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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 mark of zero will be awarded.

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1. Introduction

The second coursework of the module Emerging Programming Platforms and Technologies was assigned to us to create an XML document for a framework for a gift card store. We had to create a tree diagram of the store and an XML document based on the tree diagram on the scenario. We are given various subtleties of the store which incorporated store name, address, telephone number, website, address, and logo(image), and the subtleties of the gift card which have the properties like type, cost, validity, and the number of users and so on. We are expected to prepare data in XML and make a schema file according to the XML file. In like manner, we need to validate the XML document against our schema document using an online validation such as XML validation. To deliver the information of XML on the browser we need to utilize CSS (Cascading Style Sheets) to appropriately outwardly address the information.

XML stands for Extensible Markup Language. It is a text-based markup language derived from Standard Generalized Markup Language (SGML). XML tags identify the data and are used to store and organize the data, rather than specifying how to display it like HTML tags, which are used to display the data. XML is not going to replace HTML in the near future, but it introduces new possibilities by adopting many successful features of HTML (Tutorialspoint, 2022). The design goals of XML focus on simplicity, generality, and usability across the Internet. It is a textual data format with strong via Unicode for different human languages. Although the design of XML focuses on documents, the language is widely used for the representation of arbitrary data structures such as those used in web services (GeeksforGeeks, 2020).

CSS is the abbreviation for “Cascading Style Sheet” which is used to format the layout of web pages. They can be used to characterize text styles, table sizes, and other aspects of web pages that beforehand could only be defined in a page’s HTML. CSS assists web developers with making a uniform look across a few pages of a website commonly used styles need to be defined exclusively in a CSS document. When a style is defined in cascading style sheet, it can be utilized by any page that references the CSS file, and CSS makes it easy to change style across

several pages at once. While CSS is incredible for creating text styles, it is useful for formatting other aspects of web page layout too (TechTerms, 2022)

XML Schema is commonly known as XML Schema Definition (XSD) which is used to describe and validate the structure and the content of XML data. An XML schema defines the elements, attributes, and data types. Moreover, the Schema element supports namespace and is extensible in nature. It is similar to a database schema that describes the data in a database. The basic idea behind XML Schemas is that they describe the legitimate format that an XML document can take (tutorialspoint, 2022)

2. XML Document

2.1. List of Data

2.1.1. List of Elements

List of Elements	Element Type	Element Data	Occurrence
welcome_Everyday	simpleType	String	Only once
store_info	complexType	Child Elements	Zero or More
Store_Logo	emptyType	Empty Element	Once
Store_name	simpleType	string	Only once
Store_manager	complexType	string	Only once
item	complexType	string	Repeated seven times
opening	simpleType	string	Only once
closing	simpleType	string	Only once
street	simpleType	string	Only once
city	simpleType	string	Only once
state	simpleType	string	Only once
zip	simpleType	short	Only once
telephone_number	simpleType	Long	One or more times
phone	simpleType	Long	Zero or more times
website	simpleType	string	Once

email	simpleType	String	Once
gift_cards	complexType	Parent Element	Once or more
gift_card_name	simpleType	string	Only once
type	simpleType	string	Only once
Initial_card_value	simpleType	string	Only once
rating	simpleType	string	Only once
price	simpleType	byte	Only once
issue_date	simpleType	date	Only once
expire_date	simpleType	date	Only once
Number_of_users	simpleType	Long	Only once
discount_voucher	simpleType	int	Only once
title	simpleType	string	Once
message	complexType	messageType	Repeated four times
copyright	simpleType	string	Once
text	simpleType	string	Once

2.1.2. List of Attributes

List of Attributes	Data Type	Default	Fixed	Use
id	id	-	-	Required
title	string	-	-	Prohibited
price	string	-	-	Required
Item_number	byte	-	-	Optional
card_type	string	-	-	Optional
Unique_code	NMTOKEN	-	-	Required
Message_number	byte	-	-	Required

2.2. Tree Diagram

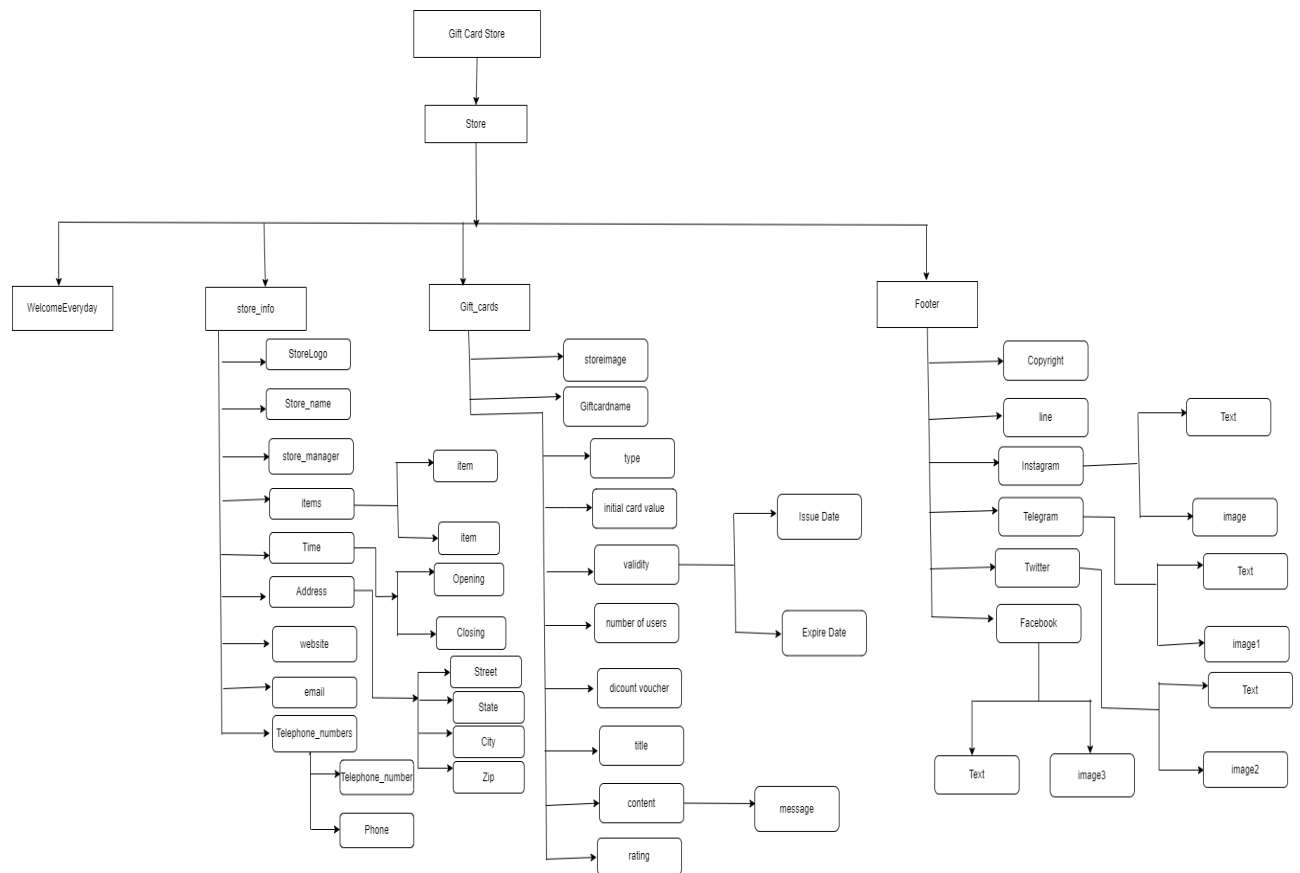


Figure 1. Tree Diagram

2.3. XML Code

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<?xml-stylesheet href="catalog_20048968.css"?>
<!--
    Gift card store
    Name: Punam Thapa Magar
    LondonmetID: 20048968
    CollegeID: np01cp4s210273
    Date: 30-03-2022
-->
<cw2:Giftcardstore xmlns:xs="http://www.w3.org/2001/XMLSchema-instance"
xmlns:cw2="http://www.cw2.com/catalog_20048968"
xs:schemaLocation="http://www.cw2.com/catalog_20048968 catalog_20048968.xsd">
    <cw2:store id="X-90100">
        <cw2:welcome_Everyday>Welcome!!Every Day You Get Our
Best</cw2:welcome_Everyday>
        <cw2:store_info>
            <cw2:store_Logo />
            <cw2:store_name>Kylie Store</cw2:store_name>
            <cw2:store_manager title="Mrs">Kylie Jenner</cw2:store_manager>
            <cw2:items>
                <cw2:item price="$47" item_number="001">Kylie
Cosmetics</cw2:item>
                <cw2:item price="$26" item_number="002">Kylie Baby</cw2:item>
                <cw2:item price="$15" item_number="003">Fenty
Beauty</cw2:item>
                <cw2:item price="$26" item_number="004">Kylie Skin</cw2:item>
                <cw2:item price="$40" item_number="005">Kylie Swim</cw2:item>
                <cw2:item price="$20" item_number="006">Any time
buys</cw2:item>
                <cw2:item price="$30" item_number="007">Clothing
Store</cw2:item>
            </cw2:items>
            <cw2:time>
                <cw2:opening>7:00AM</cw2:opening>
                <cw2:closing>9:00PM</cw2:closing>
            </cw2:time>
            <cw2:address>
                <street>400 Main St.</street>
                <city>Davidton</city>
                <state>MO</state>
                <zip>29102</zip>
            </cw2:address>
            <cw2:telephone_numbers>
                <cw2:telephone_number>555-91028</cw2:telephone_number>
                <cw2:phone>0192837</cw2:phone>
            </cw2:telephone_numbers>
        </cw2:store>
    </cw2:Giftcardstore>
</xml>
```



```
<cw2:website>www.kyliejenner.com</cw2:website>
<cw2:email>kyliejenner09@gmail.com</cw2:email>
</cw2:store_info>

<cw2:gift_cards>
  <cw2:gift_card id="P009" card_type="physical" unique_code="0090">
    <cw2:store_image />
    <cw2:gift_card_name>Kylie Cosmetics Gift
Card</cw2:gift_card_name>
    <cw2:type>Debit</cw2:type>
    <cw2:initial_card_value>50</cw2:initial_card_value>
    <rating>☆☆☆☆</rating>
    <price>50</price>
    <cw2:validity>
      <issue_date>02-05-2022</issue_date>
      <expire_date>02-05-2024</expire_date>
    </cw2:validity>
    <cw2:number_of_users>10000</cw2:number_of_users>
    <cw2:discount_voucher>15</cw2:discount_voucher>
    <cw2:title>Terms and Conditions</cw2:title>
    <cw2:content>
      <cw2:message message_number="1">By accessing this website
and/or placing an order, you agree to be bound by the terms and conditions set
out below. </cw2:message>
      <cw2:message message_number="2">If you do not agree to be
bound by these terms and conditions, you may not use or access this
website.</cw2:message>
      <cw2:message message_number="3">Your attention is
particularly drawn to Section 11 (Price and Payment), Section 14 (Limitation
of Liability), and Section 16 (Indemnification).</cw2:message>
      <cw2:message message_number="4">The provision of these
Terms and Conditions apply to the extent permitted under applicable
law.</cw2:message>
    </cw2:content>
  </cw2:gift_card>

  <cw2:gift_card id="920RT" card_type="physical" unique_code="90:90-
80">
    <cw2:B_store_image />
    <cw2:gift_card_name>Kylie Baby Gift Card</cw2:gift_card_name>
    <cw2:type>Debit</cw2:type>
    <cw2:initial_card_value>10</cw2:initial_card_value>
    <cw2:validity>
      <issue_date>02-08-2022</issue_date>
      <expire_date>02-08-2025</expire_date>
    </cw2:validity>
    <cw2:number_of_users>10000</cw2:number_of_users>
    <cw2:discount_voucher>25</cw2:discount_voucher>
```

```
<rating>☆☆☆☆</rating>
<cw2:title>Terms and Conditions</cw2:title>
<cw2:content>
    <cw2:message message_number="1"> All the orders are
subjected to acceptance and availability, which may vary depending on the
shipping destination.</cw2:message>
    <cw2:message message_number="2">When you buy products
online, you have cancellation rights.</cw2:message>
    <cw2:message message_number="3">You may only user one
disciunt code with each order. </cw2:message>
    <cw2:message message_number="4">We accept payment with
Afterpay, Visa, Mastercard, American Express, Paypal and Shop
Pay</cw2:message>
</cw2:content>
</cw2:gift_card>

<cw2:gift_card id="9318U" card_type="physical" unique_code="80:50-
50">
    <cw2:F_store_image />
    <cw2:gift_card_name>Fenty Beauty By
Rihanna</cw2:gift_card_name>
    <cw2:type>Debit</cw2:type>
    <cw2:initial_card_value>20</cw2:initial_card_value>
    <cw2:validity>
        <issue_date>08-08-2022</issue_date>
        <expire_date>08-08-2026</expire_date>
    </cw2:validity>
    <cw2:discount_voucher>25</cw2:discount_voucher>
    <cw2:title>Terms and Conditions</cw2:title>
    <cw2:content>
        <cw2:message message_number="1">You may browse the site
without registering for an account.</cw2:message>
        <cw2:message message_number="2">You will be required to
register for an account to use certain features of the sites, such as
subscribing to newsletter.</cw2:message>
        <cw2:message message_number="3">You may only user one
discount code with each order. </cw2:message>
        <cw2:message message_number="4">We accept payment with
Afterpay, Visa, Mastercard, American Express, Paypal and Shop
Pay</cw2:message>
    </cw2:content>
</cw2:gift_card>

<cw2:gift_card id="P01" card_type="physical" unique_code="20:20-
58">
    <cw2:S_store_image />
    <cw2:gift_card_name>kylie Skin</cw2:gift_card_name>
    <cw2:type>Debit</cw2:type>
```

```
<cw2:initial_card_value>10</cw2:initial_card_value>
<cw2:validity>
  <issue_date>03-04-2022</issue_date>
  <expire_date>03-04-2025</expire_date>
</cw2:validity>
<cw2:number_of_users>10000</cw2:number_of_users>
<cw2:discount_voucher>30</cw2:discount_voucher>
<cw2:title>Terms and Conditions</cw2:title>
<cw2:content>
  <cw2:message message_number="1"> No need to carry cash and
feel free to buy anything you want without the fear of theft or
loss.</cw2:message>
</cw2:content>
</cw2:gift_card>

<cw2:gift_card id="0192P" card_type="physical" unique_code="10:30-
40">

  <cw2:H_store_image />
  <cw2:gift_card_name>Kylie Swim</cw2:gift_card_name>
  <cw2:type>Debit</cw2:type>
  <cw2:initial_card_value>15</cw2:initial_card_value>
  <cw2:validity>
    <issue_date>09-12-2022</issue_date>
    <expire_date>09-12-2025</expire_date>
  </cw2:validity>
  <cw2:number_of_users>100000</cw2:number_of_users>
  <rating>☆☆☆☆</rating>
  <cw2:title>Terms and Conditions</cw2:title>
  <cw2:content>
    <cw2:message message_number="1">You may browse the site
without registering for an account.</cw2:message>
    <cw2:message message_number="2">You will be required to
register for an account to use certain features of the sites, such as
subscribing to newsletter.</cw2:message>
    <cw2:message message_number="3">You may only user one
discount code with each order. </cw2:message>
    <cw2:message message_number="4">We accept payment with
Afterpay, Visa, Mastercard, American Express, Paypal and Shop
Pay</cw2:message>
  </cw2:content>
</cw2:gift_card>

<cw2:gift_card id="P03" card_type="physical" unique_code="60:40-
70">

  <cw2:A_store_image />
  <cw2:gift_card_name>Any Time Buys Gift
Card</cw2:gift_card_name>
  <cw2:type>Credit</cw2:type>
```

```
<cw2:initial_card_value>20</cw2:initial_card_value>
<cw2:validity>
  <issue_date>29-04-2022</issue_date>
  <expire_date>29-04-2026</expire_date>
</cw2:validity>
<cw2:number_of_users>10000</cw2:number_of_users>
<cw2:discount_voucher>30</cw2:discount_voucher>
<cw2:title>Terms and Conditions</cw2:title>
<cw2:content>
  <cw2:message message_number="1">We will make all efforts
to ensure pricing is correct,but we will not be obliged to sell products
displaying incorrect prices.</cw2:message>
  <cw2:message message_number="2">Once a deposit is paid
you have accepted the order and payment terms/commitments.</cw2:message>
</cw2:content>
</cw2:gift_card>

<cw2:gift_card id="P05" card_type="digital" unique_code="12:80-
54">
  <cw2:L_store_image />
  <cw2:gift_card_name>B Line Clothing
Giftcard</cw2:gift_card_name>
  <cw2:type>Debit</cw2:type>
  <cw2:initial_card_value>50</cw2:initial_card_value>
  <cw2:validity>
    <issue_date>04-12-2022</issue_date>
    <expire_date>04-12-2026</expire_date>
  </cw2:validity>
  <cw2:number_of_users>150000</cw2:number_of_users>
  <cw2:discount_voucher>10</cw2:discount_voucher>
  <cw2:title>Terms and Conditions</cw2:title>
  <cw2:content>
    <cw2:message message_number="1">1.These are the terms and
conditions(which included our copyright notice) on wcih we do business for
goods ordered through this website. </cw2:message>
    <cw2:message message_number="2">2.We reserve the right to
vary these terms and conditions at any time but, in respect of any ordered
goods, the terms and conditions which apply shall be those which you accepted
when you places your order. Otherwise, no alteration of these terms and
conditions shall apply unless agreed in writing between us and you.
</cw2:message>
    <cw2:message message_number="3">3.Every effort will be
made to ensure that prices shown in our website are accurate at the time you
place your order.</cw2:message>
  </cw2:content>
</cw2:gift_card>
```

```
<cw2:gift_card id="01929" card_type="digital"
unique_code="70:60:50">
  <cw2:Q_store_image />
  <cw2:gift_card_name>BC Liquor Store Gift
Card</cw2:gift_card_name>
  <cw2:type>Debit</cw2:type>
  <cw2:initial_card_value>75</cw2:initial_card_value>
  <cw2:validity>
    <issue_date>03-05-2022</issue_date>
    <expire_date>03-05-2025</expire_date>
  </cw2:validity>
  <cw2:number_of_users>30000</cw2:number_of_users>
  <cw2:discount_voucher>25</cw2:discount_voucher>
  <cw2:title>Terms and Conditions</cw2:title>
  <cw2:content>
    <message message_number="1">1. Your age should be over 18
to buy a liquor store gift card.</message>
    <message message_number="2">2. Your access to and use of
the Service is conditioned on your acceptance of and compliance with these
Terms.</message>
    <message message_number="3">3. These Terms apply to all
visitors, users and other others who access or use the Service.</message>
    <message message_number="4">4. By accessing or using the
Service you agree to be bound by these Terms.</message>
    <message message_number="5">5. If you disagree with any
part of the terms then you may not access the Service.</message>
  </cw2:content>
</cw2:gift_card>
</cw2:gift_cards>

<cw2:footer>
  <cw2:copyright>COPYRIGHT RIGHTS RESERVED 2022</cw2:copyright>
  <cw2:line>-----
-----</cw2:line>
  <cw2:Instagram>
    <text>Instagram</text>
    <cw2:image />
  </cw2:Instagram>
  <cw2:Telegram>
    <text>Telegram</text>
    <cw2:image1/>
  </cw2:Telegram>
  <cw2:Twitter>
    <text>Twitter</text>
    <cw2:image2/>
  </cw2:Twitter>
  <cw2:Facebook>
    <text>Facebook</text>
```

```
        <cw2:image3/>
      </cw2:Facebook>
    </cw2:footer>
  </cw2:store>
</cw2:Giftcardstore>
```

3. Schema Document

```
<?xml version="1.0" encoding="UTF-8"?>
<!--schema declaration-->
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:cw="http://www.cw2.com/catalog_20048968"
targetNamespace="http://www.cw2.com/catalog_20048968"
elementFormDefault="qualified" attributeFormDefault="unqualified"
xmlns="http://www.w3.org/2001/XMLSchema">

  <!--ComplexType (compositors) -Element with child element-->
  <xs:element name="Giftcardstore">
    <xs:complexType>
      <!-- Use of compositor -sequence-->
      <xs:sequence>
        <xs:element name="store" minOccurs="0" maxOccurs="1" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>

  <!--sub-child element for reference-->
  <xs:complexType name="store">
    <!-- Use of compositor -sequence-->
    <xs:sequence>
      <xs:element name="welcome_Everyday" type="xs:string" />
      <xs:element name="store_info" />
      <xs:element name="gift_cards" />
      <xs:element name="footer" type="xs:string" />
    </xs:sequence>
  </xs:complexType>

  <!--store-info element-->
  <xs:complexType name="store_info">
    <xs:sequence>
      <xs:element name="store_Logo" />
      <xs:element name="store_name" type="xs:string" />
      <xs:element name="store_manager" type="xs:string" />
      <xs:element name="items" />
    </xs:sequence>
  </xs:complexType>
```

```
<xs:element name="address" />
<xs:element name="telephone_numbers" />
<xs:element name="website" type="xs:string" />
<xs:element name="email" type="xs:string" />
</xs:sequence>
</xs:complexType>

<!--store-manage element-->
<xs:complexType name="store_manager">
  <xs:attribute name="title" type="xs:string" use="prohibited" />
</xs:complexType>

<!--item element-->
<xs:complexType name="items">
  <xs:sequence>
    <xs:element name="item" maxOccurs="unbounded" />
  </xs:sequence>
</xs:complexType>
<!--item attribute-->
<xs:attributeGroup name="item">
  <xs:attribute name="price" type="xs:decimal" use="required" />
  <xs:attribute name="item_number" type="xs:integer" use="optional" />
</xs:attributeGroup>

<!--address element-->
<xs:complexType name="address">
  <!-- Use of compositor -all-->
  <xs:all>
    <xs:element name="street" type="xs:string" minOccurs="0"
maxOccurs="1" />
    <xs:element name="city" type="xs:string" minOccurs="0"
maxOccurs="1" />
    <xs:element name="state" type="xs:string" minOccurs="0"
maxOccurs="1" />
    <xs:element name="zip" type="xs:positiveInteger" minOccurs="0"
maxOccurs="1" />
  </xs:all>
</xs:complexType>

<!--Elements with text only-->
<xs:complexType name="telephone_numbers">
  <xs:all>
    <xs:element name="telephone_number" type="xs:long" minOccurs="0"
maxOccurs="1" />
    <xs:element name="phone" type="xs:long" minOccurs="0"
maxOccurs="1" />
  </xs:all>
</xs:complexType>
```

```
<!--Elements with text only-->
<xs:complexType name="footer">
  <xs:all>
    <xs:element name="text" type="xs:string" minOccurs="0"
maxOccurs="1" />
  </xs:all>
</xs:complexType>

<xs:complexType name="gift_cards">
  <xs:sequence>
    <xs:element name="gift_card"/>
    <!--Empty content type-->
    <xs:element name="store_image" />
    <!--Elements with text only-->
    <xs:element name="gift_card_name" type="xs:string" />
    <!--Elements with text only-->
    <xs:element name="type" type="xs:string" />
    <!--Elements with numbers only-->
    <xs:element name="number_of_users" type="xs:long" />
    <!--Elements with text only-->
    <xs:element name="rating" type="xs:string" />
    <!--Elements with numbers only-->
    <xs:element name="discount_voucher" type="xs:int" />
    <!--Elements with numbers only-->
    <xs:element name="initial_card_value" type="xs:string" />
    <!--Elements with numbers only-->
    <xs:element name="price" type="xs:decimal" />
    <!--Elements with text only-->
    <xs:element name="title" />
    <!--Elements with text only-->
    <xs:element name="content" />
    <!--Elements with text only-->
    <xs:element name="copyright" type="xs:string"/>
    <!--Elements with text only-->
    <xs:element name="Instagram" type="xs:string"/>
    <xs:element name="line"/>
    <!--Elements with text only-->
    <xs:element name="Telegram" type="xs:string"/>
    <!--Elements with text only-->
    <xs:element name="Twitter" type="xs:string"/>
    <!--Elements with text only-->
    <xs:element name="Facebook" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

<!--validity element-->
<xs:complexType name="validity">
```



```
<xs:all>
  <xs:element name="issue_date" type="xs:date" />
  <xs:element name="expire_date" type="xs:date" />
</xs:all>
</xs:complexType>

<!--attribute gift_card-->
<xs:attributeGroup name="gift_card">
  <xs:attribute name="id" type="xs:string" use="required" />
  <xs:attribute name="card_type" use="optional" />
  <!--Required attribute with type NMTOKEN-->
  <xs:attribute name="unique_code" use="required" type="NMTOKEN" />
</xs:attributeGroup>

<!--message element-->
<xs:complexType name="message">
  <!--message attribute-->
  <xs:attribute name="message_number" use="required">
    <xs:simpleType>
      <xs:restriction base="xs:int">
        <!-- Enumeration tag given for the list item with certain
value-->
        <xs:enumeration value="1" />
        <xs:enumeration value="2" />
        <xs:enumeration value="3" />
        <xs:enumeration value="4" />
      </xs:restriction>
    </xs:simpleType>
  </xs:attribute>
</xs:complexType>

</xs:schema>
```

4. Difference between Schema and DTD?

XML is an assortment of norms for producing documents so that they can be perused by computers. It makes no mention of what the documents are for or the way in which they will be utilized. XML has turned into a typical means to send information between computer systems, particularly across networks, since tools to create and read it are accessible in every programming language. Schema and DTD belong to the same markup language.

The main difference between DTDs and XML Schemas is that XML Schemas use an XML-based syntax, whereas DTDs use a special syntax that dates back to SGML DTDs. The converse is true for XML Schema, which is verbose but also uses tags and XML, making the syntax of XML Schema less scary to XML authors. Although DTDs are frequently chastised for requiring users to learn new grammar, the syntax is extremely simple.

(askanydifference, 2022)

The difference between Schema and DTD is:

S.N.	Schema	DTD
1.	XML Schema helps in the generation of XML documents and defines rules of attributes and elements of an XML document.	DTD describes the attributes and structures of an XML document and language.
2.	Schema is used to specify both the structure and content.	DTD specifies defining the structure of XML documents.
3.	The schema supports data types.	DTD does not support data types. Only the text string data type is supported.
4.	XML Schema supports namespace.	DTD does not support namespace.
5.	It gives better structure control of any XML document.	It gives less structure control of any XML document compared to Schema.
6.	XML Schema is extensible in nature	DTD is not extensible in nature.
7.	Schema is easy to develop.	However, DTD is difficult to develop.
8.	XSDs are written in XML.	Whereas DTDs are derived from SGML syntax.

5. Testing

Test 1. XML without CSS

Table 1: Test No.1

Objective	Result
Action	The code was run in the Microsoft edge without linking the CSS file.
Expected Output	The raw XML code should be visible on the webpage.
Actual Output	The program displays the raw XML code on the webpage.

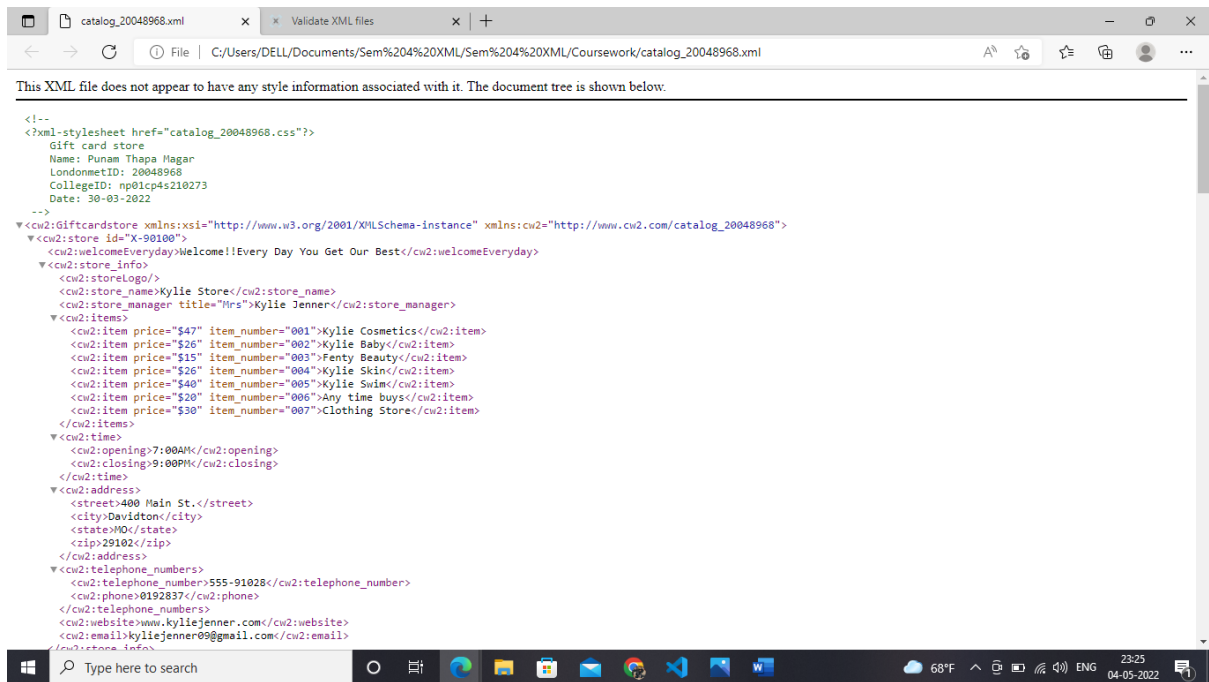


Figure 2:Test No.1

Test 2. XML with CSS

Table 2:Test No.2

Objective	Result
Action	The code was run in the Microsoft edge after linking the CSS file.
Expected Output	A well-proportioned webpage should be displayed.
Actual Output	The well-proportioned webpage was displayed.

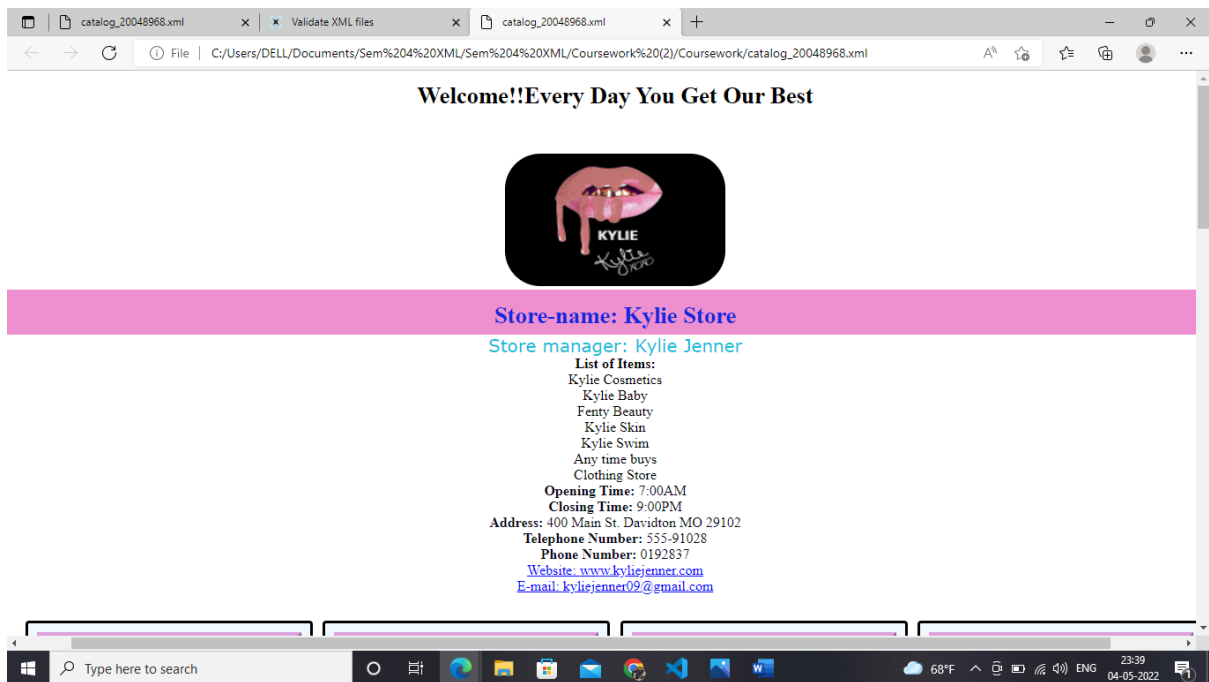


Figure 3. Test No:2

Test 3. Validation of the XML file and the referenced schema file.

Table 3: Test No.3

Objective	Result
Action	Validating the XML file and the referenced schema file.
Expected Output	No error message should arouse during the validation process.
Actual Output	There was no error found during the validation process.

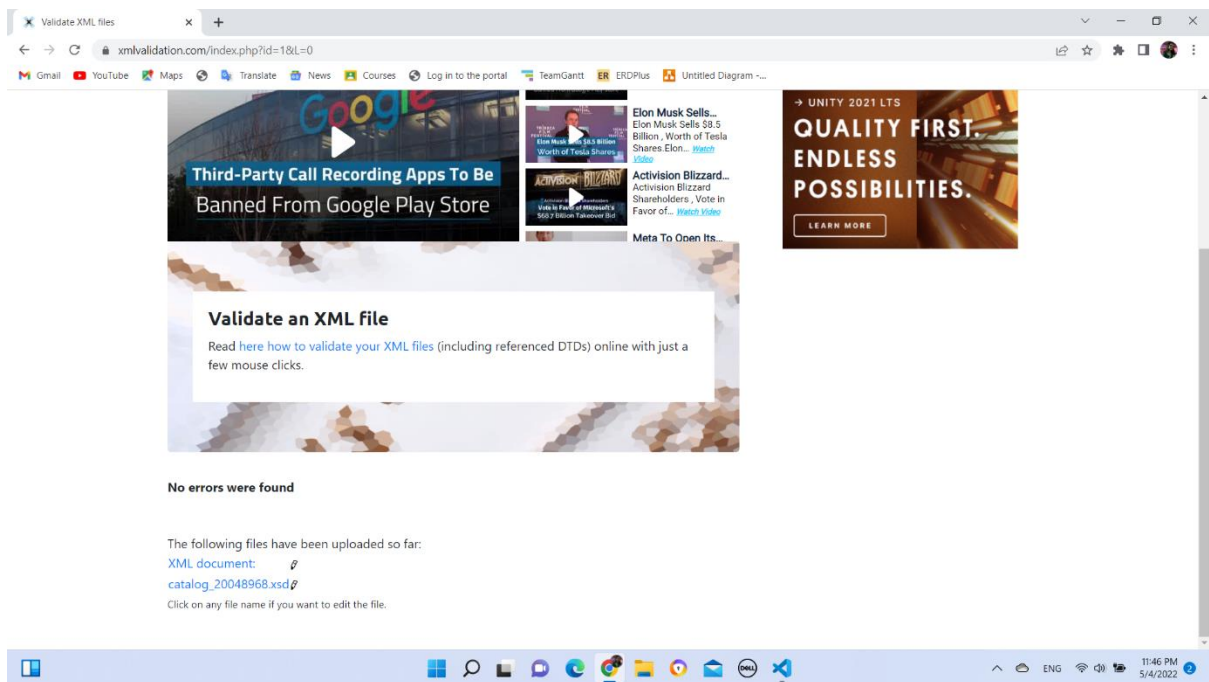


Figure 4: Test No.3

Test 4. Validation of XML file after removing a line of code from the schema.

Table 4:Test No.4

Objective	Result
Action	Validating the XML file after removing a line of code from the schema.
Expected Output	An error occurs while validating.
Actual Output	An error was shown in the XML file while validating.

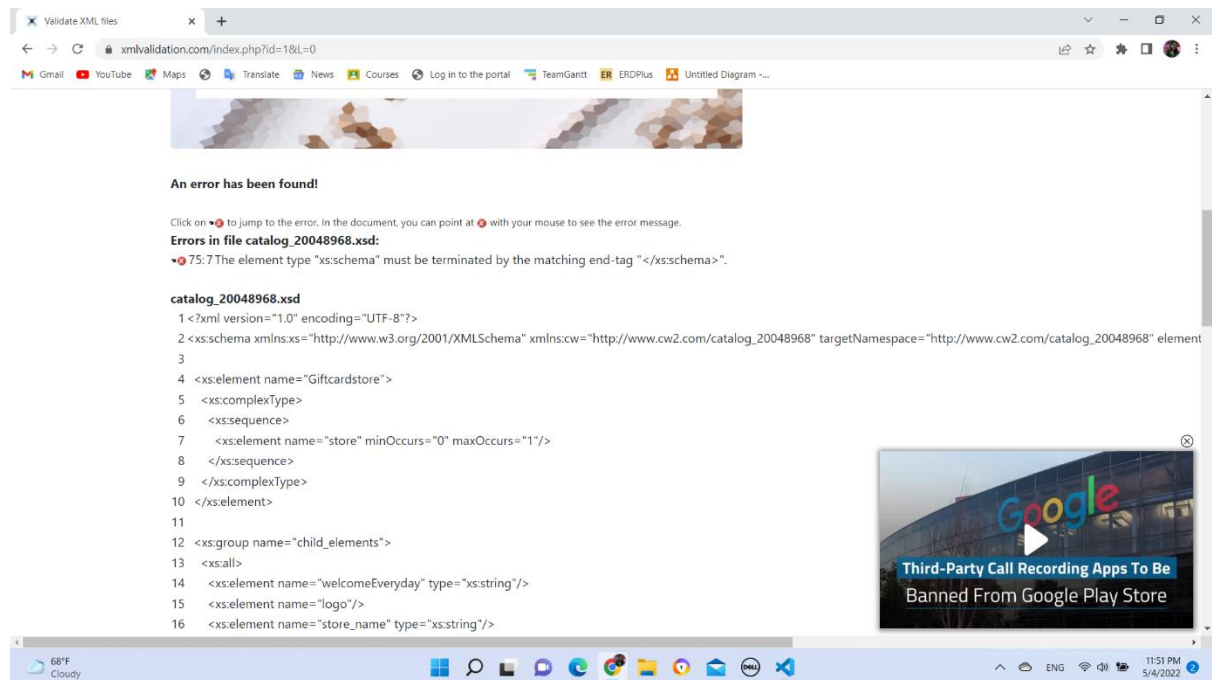


Figure 5:Test No.4

Test 5. Testing whether animation set up works or not

Table 5:Test No. 5

Objective	Result
Action	Testing whether animation set up works or not.
Expected Output	Initial colour should be different from the final colour.
Actual Output	Initial colour was different from the final colour.

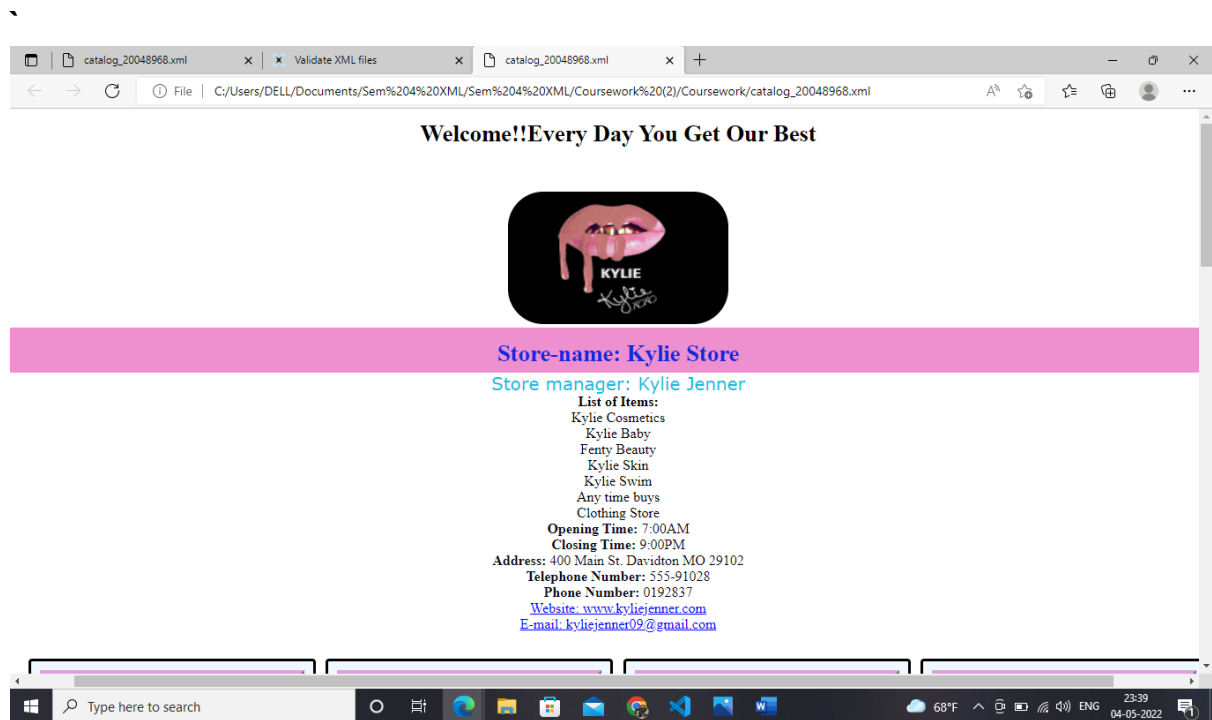


Figure 6:Test.5(Before)

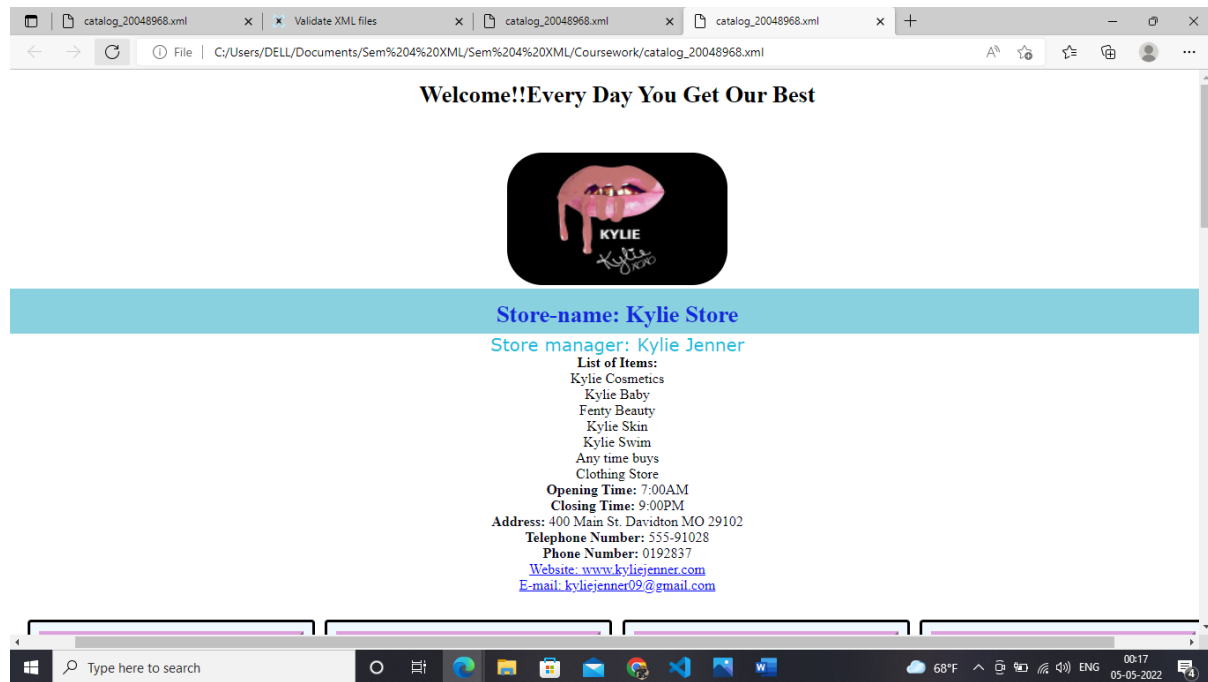


Figure 7:Test No.7(After)

6. Coursework Development

The tools used during the development of this coursework are as follows:

- **Visual Studio Code**

Visual Studio Code is a code editor in layman's terms which is a free editor that helps the programmer write code, helps in debugging, and corrects the code using the intelli-sense method. In normal terms, it facilitates users to write the code in an easy manner. As time went by, some programming languages needed a specific framework and support for further coding and development it, which was not possible using these editors, VI Editor, Sublime Text Editor, is one of the many kinds of editors that came into existence. The most prominent and which supports almost every coding language is Visual Studio Code. Its features let the user modify the editor as per the usage, which means the user is able to download the libraries from the internet and integrate it with the code as per his requirements (Padamkar, 2022)



Figure 8. Visual Studio Code

- **Draw.io**

Draw.io is exclusive software for making diagrams and graphs created by Seibert Media which permits the user to choose from an automatic layout function or make a custom layout. They have an enormous determination of shapes and many visual components to make a diagram or outline unique. The drag and drop feature make it simple to make an incredible-looking diagram or chart. Additionally, this online editor was utilized to construct the tree diagram and it was basic and straightforward to use, and it proved to be useful when it came to repeatedly editing the tree diagram.



Figure 9. Draw.io

7. Critical Analysis

This coursework was relegated to us for creating a system using XML and CSS. While doing this coursework I needed to confront the challenges, particularly in the CSS section, which was a big deal as we had to construct the base layout ourselves. I was likewise somewhat confused in regard to the schema as numerous mistakes occurred which was also a lot of work. Yet in order to conquer the confusion and troubles, a lot of exploration was finished with respect to the applicable topics. Cent percent exertion was given to finish the undertaking allocated in this topic. Regular interaction with instructors, consistent exertion, and a lot of exploration, going through the lecture slides and surfing the web-assisted with acquiring sound information about CSS, XML, and schema. I likewise, became more acquainted with various terms which are utilized in the program, I knew about various terms alongside their capabilities and it was extremely beneficial to me and greatly improved my understanding of CSS.

8. Conclusion

Despite the fact that it was challenging and troublesome from the outset, the coursework was finished on schedule and submitted on time as well. I had the chance to learn numerous new things and it assisted me in gaining a deeper understanding of the module and how front-end development functions, which I knew about. It was a decent encounter to foster a program utilizing vs code and it was enjoyable to chip away at this project as well.

9. References

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10.Appendix

CSS Content

```
/*
    Name: Punam Thapa Magar
    Date: 03/04/2022
*/

@namespace cw2 url(http://www.cw2.com/catalog_20048968);

cw2|welcome_Everyday, cw2\:welcome_Everyday{
    display: block;
    font-size: 20pt;
    font-weight: bold;
    font-style: normal;
    color:black;
    margin-top: 10pt;
    text-align: center;
}

cw2|store, cw2\:store{
    display: block;
    width: 1500px;
    height: 650px;
    font-family: Times New Roman;
    font-size:12pt;
    margin: 5px;
}

cw2|store_info, cw2\:store_info{
    display: block;
    font-family: Times New Roman;
    font-size:12pt;
    flex-direction: column;
    text-align: center;
}

cw2|store_Logo, cw2\:store_Logo{
    content: url("KSLogo.jpg");
    image-orientation: flip;
    float: center;
    width: 250px;
    height: 150px;
    margin-top: 50px;
    border: 10px rgb(194, 144, 238);
    border-radius: 40px;
}
```

```

cw2|store_name, cw2\:store_name{
  display: block;
  text-align: center;
  font-size: 20pt;
  font-weight: bold;
  font-family: 'Times New Roman', Times, serif;
  color: rgb(20, 40, 220);
  padding-top: 10pt;
  padding-bottom: 5pt;
  background-color: rgb(238, 144, 207);
  animation-name: hello;
  animation-duration: 5s;
}
@keyframes hello{
  from {background-color: rgb(238, 144, 207);}
  to {background-color: rgba(112, 200, 216, 0.829);}
}
store_name:before {content: "Store-name: "}

cw2|store_manager, cw2\:store_manager{
  display: block;
  font-size: 15pt;
  font-family: Verdana, Geneva, Tahoma, sans-serif;
  color: rgb(20, 190, 220);
}
store_manager:before {content: "Store manager: "}

cw2|items > item, cw2\:items > item{
  display: list-item;
  font-size: 12pt;
  font-family: 'Times New Roman';
  color: black;
}
items:before {content: "List of Items: " ; font-weight: bold;}

cw2|time > opening, cw2\:time > opening{
  display: block;
  font-size: 12pt;
  font-family: 'Times New Roman';
  color: rgb(10, 10, 23);
}
opening:before {content: "Opening Time: " ; font-weight: bold;}

cw2|time > closing, cw2\:time > closing{
  display: block;
  font-size: 12pt;
  font-family: 'Times New Roman';
}
```

```
        color: rgb(10, 10, 23);
    }
    closing:before {content: "Closing Time: " ; font-weight: bold;}

    cw2|address, cw2\:address{
        display: block;
        font-size: 12;
        font-family: 'Times New Roman', Times, serif;
        color: rgb(10, 10, 23);
        margin-left: 0pt;
    }
    address:before {content: "Address: " ; font-weight: bold;}

    cw2|telephone_numbers > telephone_number, cw2\:telephone_numbers >
    telephone_number{
        display: list-item;
        font-size: 12pt;
        font-family: 'Times New Roman';
        color: rgb(10, 10, 23);
    }
    telephone_number:before {content: "Telephone Number: " ; font-weight: bold;}

    cw2|telephone_numbers > phone, cw2\:telephone_numbers > phone{
        display: list-item;
        font-size: 12pt;
        font-family: 'Times New Roman';
        color: rgb(10, 10, 23);
    }
    phone:before {content: "Phone Number: " ; font-weight: bold;}

    cw2|website, cw2\:website{
        display: block;
        font-size: 12pt;
        font-family: 'Times New Roman';
        color: blue;
        text-decoration: underline;
    }
    website:before {content: "Website: " ;}

    cw2|email, cw2\:email{
        display: block;
        font-size: 12pt;
        font-family: 'Times New Roman';
        color: blue;
        text-decoration: underline;
    }
    email:before {content: "E-mail: " ;}
```

```

cw2|gift_cards, cw2\:gift_cards{
  width: 90%;
  min-height: 90vh;
  display: flex;
  flex-wrap: wrap;
  margin: 10px auto;
  margin-bottom: 40px;
  padding: 10px;
}

cw2|gift_card, cw2\:gift_card{
  width: 300px;
  display: flex;
  flex-direction: column;
  margin: 10px auto;
  padding: 10px;
  background-color: aliceblue;
  border: black solid 3px;
  border-radius: 0.25rem;
  font-family: 'Times New Roman', Times, serif;
}

cw2|gift_card_name, cw2\:gift_card_name{
  display: block;
  font-size: 16pt;
  font-weight: bold;
  font-family: 'Times New Roman', Times, serif;
  color: hotpink;
  padding-top: 10pt;
  background-color: honeydew;
}

giftcardname:before {content: "Gift Card Name: "}

cw2|store_image, cw2\:store_image{
  content: url("KCGC.jpg");
  image-orientation: flip;
  width: 280px;
  height: 250px;
  border: 10px ridge plum;
}

cw2|B_store_image, cw2\:B_store_image{
  content: url("KB.png");
  image-orientation: flip;
  width: 280px;
  height: 250px;
  border: 10px ridge plum;
}
```



```

cw2|F_store_image, cw2\F_store_image{
    content: url("fbGC.jpg");
    image-orientation: flip;
    width: 280px;
    height: 250px;
    border: 10px ridge plum;
}

cw2|S_store_image, cw2\S_store_image{
    content: url("Skin.png");
    image-orientation: flip;
    width: 280px;
    height: 250px;
    border: 10px ridge plum;
}

cw2|A_store_image, cw2\A_store_image{
    content: url("Items.png");
    image-orientation: flip;
    width: 280px;
    height: 250px;
    border: 10px ridge plum;
}

cw2|L_store_image, cw2\L_store_image{
    content: url("Clothing.png");
    image-orientation: flip;
    width: 280px;
    height: 250px;
    border: 10px ridge plum;
}

cw2|H_store_image, cw2\H_store_image{
    content: url("Swim.jpg");
    image-orientation: flip;
    width: 280px;
    height: 250px;
    border: 10px ridge plum;
}

cw2|Q_store_image, cw2\Q_store_image{
    content: url("LIQ.jpg");
    image-orientation: flip;
    width: 280px;
    height: 250px;
    border: 10px ridge plum;
}

```

```

cw2|initial_card_value, cw2\:initial_card_value{
    display: block;
    font-size: 12pt;
    font-family: 'Times New Roman';
    color: black;
}
initial_card_value:before{content: "Initial Card Value ($) - " ; font-weight:
bold;}

cw2|rating, cw2\:rating{
    display: block;
    font-size: 12pt;
    font-family: 'Times New Roman';
    color: black;
}
rating:before{content: "Rating: " ; font-weight: bold;}

cw2|type, cw2\:type{
    display: block;
    font-size: 12pt;
    font-family: 'Times New Roman';
    color: black;
}
type:before {content: "Type: " ; font-weight: bold;}

cw2|price, cw2\:price{
    display: block;
    font-size: 12pt;
    font-family: 'Times New Roman';
    color: black;
}
price:before {content: "Price ($): " ; font-weight: bold;}

cw2|validity > issue_date, cw2\:validity > issue_date{
    display: block;
    font-size: 12pt;
    font-family: 'Times New Roman';
    color: black;
}
issue_date:before {content: "Issue-Date: " ; font-weight: bold;}

cw2|validity > expire_date, cw2\:validity > expire_date{
    display: block;
    font-size: 12pt;
    font-family: 'Times New Roman';
    color: black;
}
```

```
}
expire_date:before {content: "Expire-date: " ; font-weight: bold;}

cw2|number_of_users, cw2\:number_of_users{
    display: block;
    font-size: 12pt;
    font-family: 'Times New Roman';
    color: black;
}
number_of_users:before {content: "Number of users: " ; font-weight: bold;}

cw2|discount_voucher, cw2\:discount_voucher{
    display: block;
    font-size: 12pt;
    font-family: 'Times New Roman';
    color: black;
}
discount_voucher:before {content: "Discount(%)": " ; font-weight: bold;}

cw2|title, cw2\:title{
    display: block;
    font-size: 12pt;
    font-weight: bold;
    font-family: 'Times New Roman';
    color: rgb(27, 104, 99);
    background-color: rgb(194, 144, 238);
}

cw2|content > message, cw2\:content > message{
    display: list-item;
    font-size: 12pt;
    font-family: 'Times New Roman';
    color: black;
}

cw2|copyright, cw2\:copyright{
    display: block;
    font-size: 10pt;
    font-style: italic;
    font-family: 'Times New Roman';
    color: black;
    margin-bottom: 10px;
    text-align: center;
}

cw2|Instagram, cw2\:Instagram{
    display: block;
    font-size: 10pt;
```

```
font-style: italic;
font-family: 'Times New Roman';
color: black;
margin-bottom: 8px;
text-align: center;
}

cw2|Telegram, cw2\:Telegram{
display: block;
font-size: 10pt;
font-style: italic;
font-family: 'Times New Roman';
color: black;
margin-bottom: 6px;
text-align: center;
}

cw2|Twitter, cw2\:Twitter{
display: block;
font-size: 10pt;
font-style: italic;
font-family: 'Times New Roman';
color: black;
margin-bottom: 4px;
text-align: center;
}

cw2|Facebook, cw2\:Facebook{
display: block;
font-size: 10pt;
font-style: italic;
font-family: 'Times New Roman';
color: black;
margin-bottom: 2px;
text-align: center;
}

cw2|line, cw2\:line{
display: ruby-base;
text-align: center;
margin-left: 550px;
}

cw2|image, cw2\:image{
content: url("insta.jpg");
image-orientation: flip;
width: 20px;
height: 20px;
```

```
        border: 2.5px ridge plum;
    }

    cw2|image1, cw2\:image1{
        content: url("tel.jpg");
        image-orientation: flip;
        width: 20px;
        height: 20px;
        border: 2.5px ridge plum;
    }

    cw2|image2, cw2\:image2{
        content: url("twitter.jpg");
        image-orientation: flip;
        width: 20px;
        height: 20px;
        border: 2.5px ridge plum;
    }

    cw2|image3, cw2\:image3{
        content: url("fb.jpg");
        image-orientation: flip;
        width: 20px;
        height: 20px;
        border: 2.5px ridge plum;
    }
}
```