Name:_____

Homework 1 for CSC 513: E-Commerce Technologies

Collaborative Work

You may form teams of 1–4 members (of students in this class) to cooperate on this problem set. After discussing the problem, please write up your answers individually. Indicate the names of the other members in your team, if any.

1 XML Schema

Listing 1: A simple XML document showing a collection of songs

```
<?xml version="1.0"?>
<!-- Sgr, lg, and ti abbreviate Singer, -->
<!-- language, and title, respectively. -->
<!-- The standard (ISO 639) codes for -->
<!-- English and Punjabi are en and pa, -->  5
<!-- respectively. -->
<Songs>
 <Sgr name='Eagles' genre='rock'>
  <Song lg='en' ti='Hotel_California'/>
  <Song lg='en' ti='Seven_Bridges_Road'/>  10
 </Sgr>
 <Sgr name='H_Belafonte' genre='reggae'>
  <Song lg='cpe' ti='Day_O'/>
  <Song lg='en' ti='Jamaica_Farewell'/>
 </Sgr>  15
 <Sgr name='J_Prasad' genre='classical'>
  <Song lg='him' ti='Ajahoon_Na_Bhejiho'/>
  <Song lg='pa' ti='Mera_Dil_Darda'/>
  <Song lg='en' ti='Never_a_Result'/>
 </Sgr>  20
</Songs>
```

1.1. (40 points) Give an XML Schema document that would generate the instance document of Listing 1.

Homework 1 for CSC 513: E-Commerce Technologies

Independent Work

You must solve this problem set individually without any assistance from anyone.

2 XML Schema

Listing 2: An XML document for a list of songs

```
<?xml version="1.0"?>
<SongList>
 <Song lg='en' ti='Hotel_California'/>
 <Song lg='en' ti='Seven_Bridges_Road'/>
 <Song lg='en' ti='Jamaica_Farewell'/>            5
</SongList>
```

Listing 3: XML document with singer elements nested within song elements

```
<?xml version="1.0"?>
<SongList>
 <Song lg='en' ti='Hotel_California'>
  <Sgr name='Eagles' genre='rock'/>
 </Song>                                          5
 <Song lg='en' ti='Seven_Bridges_Road'>
  <Sgr name='Eagles' genre='rock'/>
 </Song>
 <Song lg='cpe' ti='Day_O'>
  <Sgr name='H_Belafonte' genre='reggae'/>        10
 </Song>
 <Song lg='en' ti='Jamaica_Farewell'>
  <Sgr name='H_Belafonte' genre='reggae'/>
 </Song>
 <Song lg='him' ti='Ajahoon_Na_Bhejiho'>         15
  <Sgr name='J_Prasad' genre='classical'/>
 </Song>
 <Song lg='pa' ti='Mera_Dil_Darda'>
  <Sgr name='J_Prasad' genre='classical'/>
 </Song>                                          20
 <Song lg='en' ti='Never_a_Result'>
  <Sgr name='J_Prasad' genre='classical'/>
 </Song>
</SongList>
```

2.1. (40 points) Give an XML Schema document that would generate the instance document of Listing 2.

2.2. (40 points) Give an XML Schema document that would generate the instance document of Listing 3.