

TCP3151

Integrative Programming and Technologies

**Assignment Report**

Lab Section: IP1A

BY

|  |  |
| --- | --- |
| **STUDENT ID** | **STUDENT NAME** |
| 1131119882 | Koh Kah Siang |
| 1151105086 | Daphne Bunga Dwiputriane |
| 1151105293 | Wong Chang He |
| 1151104900 | Cheng Kean Wah |

**LECTURER:**

**DR. CHONG LEE YING**

MULTIMEDIA UNIVERSITY

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TRIMESTER 1

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# Part 1 – Data related to Lost Item Reporting System

## Brief Introduction of the Data used

## XML Documents

**LostItemReport.xml**

|  |
| --- |
| <?xml version="1.0" encoding="UTF-8" standalone="no" ?>  <!-- This report is to record the items that are reported LOST to the Lost and Found Station -->  <!-- External DTD -->  <!DOCTYPE lostReport SYSTEM "LostItemReport.dtd" >  <!-- Link to XSL -->  <?xml-stylesheet type="text/xsl" href="ListOfLostItem.xsl" ?>  <lostReport>  <item id="L1001"> <!-- indicate an item that have been lost; id incidate the primary key -->  <status choice="Open" /> <!-- Open: Item is awaiting to be found and returned; Found: Item have been found and awaiting to be returned; Closed: Item have been found and returned -->  <description>Student ID</description> <!-- short description of the item lost -->  <!-- when the item is reported to the lost and found station -->  <report:datetime xmlns:report="http://www.w3.org/xml/report/">  <report:date year="2019" month="07" date="02" />  <report:time hour="17" minute="26" />  </report:datetime>  <!-- when the item is suspected lost -->  <lost:datetime xmlns:lost="http://www.w3.org/xml/lost/">  <lost:dateFrom year="2019" month="07" date="02" />  <lost:dateTo year="2019" month="07" date="02" />  <lost:timeFrom hour="14" minute="00" />  <lost:timeTo hour="16" minute="00" />  </lost:datetime>  <!-- when the item is being claimed by its owner -->  <claim:datetime xmlns:claim="http://www.w3.org/xml/claim/">  <claim:date year="" month="" date="" />  <claim:time hour="" minute="" />  </claim:datetime>  <!-- where the item is suspected lost -->  <locations>  <location>MSMX0001</location>  <location>CLC Concourse</location>  </locations>  <!-- detail description of the item lost -->  <detail> <![CDATA[  Student Id: 1131119882  ]]></detail>  <!-- item lost is reported by this person -->  <reportBy>  <name>  <firstName>Kah Siang</firstName>  <lastName>Koh</lastName>  </name>  <email>kahsiang95@hotmail.com</email>  <phone>0176815218</phone>  <id>1131119882</id>  </reportBy>  <!-- item is being found by this person -->  <returnBy>  <name>  <firstName></firstName>  <lastName></lastName>  </name>  <email></email>  <phone></phone>  <id></id>  </returnBy>  </item>  <item id="L1002">  <status choice="Closed" />  <description>Wallet</description>  <report:datetime xmlns:report="http://www.w3.org/xml/report/">  <report:date year="2019" month="07" date="03" />  <report:time hour="11" minute="59" />  </report:datetime>    <lost:datetime xmlns:lost="http://www.w3.org/xml/lost/">  <lost:dateFrom year="2019" month="07" date="03" />  <lost:dateTo year="2019" month="07" date="03" />  <lost:timeFrom hour="08" minute="00" />  <lost:timeTo hour="11" minute="30" />  </lost:datetime>  <claim:datetime xmlns:claim="http://www.w3.org/xml/claim/">  <claim:date year="2019" month="07" date="04" />  <claim:time hour="08" minute="04" />  </claim:datetime>    <locations>  <location>MSMX0001</location>  </locations>  <detail> <![CDATA[  Black colour, around RM300 inside, include student id - 1151104900, ic - 980101-01-0001, driving license, and aeon member card  ]]></detail>  <reportBy>  <name>  <firstName>Kean Wah</firstName>  <lastName>Cheng</lastName>  </name>  <email>1151104900@student.mmu.edu.my</email>  <phone>0129350714</phone>  <id>1151104900</id>  </reportBy>  <returnBy>  <name>  <firstName>Daphne</firstName>  <lastName>Bunga Dwiputriane</lastName>  </name>  <email>1151105086@student.mmu.edu.my</email>  <phone>017-6356898</phone>  <id>1151105086</id>  </returnBy>  </item>  <item id="L1003"> <!-- indicate an item that have been lost; id incidate the primary key -->  <status choice="Open" /> <!-- Open: Item is awaiting to be found and returned; Found: Item have been found and awaiting to be returned; Closed: Item have been found and returned -->  <description>Necklace</description> <!-- short description of the item lost -->  <!-- when the item is reported to the lost and found station -->  <report:datetime xmlns:report="http://www.w3.org/xml/report/">  <report:date year="2019" month="07" date="09" />  <report:time hour="11" minute="30" />  </report:datetime>  <!-- when the item is suspected lost -->  <lost:datetime xmlns:lost="http://www.w3.org/xml/lost/">  <lost:dateFrom year="2019" month="07" date="09" />  <lost:dateTo year="2019" month="07" date="09" />  <lost:timeFrom hour="09" minute="00" />  <lost:timeTo hour="11" minute="00" />  </lost:datetime>  <!-- when the item is being claimed by its owner -->  <claim:datetime xmlns:claim="http://www.w3.org/xml/claim/">  <claim:date year="" month="" date="" />  <claim:time hour="" minute="" />  </claim:datetime>  <!-- where the item is suspected lost -->  <locations>  <location>MAMR4020</location>  </locations>  <!-- detail description of the item lost -->  <detail> <![CDATA[  Necklace Colour - Silver, Necklace Symbol - Cross, Necklace Length - Short  ]]></detail>  <!-- item lost is reported by this person -->  <reportBy>  <name>  <firstName>Mary Louise</firstName>  <lastName>Wright</lastName>  </name>  <email>maryloui@gmail.com</email>  <phone>0103456789</phone>  <id>118120212</id>  </reportBy>  <!-- item is being found by this person -->  <returnBy>  <name>  <firstName></firstName>  <lastName></lastName>  </name>  <email></email>  <phone></phone>  <id></id>  </returnBy>  </item>    <item id="L1004">  <status choice="Found" />  <description>Laptop Bag</description>  <report:datetime xmlns:report="http://www.w3.org/xml/report/">  <report:date year="2019" month="07" date="16" />  <report:time hour="12" minute="50" />  </report:datetime>    <lost:datetime xmlns:lost="http://www.w3.org/xml/lost/">  <lost:dateFrom year="2019" month="07" date="16" />  <lost:dateTo year="2019" month="07" date="16" />  <lost:timeFrom hour="11" minute="00" />  <lost:timeTo hour="12" minute="30" />  </lost:datetime>  <claim:datetime xmlns:claim="http://www.w3.org/xml/claim/">  <claim:date year="" month="" date="" />  <claim:time hour="" minute="" />  </claim:datetime>  <locations>  <location>MSMX2008</location>  </locations>  <detail> <![CDATA[  Black colour, messenger bag, Laptop brand - Dell, Laptop Username - Amabella Klein, Laptop Colour - Grey  ]]></detail>  <reportBy>  <name>  <firstName>Amabella</firstName>  <lastName>Klein</lastName>  </name>  <email>amabellaklein21@gmail.com</email>  <phone>0144705658</phone>  <id>1151105020</id>  </reportBy>  <returnBy>  <name>  <firstName>Chang He</firstName>  <lastName>Wong</lastName>  </name>  <email>1151105293@student.mmu.edu.my</email>  <phone>0129161580</phone>  <id>1151105293</id>  </returnBy>  </item>    <item id="L1005"> <!-- indicate an item that have been lost; id incidate the primary key -->  <status choice="Open" /> <!-- Open: Item is awaiting to be found and returned; Found: Item have been found and awaiting to be returned; Closed: Item have been found and returned -->  <description>Water Bottle</description> <!-- short description of the item lost -->  <!-- when the item is reported to the lost and found station -->  <report:datetime xmlns:report="http://www.w3.org/xml/report/">  <report:date year="2019" month="07" date="12" />  <report:time hour="14" minute="30" />  </report:datetime>  <!-- when the item is suspected lost -->  <lost:datetime xmlns:lost="http://www.w3.org/xml/lost/">  <lost:dateFrom year="2019" month="07" date="12" />  <lost:dateTo year="2019" month="07" date="12" />  <lost:timeFrom hour="11" minute="00" />  <lost:timeTo hour="13" minute="00" />  </lost:datetime>  <!-- when the item is being claimed by its owner -->  <claim:datetime xmlns:claim="http://www.w3.org/xml/claim/">  <claim:date year="" month="" date="" />  <claim:time hour="" minute="" />  </claim:datetime>  <!-- where the item is suspected lost -->  <locations>  <location>MNBR2007</location>  </locations>  <!-- detail description of the item lost -->  <detail> <![CDATA[  Brand - Tupperware, Colour -Blue, Volume of water - Half empty  ]]></detail>  <!-- item lost is reported by this person -->  <reportBy>  <name>  <firstName>Joseph</firstName>  <lastName>Schooling</lastName>  </name>  <email>joeschooling@yahoo.com</email>  <phone>0165486569</phone>  <id>115130444</id>  </reportBy>  <!-- item is being found by this person -->  <returnBy>  <name>  <firstName></firstName>  <lastName></lastName>  </name>  <email></email>  <phone></phone>  <id></id>  </returnBy>  </item>    <item id="L1006">  <status choice="Closed" />  <description>Wallet</description>  <report:datetime xmlns:report="http://www.w3.org/xml/report/">  <report:date year="2019" month="07" date="03" />  <report:time hour="12" minute="00" />  </report:datetime>    <lost:datetime xmlns:lost="http://www.w3.org/xml/lost/">  <lost:dateFrom year="2019" month="07" date="03" />  <lost:dateTo year="2019" month="07" date="03" />  <lost:timeFrom hour="10" minute="00" />  <lost:timeTo hour="11" minute="50" />  </lost:datetime>  <claim:datetime xmlns:claim="http://www.w3.org/xml/claim/">  <claim:date year="2019" month="07" date="10" />  <claim:time hour="11" minute="00" />  </claim:datetime>  <locations>  <location>ACR1006</location>  </locations>  <detail> <![CDATA[  Colour - Grey, Cash - RM10, Driving License - 100100234, CIMB ATM Card, Hong Leong Credit Card  ]]></detail>  <reportBy>  <name>  <firstName>Kosuke</firstName>  <lastName>Hagino</lastName>  </name>  <email>koshaginojp@yahoo.com</email>  <phone>0155587202</phone>  <id>1121202121</id>  </reportBy>  <returnBy>  <name>  <firstName>Frenkie</firstName>  <lastName>de Jong</lastName>  </name>  <email>fdj21@gmail.com</email>  <phone>016-6567898</phone>  <id>1181104554</id>  </returnBy>  </item>  <item id="L1007"> <!-- indicate an item that have been lost; id incidate the primary key -->  <status choice="Open" /> <!-- Open: Item is awaiting to be found and returned; Found: Item have been found and awaiting to be returned; Closed: Item have been found and returned -->  <description>House Keys</description> <!-- short description of the item lost -->  <!-- when the item is reported to the lost and found station -->  <report:datetime xmlns:report="http://www.w3.org/xml/report/">  <report:date year="2019" month="07" date="15" />  <report:time hour="16" minute="00" />  </report:datetime>  <!-- when the item is suspected lost -->  <lost:datetime xmlns:lost="http://www.w3.org/xml/lost/">  <lost:dateFrom year="2019" month="07" date="15" />  <lost:dateTo year="2019" month="07" date="15" />  <lost:timeFrom hour="08" minute="30" />  <lost:timeTo hour="12" minute="00" />  </lost:datetime>  <!-- when the item is being claimed by its owner -->  <claim:datetime xmlns:claim="http://www.w3.org/xml/claim/">  <claim:date year="" month="" date="" />  <claim:time hour="" minute="" />  </claim:datetime>  <!-- where the item is suspected lost -->  <locations>  <location>ACR3002</location>  </locations>  <!-- detail description of the item lost -->  <detail> <![CDATA[  Number of Keys - 3, Keychain words - Enjoy Spain  ]]></detail>  <!-- item lost is reported by this person -->  <reportBy>  <name>  <firstName>Aaron</firstName>  <lastName>Wan-Bissaka</lastName>  </name>  <email>spiderwan97@gmail.com</email>  <phone>0124202029</phone>  <id>1141100420</id>  </reportBy>  <!-- item is being found by this person -->  <returnBy>  <name>  <firstName></firstName>  <lastName></lastName>  </name>  <email></email>  <phone></phone>  <id></id>  </returnBy>  </item>    <item id="L1008">  <status choice="Closed" />  <description>Backpack</description>  <report:datetime xmlns:report="http://www.w3.org/xml/report/">  <report:date year="2019" month="07" date="24" />  <report:time hour="14" minute="10" />  </report:datetime>    <lost:datetime xmlns:lost="http://www.w3.org/xml/lost/">  <lost:dateFrom year="2019" month="07" date="23" />  <lost:dateTo year="2019" month="07" date="24" />  <lost:timeFrom hour="18" minute="00" />  <lost:timeTo hour="14" minute="00" />  </lost:datetime>  <claim:datetime xmlns:claim="http://www.w3.org/xml/claim/">  <claim:date year="2019" month="07" date="26" />  <claim:time hour="15" minute="00" />  </claim:datetime>  <locations>  <location>Exam Hall</location>  </locations>  <detail> <![CDATA[  Colour - Black, Network Security Lecture Notes, Final Year Project drafts, black pencil case, Sony brand powerbank  ]]></detail>  <reportBy>  <name>  <firstName>Mohammad</firstName>  <lastName>Salah</lastName>  </name>  <email>mosalah29@hotmail.com</email>  <phone>0176822910</phone>  <id>1181100106</id>  </reportBy>  <returnBy>  <name>  <firstName>Penny</firstName>  <lastName>Oleksiak</lastName>  </name>  <email>typicalpenny@gmail.com</email>  <phone>016-80902454</phone>  <id>1141205055</id>  </returnBy>  </item>    </lostReport> |

**FoundItemReport.xml**

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## Logical View

**Logical View for LostItemReport.xml**

**Logical View for FoundITemReport.xml**

## DTD Documents

**LostItemReport.dtd for LostItemReport.xml**

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| --- |
| <!ELEMENT lostReport (item\*) >  <!ELEMENT item (status, description, report:datetime, lost:datetime, claim:datetime, locations, detail, reportBy, returnBy) >  <!ELEMENT status EMPTY >  <!ELEMENT description (#PCDATA) >  <!ELEMENT report:datetime (report:date, report:time) >  <!ELEMENT report:date EMPTY >  <!ELEMENT report:time EMPTY >  <!ELEMENT lost:datetime (lost:dateFrom, lost:dateTo, lost:timeFrom, lost:timeTo) >  <!ELEMENT lost:dateFrom EMPTY >  <!ELEMENT lost:dateTo EMPTY >  <!ELEMENT lost:timeFrom EMPTY >  <!ELEMENT lost:timeTo EMPTY >  <!ELEMENT claim:datetime (claim:date, claim:time) >  <!ELEMENT claim:date EMPTY >  <!ELEMENT claim:time EMPTY >  <!ELEMENT locations (location+)>  <!ELEMENT location (#PCDATA) >  <!ELEMENT detail (#PCDATA) >  <!ELEMENT reportBy (name, email, phone, id) >  <!ELEMENT returnBy (name, email, phone, id) >  <!ELEMENT name (firstName, lastName) >  <!ELEMENT firstName (#PCDATA) >  <!ELEMENT lastName (#PCDATA) >  <!ELEMENT email (#PCDATA) >  <!ELEMENT phone (#PCDATA) >  <!ELEMENT id (#PCDATA) >  <!ATTLIST item id ID #REQUIRED >  <!ATTLIST status choice (Open | Found | Closed) #REQUIRED >  <!ATTLIST report:datetime xmlns:report CDATA #FIXED "http://www.w3.org/xml/report/">  <!ATTLIST report:date  year CDATA #REQUIRED  month CDATA #REQUIRED  date CDATA #REQUIRED  >  <!ATTLIST report:time  hour CDATA #REQUIRED  minute CDATA #REQUIRED  >  <!ATTLIST lost:datetime xmlns:lost CDATA #FIXED "http://www.w3.org/xml/lost/">  <!ATTLIST lost:dateFrom  year CDATA #REQUIRED  month CDATA #REQUIRED  date CDATA #REQUIRED  >  <!ATTLIST lost:dateTo  year CDATA #REQUIRED  month CDATA #REQUIRED  date CDATA #REQUIRED  >  <!ATTLIST lost:timeFrom  hour CDATA #REQUIRED  minute CDATA #REQUIRED  >  <!ATTLIST lost:timeTo  hour CDATA #REQUIRED  minute CDATA #REQUIRED  >  <!ATTLIST claim:datetime xmlns:claim CDATA #FIXED "http://www.w3.org/xml/claim/">  <!ATTLIST claim:date  year CDATA #REQUIRED  month CDATA #REQUIRED  date CDATA #REQUIRED  >  <!ATTLIST claim:time  hour CDATA #REQUIRED  minute CDATA #REQUIRED  > |

**DTD for FoundItemReport.xml**

It is an internal DTD included together with FoundItemReport.xml.

## XSLT Codes

**ListOfLostItem.xsl for LostItemReport.xml**

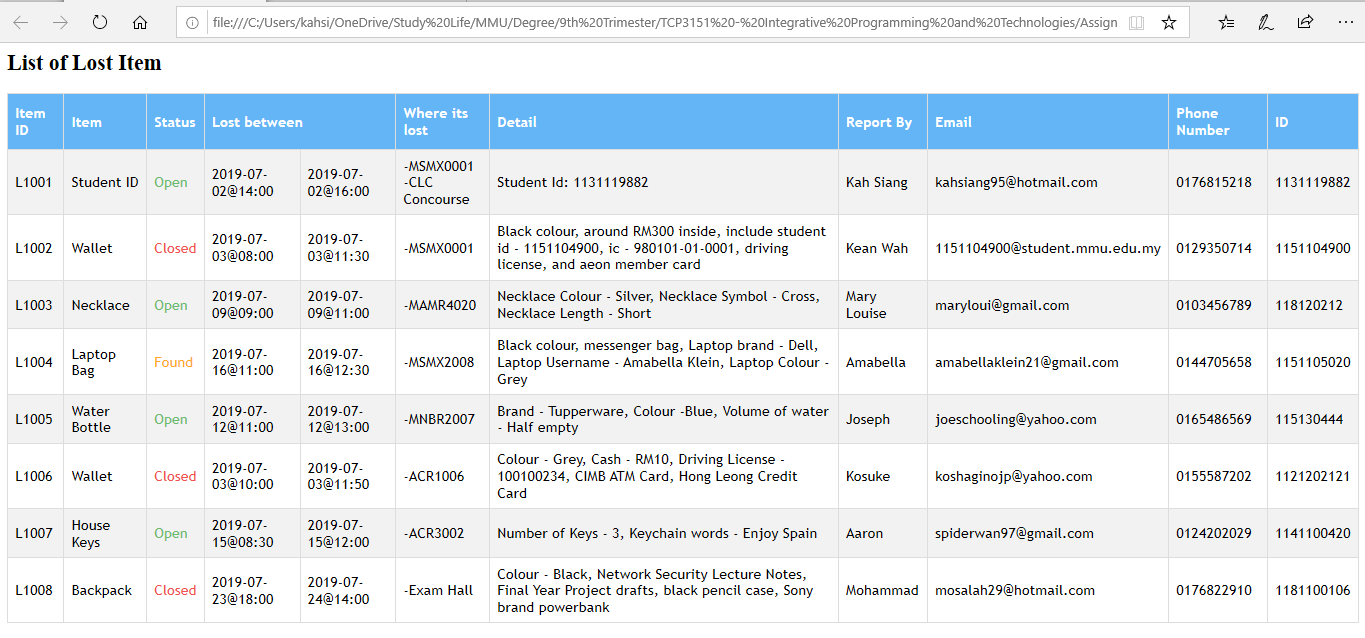
|  |
| --- |
| <?xml version="1.0" encoding="UTF-8" ?>  <xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform"  xmlns:report="http://www.w3.org/xml/report/"  xmlns:lost="http://www.w3.org/xml/lost/"  xmlns:claim="http://www.w3.org/xml/claim/">  <xsl:template match="/">    <html>  <head>  <title>List of Lost Item</title>  <style>  #lostItem {  font-family: "Trebuchet MS", Arial, Helvetica, sans-serif;  border-collapse: collapse;  width: 100%;  }  #lostItem td, #lostItem th {  border: 1px solid #ddd;  padding: 8px;  }  #lostItem tr:nth-child(even){background-color: #f2f2f2;}  #lostItem tr:hover {background-color: #ddd;}  #lostItem th {  padding-top: 12px;  padding-bottom: 12px;  text-align: left;  background-color: #64b5f6;  color: white;  }  .open {  color: #66bb6a;  }  .closed {  color: #ef5350;  }  .found {  color: #ffa726;  }  </style>  </head>      <body>        <h2>List of Lost Item</h2>  <table id="lostItem">  <tr>  <th>Item ID</th>  <th>Item</th>  <th>Status</th>  <th colspan="2">Lost between</th>  <th>Where its lost</th>  <th>Detail</th>  <th>Report By</th>  <th>Email</th>  <th>Phone Number</th>  <th>ID</th>  </tr>  <xsl:for-each select="lostReport/item">  <!--<xsl:if test="status/@choice='Open'">-->  <tr>  <td><xsl:value-of select="@id" /></td>  <td><xsl:value-of select="description" /></td>  <xsl:choose>  <xsl:when test="status/@choice='Open'">  <td class="open"><xsl:value-of select="status/@choice" /></td>  </xsl:when>  <xsl:when test="status/@choice='Found'">  <td class="found"><xsl:value-of select="status/@choice" /></td>  </xsl:when>  <xsl:otherwise>  <td class="closed"><xsl:value-of select="status/@choice" /></td>  </xsl:otherwise>  </xsl:choose>  <td>  <xsl:value-of select="lost:datetime/lost:dateFrom/@year" />-<xsl:value-of select="lost:datetime/lost:dateFrom/@month" />-<xsl:value-of select="lost:datetime/lost:dateFrom/@date" />@<xsl:value-of select="lost:datetime/lost:timeFrom/@hour" />:<xsl:value-of select="lost:datetime/lost:timeFrom/@minute" />  </td>  <td>  <xsl:value-of select="lost:datetime/lost:dateTo/@year" />-<xsl:value-of select="lost:datetime/lost:dateTo/@month" />-<xsl:value-of select="lost:datetime/lost:dateTo/@date" />@<xsl:value-of select="lost:datetime/lost:timeTo/@hour" />:<xsl:value-of select="lost:datetime/lost:timeTo/@minute" />  </td>  <td>  <xsl:for-each select="locations/location">  -<xsl:value-of select="." /><br/>  </xsl:for-each>  </td>  <td><xsl:value-of select="detail" /></td>  <td><xsl:value-of select="reportBy/name/firstName" /></td>  <td><xsl:value-of select="reportBy/email" /></td>  <td><xsl:value-of select="reportBy/phone" /></td>  <td><xsl:value-of select="reportBy/id" /></td>  </tr>  <!--</xsl:if>-->  </xsl:for-each>  </table>      </body>    </html>  </xsl:template>  </xsl:stylesheet> |

**ItemTobeClaimed.xsl for FoundItemReport.xml**

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| --- |
| <?xml version="1.0" encoding="UTF-8" ?>  <xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform"  xmlns:report="http://www.w3.org/xml/report/"  xmlns:found="http://www.w3.org/xml/found/"  xmlns:claim="http://www.w3.org/xml/claim/">  <xsl:template match="/">  <html>  <head>  <title>Items to be Claimed</title>  <style>  .foundItem {  font-family: "Trebuchet MS", Arial, Helvetica, sans-serif;  border-collapse: collapse;  width: 100%;  }  .foundItem td, .foundItem th {  border: 1px solid #ddd;  padding: 8px;  }  .foundItem tr:nth-child(even){background-color: #f2f2f2;}  .foundItem tr:hover {background-color: #ddd;}  .foundItem th {  padding-top: 12px;  padding-bottom: 12px;  text-align: left;  background-color: #c63f17;  color: white;  }  </style>  </head>    <body>  <h2>Items to be Claimed</h2>  <xsl:apply-templates/>  </body>  </html>  </xsl:template>  <xsl:template match="item">  <xsl:if test="status/@choice='Open'">  <table class="foundItem">  <tr>  <th colspan="2"><xsl:apply-templates select="@id" /> - <xsl:apply-templates select="description" /></th>  </tr>  <tr><xsl:apply-templates select="found:datetime" /></tr>  <tr><xsl:apply-templates select="location" /></tr>  <tr><xsl:apply-templates select="detail" /></tr>  <tr style="height:20px;"></tr>  </table>  </xsl:if>  </xsl:template>  <xsl:template match="@id">  <xsl:value-of select="."/>  </xsl:template>  <xsl:template match="description">  <xsl:value-of select="."/>  </xsl:template>  <xsl:template match="found:datetime">  <td style="width:130px">When its found: </td>  <td><xsl:apply-templates select="found:date" /> @ <xsl:apply-templates select="found:time" /></td>  </xsl:template>  <xsl:template match="found:date">  <xsl:value-of select="@year" />-<xsl:value-of select="@month" />-<xsl:value-of select="@date" />  </xsl:template>  <xsl:template match="found:time">  <xsl:value-of select="@hour" />:<xsl:value-of select="@minute" />  </xsl:template>  <xsl:template match="location">  <td>Location found: </td>  <td><xsl:value-of select="."/></td>  </xsl:template>  <xsl:template match="detail">  <td>Detail: </td>  <td><xsl:value-of select="." /></td>  </xsl:template>  </xsl:stylesheet> |

## HTML Outputs

**ListOfLostItem.xsl for LostItemReport.xml**



**ItemTobeClaimed.xsl for FoundItemReport.xml**

# Part 2 – JNI Program



## JNI Program Codes

## Print Screen of Outputs