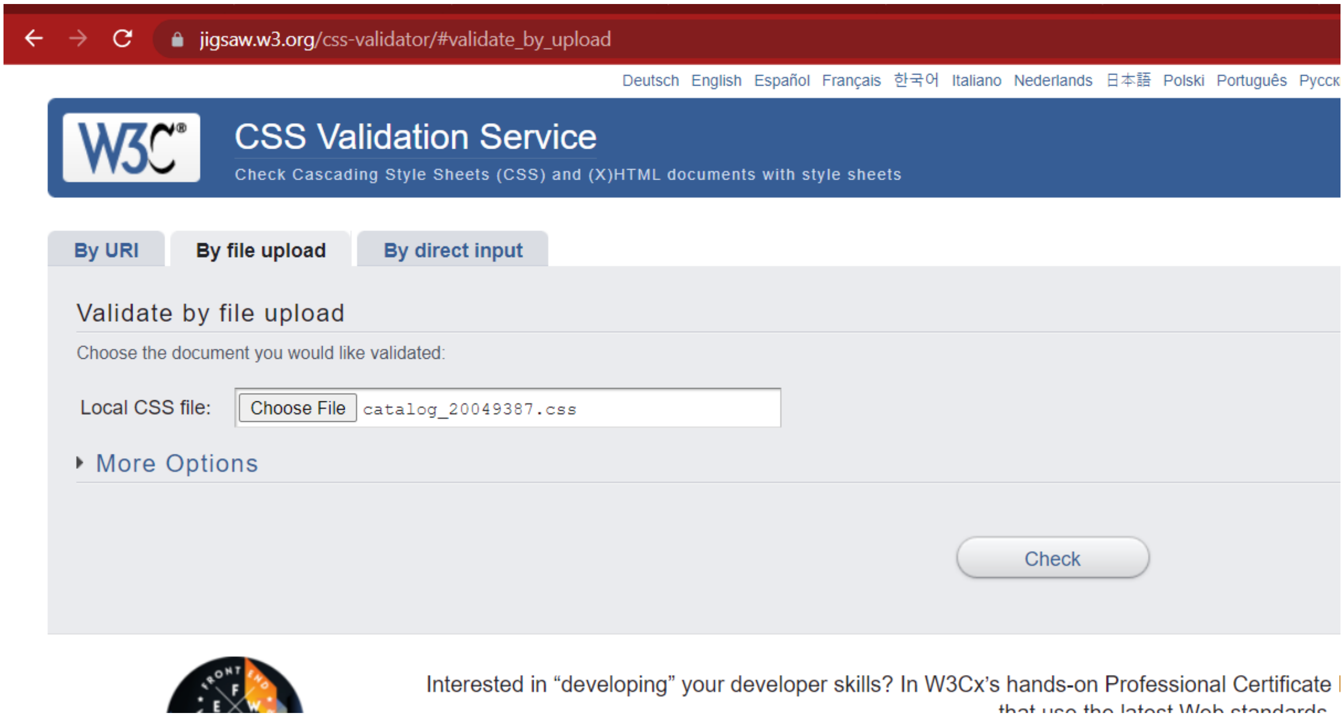
- Digital Card
- £200
- Validity: Upto 2 month after purchase
- Number of Users: 5
- Total No. Available: 10
- Discount Voucher: 50 percent off on all items in mall

Description:this voucher gives 50 percent off for all items in mall. You will receive a code which you have to show while paying

Figure 6: looks after rendering with CSS

Test 3

Objective	Validation of XML using CSS
Action	CSS file was uploaded and validated
Expected Results	There should not be any error in the XML file.
Actual results	One error was found and solved instantly
conclusion	Test was successful



jigsaw.w3.org/css-validator/#validate_by_upload

Deutsch English Español Français 한국어 Italiano Nederlands 日本語 Polski Português Pycck

CSS Validation Service

Check Cascading Style Sheets (CSS) and (X)HTML documents with style sheets

By URI
By file upload
By direct input

Validate by file upload

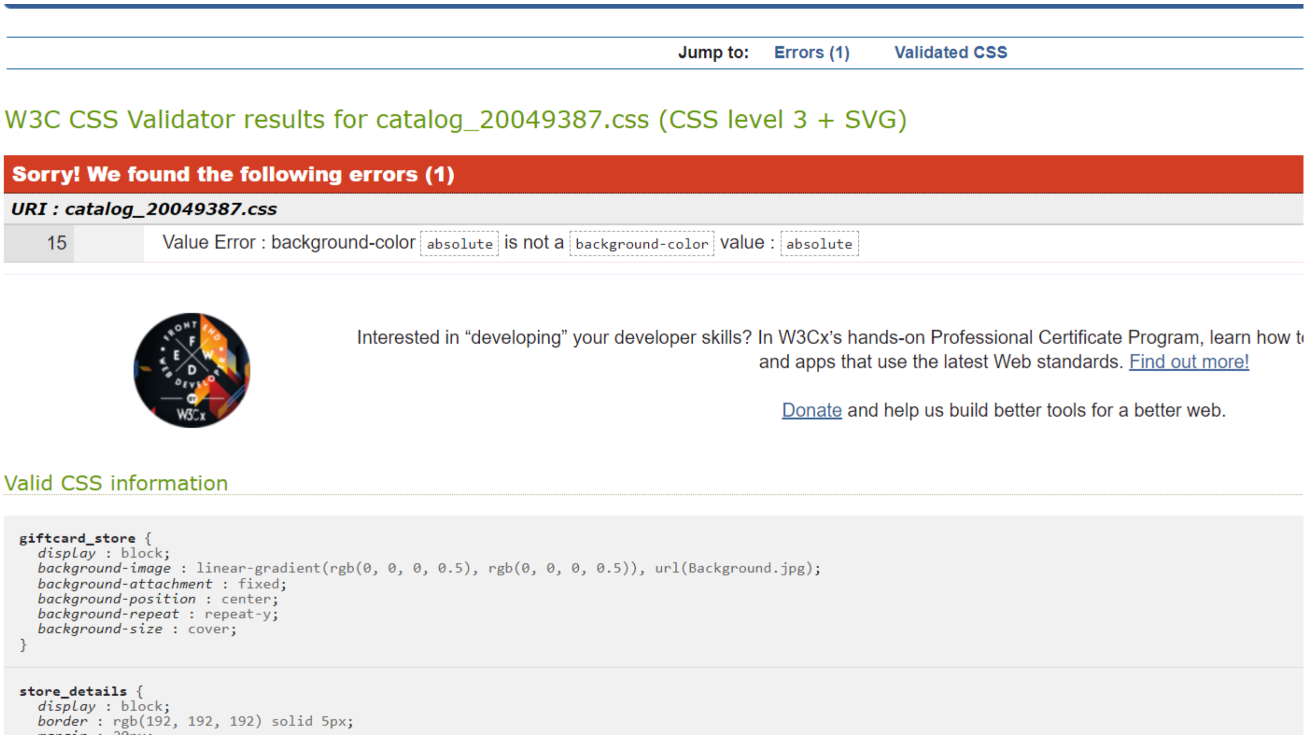
Choose the document you would like validated:

Local CSS file: Choose File catalog_20049387.css

Interested in “developing” your developer skills? In W3Cx's hands-on Professional Certificate

that use the latest Web standards

Figure 7: uploading css for validation



Jump to: Errors (1) Validated CSS

W3C CSS Validator results for catalog_20049387.css (CSS level 3 + SVG)

Sorry! We found the following errors (1)

URI : catalog_20049387.css

15 Value Error : background-color `absolute` is not a `background-color` value : `absolute`

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Valid CSS information

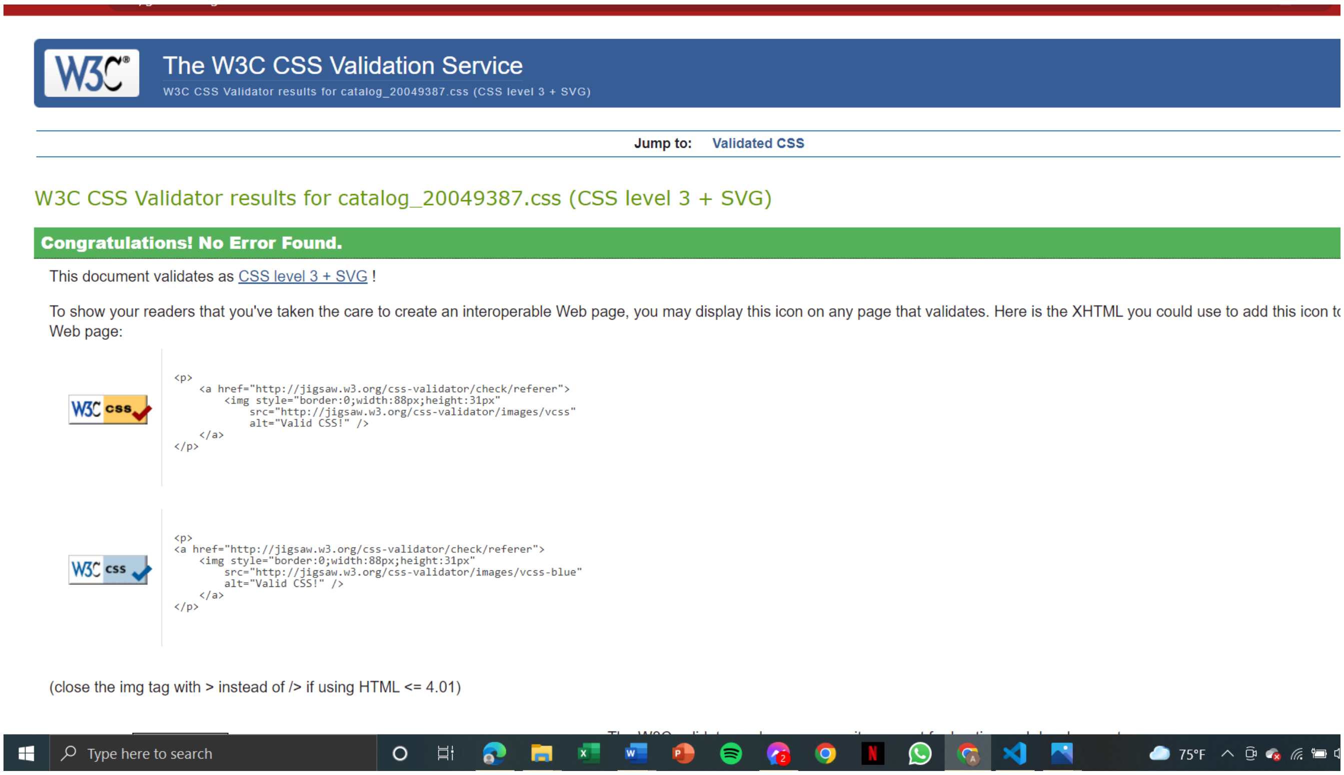
```
giftcard_store {
   display : block;
   background-image : linear-gradient(rgb(0, 0, 0, 0.5), rgb(0, 0, 0, 0.5)), url(Background.jpg);
   background-attachment : fixed;
   background-position : center;
   background-repeat : repeat-y;
   background-size : cover;
}

store_details {
   display : block;
   border : rgb(192, 192, 192) solid 5px;
```

Figure 8: error found while doing CSS validation

One error was found while validating CSS, which said that background colour could not be absolute

Action: background colour was set to transparent and the error was solved



The W3C CSS Validation Service

W3C CSS Validator results for catalog_20049387.css (CSS level 3 + SVG)

W3C CSS Validator results for catalog_20049387.css (CSS level 3 + SVG)

Congratulations! No Error Found.

This document validates as CSS level 3 + SVG !

To show your readers that you've taken the care to create an interoperable Web page, you may display this icon on any page that validates. Here is the XHTML you could use to add this icon t
Web page:

```
<p>
    <a href="http://jigsaw.w3.org/css-validator/check/referer">
        <img style="border:0;width:88px;height:31px"
            src="http://jigsaw.w3.org/css-validator/images/vcss"
            alt="Valid CSS!" />
    </a>
</p>
```

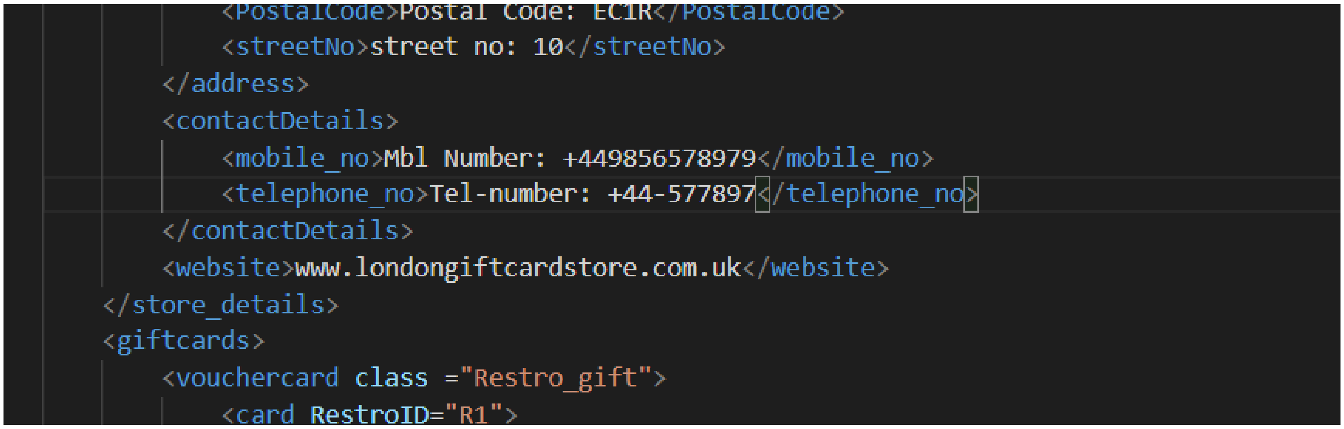
```
<p>
<a href="http://jigsaw.w3.org/css-validator/check/referer">
    <img style="border:0;width:88px;height:31px"
        src="http://jigsaw.w3.org/css-validator/images/vcss-blue"
        alt="Valid CSS!" />
    </a>
</p>
```

(close the img tag with > instead of /> if using HTML <= 4.01)

Figure 9: Error solved sucessfully

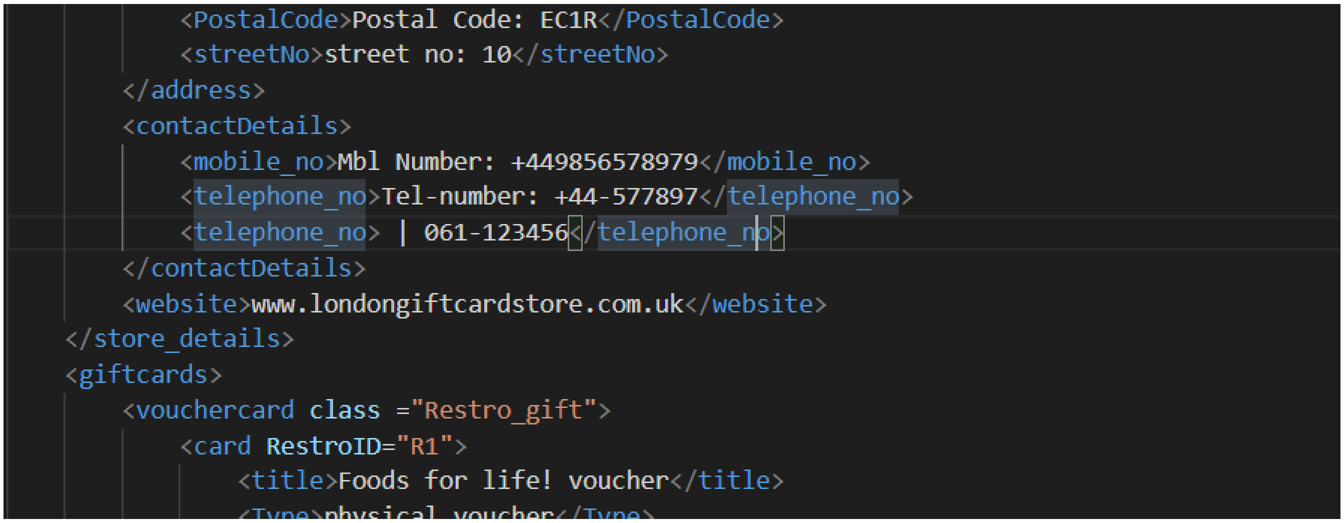
Test 4

Objective	To check the connection between CSS and XML file after adding contact Details two times.
Action	Adding another telephone number on the contact details with the same name of element and XML file is running on the chrome.
Expected Results	The telephone number that was added to the XML file should display on the screen.
Actual results	The telephone number that was added to the XML file was displayed on the screen.
conclusion	Test was successful



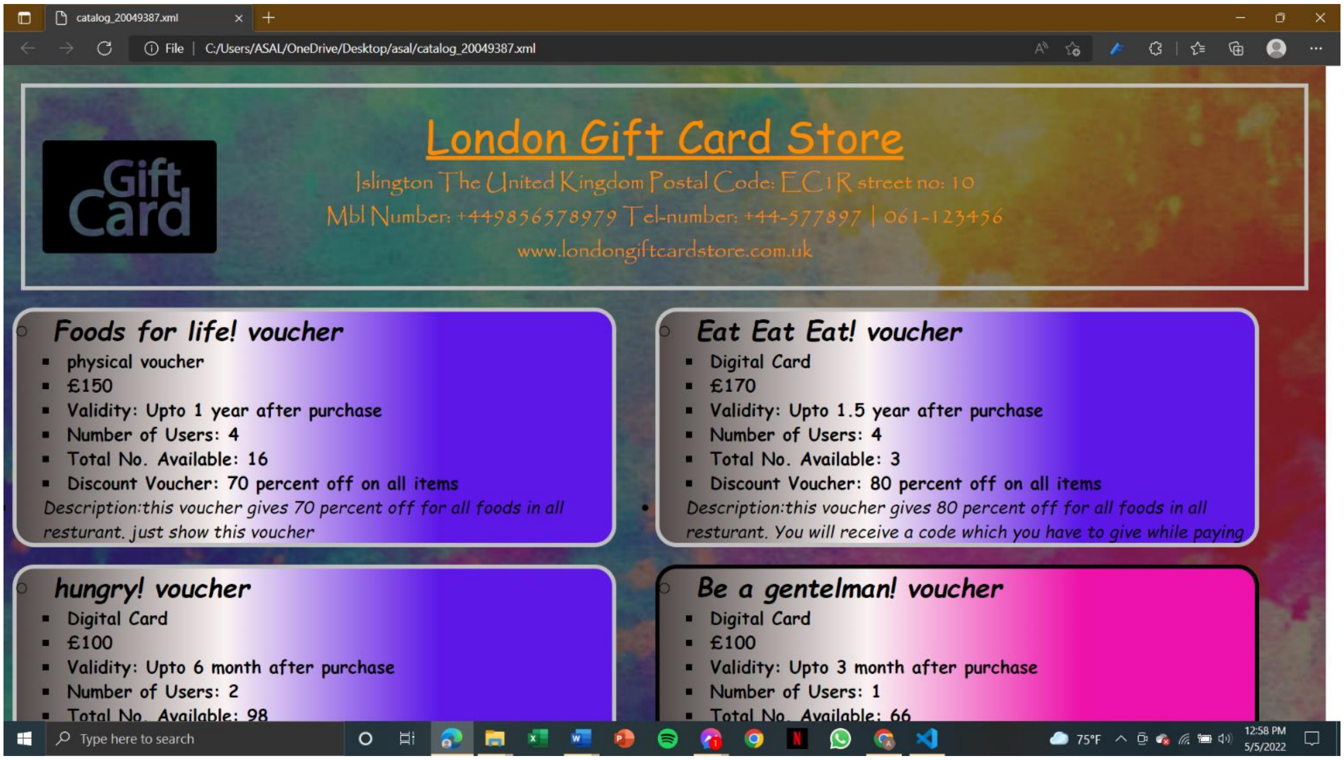
```
            <PostalCode>Postal Code: EC1R</PostalCode>
            <streetNo>street no: 10</streetNo>
        </address>
        <contactDetails>
            <mobile_no>Mbl Number: +449856578979</mobile_no>
            <telephone_no>Tel-number: +44-577897</telephone_no>
        </contactDetails>
        <website>www.londongiftcardstore.com.uk</website>
    </store_details>
    <giftcards>
        <vouchercard class ="Restro_gift">
            <card RestroID="R1">
```

Figure 10:evidence of inserting data



```
            <PostalCode>Postal Code: EC1R</PostalCode>
            <streetNo>street no: 10</streetNo>
        </address>
        <contactDetails>
            <mobile_no>Mbl Number: +449856578979</mobile_no>
            <telephone_no>Tel-number: +44-577897</telephone_no>
            <telephone_no> | 061-123456</telephone_no>
        </contactDetails>
        <website>www.londongiftcardstore.com.uk</website>
    </store_details>
    <giftcards>
        <vouchercard class ="Restro_gift">
            <card RestroID="R1">
                <title>Foods for life! voucher</title>
                <Type>physical voucher</Type>
```

Figure 11: evidence of inserting data



London Gift Card Store
Islington The United Kingdom Postal Code: EC1R street no: 10
Mbl Number: +449856578979 Tel-number: +44-577897 | 061-123456
www.londongiftcardstore.com.uk

Foods for life! voucher
- physical voucher
- £150
- Validity: Upto 1 year after purchase
- Number of Users: 4
- Total No. Available: 16
- Discount Voucher: 70 percent off on all items

Description:this voucher gives 70 percent off for all foods in all resturant. just show this voucher

Eat Eat Eat! voucher
- Digital Card
- £170
- Validity: Upto 1.5 year after purchase
- Number of Users: 4
- Total No. Available: 3
- Discount Voucher: 80 percent off on all items

Description:this voucher gives 80 percent off for all foods in all resturant. You will receive a code which you have to give while paying

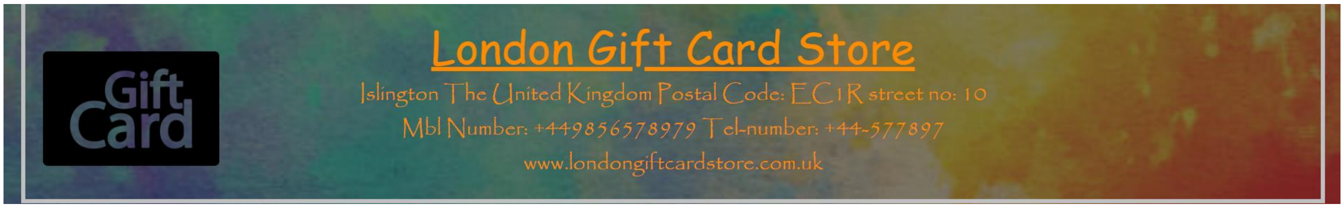
hungry! voucher
- Digital Card
- £100
- Validity: Upto 6 month after purchase
- Number of Users: 2
- Total No. Available: 98

Be a gentelman! voucher
- Digital Card
- £100
- Validity: Upto 3 month after purchase
- Number of Users: 1
- Total No. Available: 66

Figure 12: output after inserting data

Test 5

Objective	Testing the hover feature of the website.
Action	Hovering the mouse over the website
Expected Results	The website will be highlighted
Actual results	The website was highlighted.
conclusion	Test was successful



London Gift Card Store
Islington The United Kingdom Postal Code: EC1R street no: 10
Mbl Number: +449856578979 Tel-number: +44-577897
www.londongiftcardstore.com.uk

Figure 13: not hovering

Gift Card

London Gift Card Store

Islington The United Kingdom Postal Code: EC1R street no: 10

Mbl Number: +449856578979 Tel-number: +44-577897

www.londongiftcardstore.com.uk

Figure 14:hovering over the website

DTD vs XSD

XML Schema and DTD are used for defining the elements, attributes, structure, and occurrence. One of the biggest differences between schema and DTD is schema provides more control in the XML structure compared to DTD. Some of the differences between the XML and Schema are listed below:

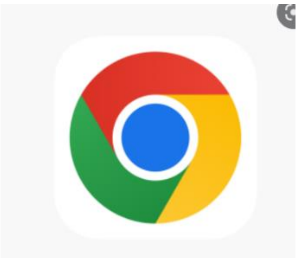
DTD	XSD
1) DTD(Document Type Definition) are the declaration that defines a document type for SGML.	**1)** XSD(XML Schema Definition) describes the elements in a XML document.
2) It is used to describe the root elements and attributes of XML.	**2)** It is used to define the rules for all the attributes and elements in XML.
3) DTD does not support data types and namespaces	**3)** XSD supports namespace and datatypes both
4) DTD gives lesser control over the structure of XML documents.	**4)** XSD gives more control over the structure of XML documents.
5) It does not have secure data communication because the data can be misunderstood by the receiver	5) Data communication is secure because the structure and data definition is very simple and understandable.
6) It is non-extensible	6) It is extensible

Development

In the process of making or modelling a system for the music store, we have made XML with CSS through an XSD file. To complete this project, many kinds of research and advanced knowledge about the concept to create the website for a gift card store by XML. Many discussions were done to complete this coursework and it was very difficult at some points to understand certain topics. A proper design of the website had to be made with a proper navigation system which displayed various gift card products. The project was developed with the help of various tools. And after completion of the project various testing of the program was done. The different sources and tools used during this project are:

Chrome

Chrome is a browser by Google. It was used to do all kinds of research and doubt clearance during this project. It was also used for the validation of XML online.



Msword

Microsoft Word is a word processor published by Microsoft. It is one of the office productivity applications included in the Microsoft Office suite. (Computer Hope, 2020)Documentation is a vital part of this project for its completion .documentation of this project was done using ms word to do it in a clean, clear and efficient manner. It helped in this project to make this documentation properly.

Draw.io

The diagrams are one of the most important things while doing different projects works. for modelling the tree diagram of the XML file, to show all parent and child elements and attributes, and hierarchies too, draw.io was used. It is used to create a simple or complicated diagram. It is also used for the flow chart, er diagram, relational diagram etc. This tool is very handy and is one of the best tools for making diagrams for this project.

Visual studio code

Visual Studio Code is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux. It comes with built-in support for JavaScript, TypeScript and Node.js and has a rich ecosystem of extensions for other languages (such as C++, C#, Java, Python, PHP, Go) and runtimes (such as .NET and Unity). (visual studio code, 2022) This editor is very handy because it offers varieties of extensions including text formatting extensions.

Critical analysis

The purpose of the coursework was to develop an XML file for a gift card store and validate XML against the schema. Also, we were required to use CSS to style and render the data of the XML document ineffective. We had to face some difficulties and many obstacles were tackled while performing the project like any other project. Multiple errors were faced and multiple tryouts were also done. There were many minor errors and even blunders while performing this project. XML and XML validation were completely new topic.
As we had performed and learnt about HTML and CSS in our previous semester. It was a little bit easier to learn about XML this year. The XML validation was challenging for me. Writing an XML schema of the XML file with complex and inheritance was quite difficult. But anyways Following the guidance of tutorials and lecture classes, I was able to clear all the confusion and complete this project in time.

It was very difficult to complete all of the tasks. Multiple errors occurred during the development of the code and style. Continuous analysis and study from tutorials and websites and guidance from our tutor helped us to solve the errors. But overall, it was fun performing this project.

Conclusion

This was the second coursework of the module Emerging Programming Platforms and Technologies.it was all about creating an XML document, validating it against XML schema and rendering it in the browser using CSS. After tons of hard work and research on XML and XML schema and CSS, all of the assigned task in this project was completed. This coursework taught us many new things about using XML, XML schema and CSS properly and provided us with some basic XML knowledge.

As I started doing the coursework, I realized existing knowledge was not enough to do this project and I needed to do more research and study regarding this coursework. I visited many websites, articles, and journals related to the topic of the coursework. Teachers helped me a lot regarding many problems that I faced on different topics. I steadily learned about writing XML documents and XML schema. Many errors and problems occurred while developing the XML documents. I kept in touch with the tutor regarding the errors and problems which were sorted out eventually.

After good research and study, I was able to develop an XML document and XML schema along with CSS to complete the coursework on time. Finally, the coursework was concluded successfully with the creation of an XML document, Schema and CSS. I was able to overcome the problems due to the help I received from my module leader and friends. And I learned many new things including variations between Schema and DTD. For example, I learned the many structural techniques for building schema from Russian dolls, venation blind, and others. This coursework has probably developed my skills to some extent and hope I will get some chance to use these skills in real-time soon.

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