1. After finishing the workshop students must complete the following tasks:
    - The XML document structure
    - XML Namespace

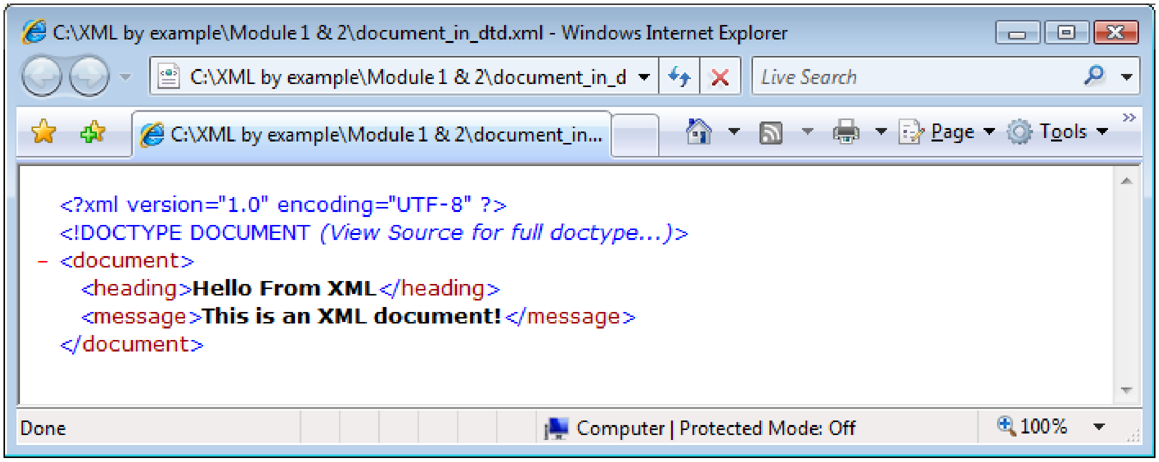
3. The XML document structure:

Open the editor and type the following code:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE DOCUMENT [
    <!ELEMENT document (heading, message)>
    <!ELEMENT heading (#PCDATA)>
    <!ELEMENT message (#PCDATA)>
]>
<document>
    <heading>
        Hello From XML
    </heading>
    <message>
        This is an XML document!
    </message>
</document>
```

Save the code as **document.xml** file and open it in the browser

The output:



C:\XML by example\Module 1 & 2\document_in_dtd.xml - Windows Internet Explorer
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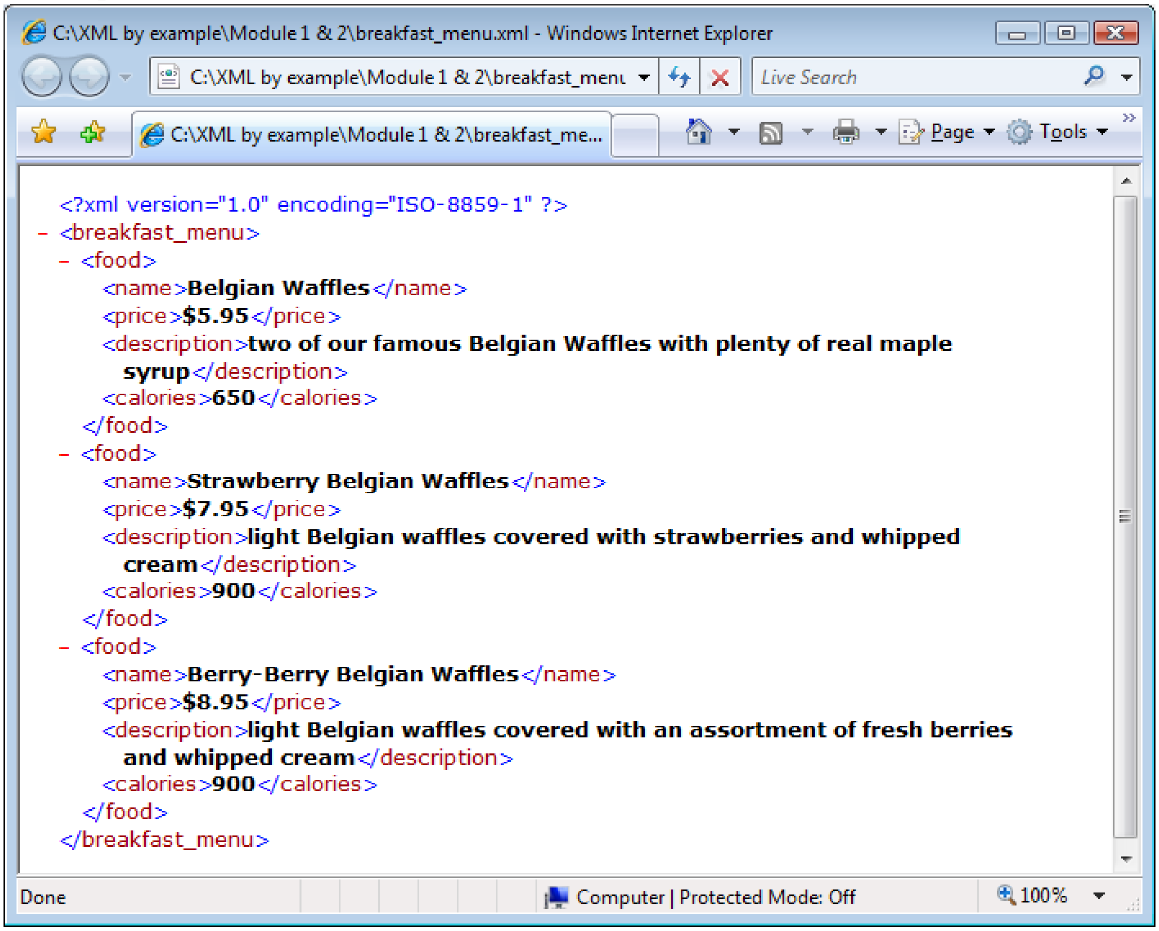
```
  <?xml version="1.0" encoding="UTF-8" ?>
  <!DOCTYPE DOCUMENT (View Source for full doctype...)>
- <document>
    <heading>Hello From XML</heading>
    <message>This is an XML document!</message>
  </document>
```

Open the editor and type the following code:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<breakfast_menu>
      <food>
            <name>Belgian Waffles</name>
            <price>$5.95</price>
            <description>two of our famous Belgian Waffles with plenty of
real maple syrup</description>
            <calories>650</calories>
      </food>
      <food>
            <name>Strawberry Belgian Waffles</name>
            <price>$7.95</price>
            <description>light Belgian waffles covered with strawberries
and whipped cream</description>
            <calories>900</calories>
      </food>
      <food>
            <name>Berry-Berry Belgian Waffles</name>
            <price>$8.95</price>
            <description>light Belgian waffles covered with an assortment
of fresh berries and whipped cream</description>
            <calories>900</calories>
      </food>
</breakfast_menu>
```

Save the code as **breakfast_menu.xml** file and open it in the browser

The output:



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```
  <?xml version="1.0" encoding="ISO-8859-1" ?>
- <breakfast_menu>
  - <food>
      <name>Belgian Waffles</name>
      <price>$5.95</price>
      <description>two of our famous Belgian Waffles with plenty of real maple
        syrup</description>
      <calories>650</calories>
    </food>
  - <food>
      <name>Strawberry Belgian Waffles</name>
      <price>$7.95</price>
      <description>light Belgian waffles covered with strawberries and whipped
        cream</description>
      <calories>900</calories>
    </food>
  - <food>
      <name>Berry-Berry Belgian Waffles</name>
      <price>$8.95</price>
      <description>light Belgian waffles covered with an assortment of fresh berries
        and whipped cream</description>
      <calories>900</calories>
    </food>
  </breakfast_menu>
```

4. XML Namespace:

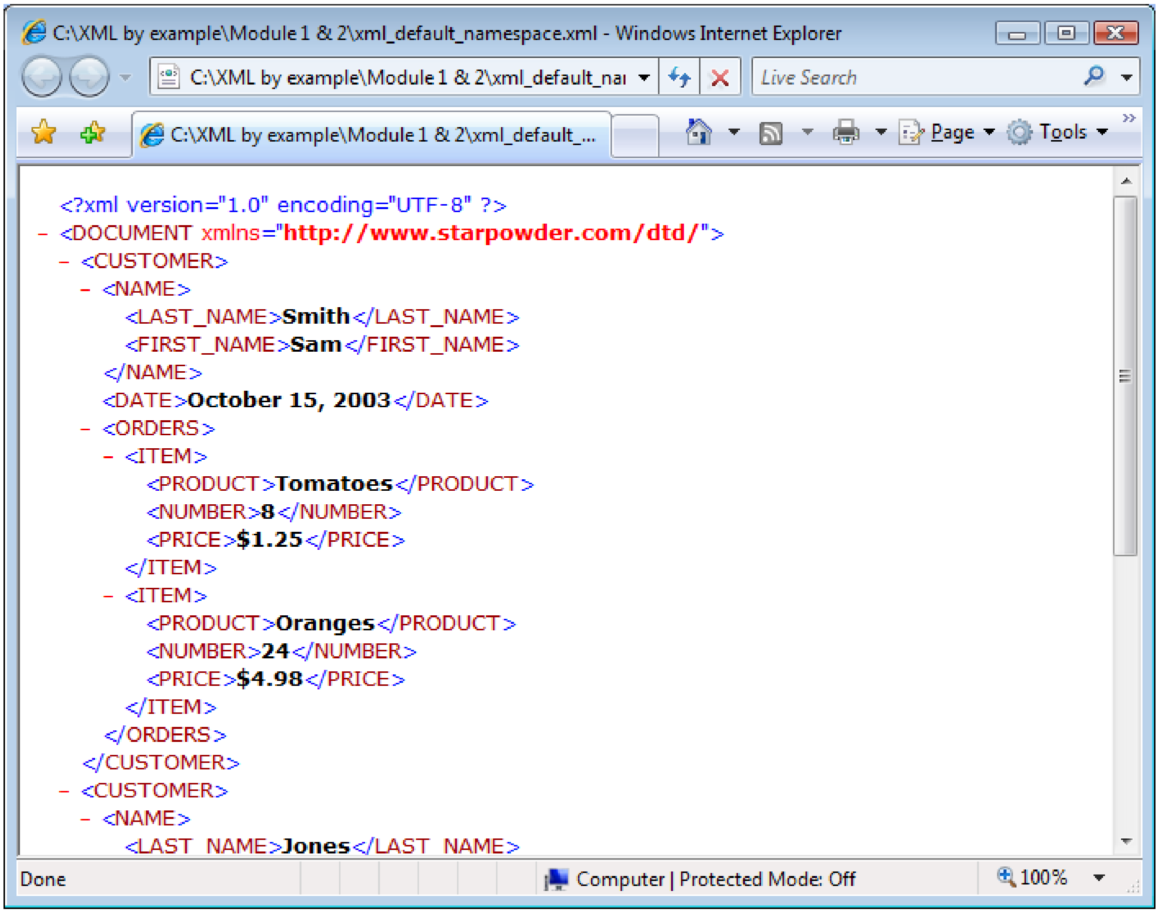
Open the editor and type the following code:

```
<?xml version="1.0" encoding="UTF-8"?>
<DOCUMENT xmlns="http://www.starpowder.com/dtd/">
    <CUSTOMER>
        <NAME>
            <LAST_NAME>Smith</LAST_NAME>
            <FIRST_NAME>Sam</FIRST_NAME>
        </NAME>
        <DATE>October 15, 2003</DATE>
        <ORDERS>
            <ITEM>
                <PRODUCT>Tomatoes</PRODUCT>
                <NUMBER>8</NUMBER>
                <PRICE>$1.25</PRICE>
            </ITEM>
            <ITEM>
                <PRODUCT>Oranges</PRODUCT>
                <NUMBER>24</NUMBER>
                <PRICE>$4.98</PRICE>
            </ITEM>
        </ORDERS>
    </CUSTOMER>

    <CUSTOMER>
        <NAME>
            <LAST_NAME>Jones</LAST_NAME>
            <FIRST_NAME>Polly</FIRST_NAME>
        </NAME>
        <DATE>October 20, 2003</DATE>
        <ORDERS>
            <ITEM>
                <PRODUCT>Bread</PRODUCT>
                <NUMBER>12</NUMBER>
                <PRICE>$14.95</PRICE>
            </ITEM>
            <ITEM>
                <PRODUCT>Apples</PRODUCT>
                <NUMBER>6</NUMBER>
                <PRICE>$1.50</PRICE>
            </ITEM>
        </ORDERS>
    </CUSTOMER>
</DOCUMENT>
```

Save the code as **xml_default_namespace.xml** file and open it in the browser

The output:


C:\XML by example\Module 1 & 2\xml_default_namespace.xml - Windows Internet Explorer
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```
  <?xml version="1.0" encoding="UTF-8" ?>
- <DOCUMENT xmlns="http://www.starpowder.com/dtd/">
  - <CUSTOMER>
    - <NAME>
        <LAST_NAME>Smith</LAST_NAME>
        <FIRST_NAME>Sam</FIRST_NAME>
      </NAME>
      <DATE>October 15, 2003</DATE>
    - <ORDERS>
      - <ITEM>
          <PRODUCT>Tomatoes</PRODUCT>
          <NUMBER>8</NUMBER>
          <PRICE>$1.25</PRICE>
        </ITEM>
      - <ITEM>
          <PRODUCT>Oranges</PRODUCT>
          <NUMBER>24</NUMBER>
          <PRICE>$4.98</PRICE>
        </ITEM>
      </ORDERS>
    </CUSTOMER>
  - <CUSTOMER>
    - <NAME>
        <LAST_NAME>Jones</LAST_NAME>
```

Open the editor and type the following code:

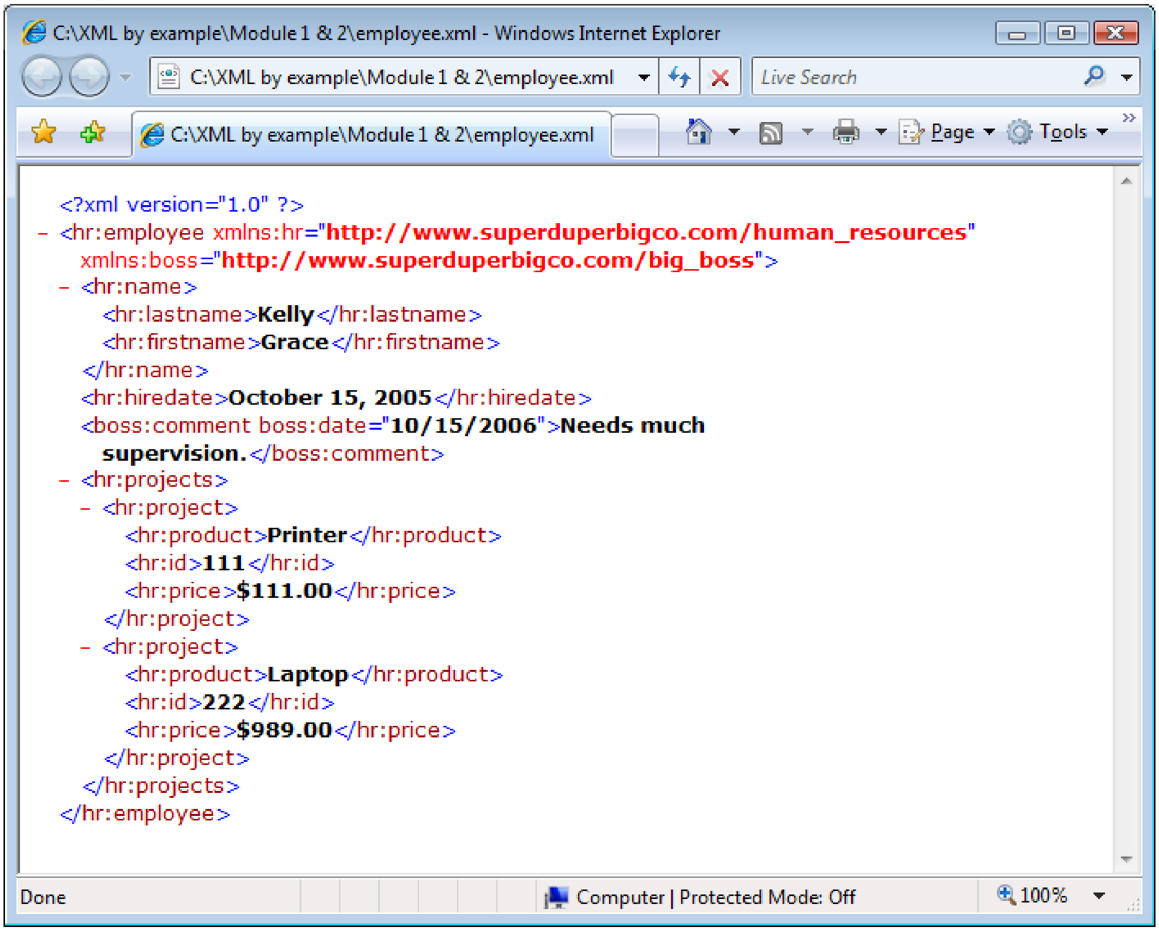
```
<?xml version="1.0" encoding="UTF-8"?>
<hr:employee
   xmlns:hr="http://www.superduperbigco.com/human_resources"
   xmlns:boss="http://www.superduperbigco.com/big_boss">
    <hr:name>
        <hr:lastname>Kelly</hr:lastname>
        <hr:firstname>Grace</hr:firstname>
    </hr:name>
    <hr:hiredate>October 15, 2005</hr:hiredate>
    <boss:comment boss:date="10/15/2006">
        Needs much supervision.
    </boss:comment>

    <hr:projects>
        <hr:project>
            <hr:product>Printer</hr:product>
            <hr:id>111</hr:id>
            <hr:price>$111.00</hr:price>
        </hr:project>
        <hr:project>
```

```
            <hr:product>Laptop</hr:product>
            <hr:id>222</hr:id>
            <hr:price>$989.00</hr:price>
        </hr:project>
    </hr:projects>
</hr:employee>
```

Save the code as **employee.xml** file and open it in the browser

The output:



C:\XML by example\Module 1 & 2\employee.xml - Windows Internet Explorer
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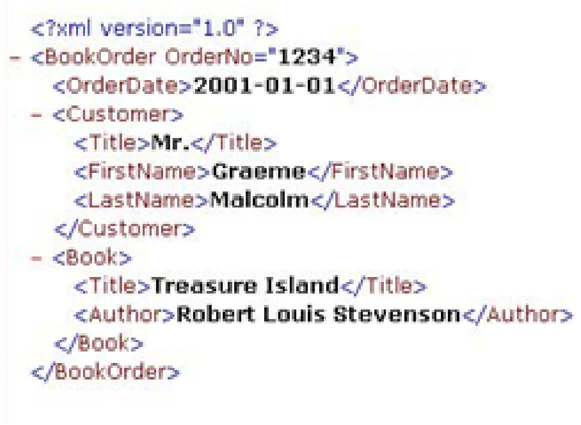
```
  <?xml version="1.0" ?>
- <hr:employee xmlns:hr="http://www.superduperbigco.com/human_resources"
    xmlns:boss="http://www.superduperbigco.com/big_boss">
  - <hr:name>
      <hr:lastname>Kelly</hr:lastname>
      <hr:firstname>Grace</hr:firstname>
    </hr:name>
    <hr:hiredate>October 15, 2005</hr:hiredate>
    <boss:comment boss:date="10/15/2006">Needs much
      supervision.</boss:comment>
  - <hr:projects>
    - <hr:project>
        <hr:product>Printer</hr:product>
        <hr:id>111</hr:id>
        <hr:price>$111.00</hr:price>
      </hr:project>
    - <hr:project>
        <hr:product>Laptop</hr:product>
        <hr:id>222</hr:id>
        <hr:price>$989.00</hr:price>
      </hr:project>
    </hr:projects>
  </hr:employee>
```

Do It Yourself

1.1. Write an XML file that describes the following Orders:



```
  <?xml version="1.0" ?>
- <BookOrder OrderNo="1234">
    <OrderDate>2001-01-01</OrderDate>
  - <Customer>
      <Title>Mr.</Title>
      <FirstName>Graeme</FirstName>
      <LastName>Malcolm</LastName>
    </Customer>
  - <Book>
      <Title>Treasure Island</Title>
      <Author>Robert Louis Stevenson</Author>
    </Book>
  </BookOrder>
```

- Set default namespace `http://www.fpt-aptech.com/customer` for the document.
- Create a namespace named `mybook` whose URI is `http://www.superduperbigco.com/customer_service` for `<Book>` tag.

1.2. Why is the following XML document not well-formed?

```
<?xml version = "1.0" standalone="yes"?>
<employee>
    <name>Frank</name>
    <position>Chef</position>
</employee>
<employee>
    <name>Ronnie</name>
    <position>Chef</position>
</employee>
```

1.3. Why is the following XML document not well-formed?

```
<?xml version = "1.0" standalone="yes"?>
<employee>
    <kitchen_staff/>
    <name language=en>Frank</name>
    <new_hire />
    <position language=en>Chef</position>
</employee>
```