cd.xml:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<catalog>
  <cd>
    <title>Empire Burlesque</title>
    <artist>Bob Dylan</artist>
    <country>USA</country>
    <company>Columbia</company>
    <price>10.90</price>
    <year>1985</year>
  </cd>
  <cd>
    <title>Hide your heart</title>
    <artist>Bonnie Tyler</artist>
    <country>UK</country>
    <company>CBS Records</company>
    <price>9.90</price>
    <year>1988</year>
  </cd>
  <cd>
    <title>Greatest Hits</title>
    <artist>Dolly Parton</artist>
    <country>USA</country>
    <company>RCA</company>
    <price>9.90</price>
    <year>1982</year>
  </cd>
  <cd>
    <title>Still got the blues</title>
    <artist>Gary Moore</artist>
    <country>UK</country>
    <company>Virgin records</company>
    <price>10.20</price>
    <year>1990</year>
  </cd>
  <cd>
    <title>Eros</title>
    <artist>Eros Ramazzotti</artist>
    <country>EU</country>
    <company>BMG</company>
    <price>9.90</price>
    <year>1997</year>
  </cd>
  <cd>
    <title>One night only</title>
    <artist>Bee Gees</artist>
    <country>UK</country>
    <company>Polydor</company>
    <price>10.90</price>
    <year>1998</year>
  </cd>
```

```xml
<cd>
  <title>Sylvias Mother</title>
  <artist>Dr.Hook</artist>
  <country>UK</country>
  <company>CBS</company>
  <price>8.10</price>
  <year>1973</year>
</cd>
<cd>
  <title>Maggie May</title>
  <artist>Rod Stewart</artist>
  <country>UK</country>
  <company>Pickwick</company>
  <price>8.50</price>
  <year>1990</year>
</cd>
<cd>
  <title>Romanza</title>
  <artist>Andrea Bocelli</artist>
  <country>EU</country>
  <company>Polydor</company>
  <price>10.80</price>
  <year>1996</year>
</cd>
<cd>
  <title>When a man loves a woman</title>
  <artist>Percy Sledge</artist>
  <country>USA</country>
  <company>Atlantic</company>
  <price>8.70</price>
  <year>1987</year>
</cd>
<cd>
  <title>Black angel</title>
  <artist>Savage Rose</artist>
  <country>EU</country>
  <company>Mega</company>
  <price>10.90</price>
  <year>1995</year>
</cd>
<cd>
  <title>1999 Grammy Nominees</title>
  <artist>Many</artist>
  <country>USA</country>
  <company>Grammy</company>
  <price>10.20</price>
  <year>1999</year>
</cd>
<cd>
  <title>For the good times</title>
  <artist>Kenny Rogers</artist>
  <country>UK</country>
```

```
  <company>Mucik Master</company>
  <price>8.70</price>
  <year>1995</year>
</cd>
<cd>
  <title>Big Willie style</title>
  <artist>Will Smith</artist>
  <country>USA</country>
  <company>Columbia</company>
  <price>9.90</price>
  <year>1997</year>
</cd>
<cd>
  <title>Tupelo Honey</title>
  <artist>Van Morrison</artist>
  <country>UK</country>
  <company>Polydor</company>
  <price>8.20</price>
  <year>1971</year>
</cd>
<cd>
  <title>Soulsville</title>
  <artist>Jorn Hoel</artist>
  <country>Norway</country>
  <company>WEA</company>
  <price>7.90</price>
  <year>1996</year>
</cd>
<cd>
  <title>The very best of</title>
  <artist>Cat Stevens</artist>
  <country>UK</country>
  <company>Island</company>
  <price>8.90</price>
  <year>1990</year>
</cd>
<cd>
  <title>Stop</title>
  <artist>Sam Brown</artist>
  <country>UK</country>
  <company>A and M</company>
  <price>8.90</price>
  <year>1988</year>
</cd>
<cd>
  <title>Bridge of Spies</title>
  <artist>T`Pau</artist>
  <country>UK</country>
  <company>Siren</company>
  <price>7.90</price>
  <year>1987</year>
</cd>
```

```xml
<cd>
  <title>Private Dancer</title>
  <artist>Tina Turner</artist>
  <country>UK</country>
  <company>Capitol</company>
  <price>8.90</price>
  <year>1983</year>
</cd>
<cd>
  <title>Midt om natten</title>
  <artist>Kim Larsen</artist>
  <country>EU</country>
  <company>Medley</company>
  <price>7.80</price>
  <year>1983</year>
</cd>
<cd>
  <title>Pavarotti Gala Concert</title>
  <artist>Luciano Pavarotti</artist>
  <country>UK</country>
  <company>DECCA</company>
  <price>9.90</price>
  <year>1991</year>
</cd>
<cd>
  <title>The dock of the bay</title>
  <artist>Otis Redding</artist>
  <country>USA</country>
  <company>Stax Records</company>
  <price>7.90</price>
  <year>1968</year>
</cd>
<cd>
  <title>Picture book</title>
  <artist>Simply Red</artist>
  <country>EU</country>
  <company>Elektra</company>
  <price>7.20</price>
  <year>1985</year>
</cd>
<cd>
  <title>Red</title>
  <artist>The Communards</artist>
  <country>UK</country>
  <company>London</company>
  <price>7.80</price>
  <year>1987</year>
</cd>
<cd>
  <title>Unchain my heart</title>
  <artist>Joe Cocker</artist>
  <country>USA</country>
```

```xml
    <company>EMI</company>
    <price>8.20</price>
    <year>1987</year>
  </cd>
</catalog>
```

cd.xsl:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
<xsl:template match="/">
<html>
<body>
  <h2>My CD Collection</h2>
  <table border="1">
    <tr bgcolor="#9acd32">
      <th style="text-align:left">Title</th>
      <th style="text-align:left">Artist</th>
    </tr>
    <xsl:for-each select="catalog/cd">
    <tr>
      <td><xsl:value-of select="title"/></td>
      <td><xsl:value-of select="artist"/></td>
    </tr>
    </xsl:for-each>
  </table>
</body>
</html>
</xsl:template>
</xsl:stylesheet>
```

O/P:

My CD Collection

Title	Artist
Empire Burlesque	Bob Dylan
Hide your heart	Bonnie Tyler
Greatest Hits	Dolly Parton
Still got the blues	Gary Moore
Eros	Eros Ramazzotti
One night only	Bee Gees
Sylvias Mother	Dr.Hook
Maggie May	Rod Stewart
Romanza	Andrea Bocelli
When a man loves a woman	Percy Sledge
Black angel	Savage Rose
1999 Grammy Nominees	Many
For the good times	Kenny Rogers
Big Willie style	Will Smith

XSLT uses XPath to find information in an XML document. XPath is used to navigate through elements and attributes in XML documents.

Correct Style Sheet Declaration

The root element that declares the document to be an XSL style sheet is <xsl:stylesheet> or <xsl:transform>.

<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">

Link the XSL Style Sheet to the XML Document

Add the XSL style sheet reference to your XML document ("cdcatalog.xml"):
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/xsl" href="cdcatalog.xsl"?>
<catalog>

XSLT <xsl:template> Element
An XSL style sheet consists of one or more set of rules that are called templates.

A template contains rules to apply when a specified node is matched.
The match attribute is used to associate a template with an XML element. The match attribute can also be used to define a template for the entire XML document. The value of the match attribute is an XPath expression (i.e. match="/" defines the whole document).

<xsl:template match="/">

The <xsl:template> element defines a template. The match="/" attribute associates the template with the root of the XML source document.
The content inside the <xsl:template> element defines some HTML to write to the output.

XSLT <xsl:value-of> Element:

The <xsl:value-of> element can be used to extract the value of an XML element and add it to the output stream of the transformation:

<tr>
    <td><xsl:value-of select="catalog/cd/title"/></td>
    <td><xsl:value-of select="catalog/cd/artist"/></td>
  </tr>
Note: The select attribute, in the example above, contains an XPath expression. An XPath expression works like navigating a file system; a forward slash (/) selects subdirectories.

The <xsl:for-each> Element:
The XSL <xsl:for-each> element can be used to select every XML element of a specified node-set:

<xsl:for-each select="catalog/cd">
   <tr>
    <td><xsl:value-of select="title"/></td>
    <td><xsl:value-of select="artist"/></td>
   </tr>
   </xsl:for-each>

Filtering the Output

We can also filter the output from the XML file by adding a criterion to the select attribute in the <xsl:for-each> element.

<xsl:for-each select="catalog/cd[artist='Bob Dylan']">

Legal filter operators are:

  = (equal)
  != (not equal)
  < less than
  > greater than

<xsl:for-each select="catalog/cd[artist='Bob Dylan']">
   <tr>
    <td><xsl:value-of select="title"/></td>
    <td><xsl:value-of select="artist"/></td>
   </tr>
   </xsl:for-each>

XSLT <xsl:sort> Element:

To sort the output, simply add an <xsl:sort> element inside the <xsl:for-each> element in the XSL file
<xsl:for-each select="catalog/cd">
   <xsl:sort select="artist"/>
   <tr>
    <td><xsl:value-of select="title"/></td>
    <td><xsl:value-of select="artist"/></td>
   </tr>
  </xsl:for-each>

XSLT <xsl:if> Element:
To put a conditional if test against the content of the XML file, add an <xsl:if> element to the XSL document**.**
Syntax:
<xsl:if test="expression">
  ...some output if the expression is true...
</xsl:if>
To add a conditional test, add the <xsl:if> element inside the <xsl:for-each> element in the XSL file

```
<xsl:if test="price &gt; 10">
    <tr>
      <td><xsl:value-of select="title"/></td>
      <td><xsl:value-of select="artist"/></td>
      <td><xsl:value-of select="price"/></td>
    </tr>
  </xsl:if>
```

OUTPUT:

My CD Collection

Title	Artist	Price
Empire Burlesque	Bob Dylan	10.90
Still got the blues	Gary Moore	10.20
One night only	Bee Gees	10.90
Romanza	Andrea Bocelli	10.80
Black angel	Savage Rose	10.90
1999 Grammy Nominees	Many	10.20

XSLT <xsl:choose> Element:

The <xsl:choose> element is used in conjunction with <xsl:when> and <xsl:otherwise> to express multiple conditional tests
Syntax
```
<xsl:choose>
  <xsl:when test="expression">
    ... some output ...
  </xsl:when>
  <xsl:otherwise>
    ... some output ....
  </xsl:otherwise>
</xsl:choose>
```

To insert a multiple conditional test against the XML file, add the <xsl:choose>, <xsl:when>, and <xsl:otherwise> elements to the XSL file

```
<xsl:for-each select="catalog/cd">
   <tr>
     <td><xsl:value-of select="title"/></td>
     <xsl:choose>
       <xsl:when test="price &gt; 10">
         <td bgcolor="#ff00ff">
         <xsl:value-of select="artist"/></td>
       </xsl:when>
       <xsl:otherwise>
         <td><xsl:value-of select="artist"/></td>
```

```
      </xsl:otherwise>
    </xsl:choose>
  </tr>
  </xsl:for-each>
```

OUTPUT:

My CD Collection

Title	Artist
Empire Burlesque	Bob Dylan
Hide your heart	Bonnie Tyler
Greatest Hits	Dolly Parton
Still got the blues	Gary Moore
Eros	Eros Ramazzotti
One night only	Bee Gees
Sylvias Mother	Dr.Hook
Maggie May	Rod Stewart
Romanza	Andrea Bocelli
When a man loves a woman	Percy Sledge
Black angel	Savage Rose
1999 Grammy Nominees	Many
For the good times	Kenny Rogers
Big Willie style	Will Smith
Tupelo Honey	Van Morrison
Soulsville	Jorn Hoel
The very best of	Cat Stevens
Stop	Sam Brown

XSLT <xsl:apply-templates> Element:

The <xsl:apply-templates> element applies a template to the current element or to the current element's child nodes

If we add a select attribute to the <xsl:apply-templates> element it will process only the child element that matches the value of the attribute. We can use the select attribute to specify the order in which the child nodes are processed.

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform">

<xsl:template match="/">
  <html>
  <body>
  <h2>My CD Collection</h2>
```

```
  <xsl:apply-templates/>
  </body>
  </html>
</xsl:template>

<xsl:template match="cd">
  <p>
    <xsl:apply-templates select="title"/>
    <xsl:apply-templates select="artist"/>
  </p>
</xsl:template>

<xsl:template match="title">
  Title: <span style="color:#ff0000">
  <xsl:value-of select="."/></span>
  <br />
</xsl:template>

<xsl:template match="artist">
  Artist: <span style="color:#00ff00">
  <xsl:value-of select="."/></span>
  <br />
</xsl:template>

</xsl:stylesheet>
```

OUTPUT:
My CD Collection

Title: Empire Burlesque
Artist: Bob Dylan

Title: Hide your heart
Artist: Bonnie Tyler

Title: Greatest Hits
Artist: Dolly Parton

Title: Still got the blues
Artist: Gary Moore

Title: Eros
Artist: Eros Ramazzotti

Title: One night only
Artist: Bee Gees

Title: Sylvias Mother
Artist: Dr.Hook

Title: Maggie May
Artist: Rod Stewart