Exercises XML files

Exercise 1

For this exercise you will use the XML file *plants.xml.*

a) Write a program that makes the following overview of the plants.

```
Plant 1 : BLOODROOT (Sanguinaria canadensis)
Plant 2 : COLUMBINE (Aquilegia canadensis)
Plant 3 : MARSH MARIGOLD (Caltha palustris)
Plant 4 : COWSLIP (Caltha palustris)
Plant 5 : DUTCHMAN'S-BREECHES (Diecentra cucullaria)
Plant 6 : GINGER, WILD (Asarum canadense)
Plant 7 : HEPATICA (Hepatica americana)
Plant 8 : LIVERLEAF (Hepatica americana)
Plant 9 : JACK-IN-THE-PULPIT (Arisaema triphyllum)
Plant 10 : MAYAPPLE (Podophyllum peltatum)
Plant 11 : PHLOX, WOODLAND (Phlox divaricata)
Plant 12 : PHLOX, BLUE (Phlox divaricata)
Plant 13 : SPRING-BEAUTY (Claytonia virginica)
Plant 14 : TRILLIUM (Trillium grandiflorum)
Plant 15 : WAKE ROBIN (Trillium grandiflorum)
Plant 16 : VIOLET, DOG-TOOTH (Erythronium americanum)
Plant 17 : TROUT LILY (Erythronium americanum)
Plant 18 : ADDER'S-TONGUE (Erythronium americanum)
Plant 19 : ANEMONE (Anemone blanda)
Plant 20 : GRECIAN WINDFLOWER (Anemone blanda)
Plant 21 : BEE BALM (Monarda didyma)
Plant 22 : BERGAMONT (Monarda didyma)
Plant 23 : BLACK-EYED SUSAN (Rudbeckia hirta)
Plant 24 : BUTTERCUP (Ranunculus)
Plant 25 : CROWFOOT (Ranunculus)
Plant 26 : BUTTERFLY WEED (Asclepias tuberosa)
Plant 27 : CINQUEFOIL (Potentilla)
Plant 28 : PRIMROSE (Oenothera)
Plant 29 : GENTIAN (Gentiana)
Plant 30 : BLUE GENTIAN (Gentiana)
Plant 31 : JACOB'S LADDER (Polemonium caeruleum)
Plant 32 : GREEK VALERIAN (Polemonium caeruleum)
Plant 33 : CALIFORNIA POPPY (Eschscholzia californica)
Plant 34 : SHOOTING STAR (Dodecatheon)
Plant 35 : SNAKEROOT (Cimicifuga)
Plant 36 : CARDINAL FLOWER (Lobelia cardinalis)
```

b) Adjust your program so that you only print the plants that are best in the sun.

```
Plant 1 : BLOODROOT (Sanguinaria canadensis)
Plant 2 : MARSH MARIGOLD (Caltha palustris)
Plant 3 : GINGER, WILD (Asarum canadense)
Plant 4 : PHLOX, WOODLAND (Phlox divaricata)
Plant 5 : PHLOX, BLUE (Phlox divaricata)
Plant 6 : TRILLIUM (Trillium grandiflorum)
Plant 7 : WAKE ROBIN (Trillium grandiflorum)
Plant 8 : BLACK-EYED SUSAN (Rudbeckia hirta)
Plant 9 : BUTTERFLY WEED (Asclepias tuberosa)
Plant 10 : PRIMROSE (Oenothera)
Plant 11 : GENTIAN (Gentiana)
Plant 12 : BLUE GENTIAN (Gentiana)
Plant 13 : CALIFORNIA POPPY (Eschscholzia californica)
```

Exercise 2

XML files are often distributed by open data initiatives. For this exercise you use the file *cinemas.xml*. This file has been distributed as open data by the City of Antwerp (so the information is in Dutch).

Processing and combining such open data sources and converting this data into information suitable for analysis is an important component for students interested in Business Intelligence.

The file *cinemas.xml* is not nicely aligned. It's up to you to interpret the file so you can print a list of the Antwerp cinemas. (the first 6 can be found in the screenshot)

```
Bioscopen in Antwerpen
Cartoons
KAASSTRAAT 4-6
2000 Antwerpen

UGC
VAN ERTBORNSTRAAT 13-15
2018 Antwerpen

Metropolis
GROENENDAALLAAN 394-422
2030 Antwerpen

Ciné Royale
KONINGIN ASTRIDPLEIN  12
2018 Antwerpen

Filmhuis Klappei
KLAPPEISTRAAT 2
2060 Antwerpen

Cinéma Zuid
WAALSEKAAI 47
2000 Antwerpen
```

Exercise 3

```
Overview IT vacancies:

1.   Position:   Full Stack Java Developer
     Company:    Ausy
     Contact:    cindy.morren@cx.ausy.be

2.   Position:   System Engineer
     Company:    Tobania
     Contact:    jobs@tobania.be

3.   Position:   Embedded Software Engineer Electronics
     Company:    Experis
     Contact:    info@experis.be

4.   Position:   Junior J2EE Architect
     Company:    Experis
     Contact:    info@experis.be

5.   Position:   .NET Developer
     Company:    Experis
     Contact:    info@experis.be
```

For this exercise you will use the XML-file *jobs.xml*.

Write a program that makes the following overview.

Note: only the vacancies for IT jobs are mentioned!

Exercise 4

For this exercise you use the XML-file *drugs.xml*.

Write a program to make some changes to this file.

- You remove the element *pharmaceutical_forms* everywhere (including all child elements).
- You make sure the name of the drug is in capital letters.

You save the custom XML document under the name *drugs_changed.xml*

```xml
<drugs>
    <leaflet code="A1551">
        <name>IBUPROFEN EG</name>
        <group>anti-inflammatory</group>
        <therapeutic_indication>remedy against pain, fever and inflammation</therapeutic_indication>
        <prescription />
    </leaflet>
    <leaflet code="Z1C209">
        <name>DAFALGAN</name>
        <group>pain medication</group>
        <therapeutic_indication>symptomatic treatment of fever and pain</therapeutic_indication>
    </leaflet>
    <leaflet code="P56145">
        <name>ASPIRINE</name>
        <group>pain medication</group>
        <therapeutic_indication>symptomatic treatment of fever and pain</therapeutic_indication>
    </leaflet>
    <leaflet code="A14965">
        <name>PERDOLAN</name>
        <group>pain medication</group>
        <therapeutic_indication>symptomatic treatment of fever and pain</therapeutic_indication>
    </leaflet>
    <leaflet code="A15888">
        <name>ACTIFED</name>
        <group>anti-cough</group>
        <therapeutic_indication>reduction of swelling of the nasal mucosa in case of rhinitis</therapeutic_indication>
        <prescription />
    </leaflet>
</drugs>
```

Exercise 5

For this exercise you use the file *songs.txt*. Write a program that converts this txt file to an XML file songs.xml.

```
Jasper Erkens;The Brighter Story
Milow;Darkness Ahead and Behind
Kings of Leon;Revelry
Muse;Undisclosed Desires
Kings of Leon;Sex on fire
Mumford and Sons;Little Lion Man
Them Crooked Vultures;New Fang
Pearl Jam;The Fixer
Daan;Icon
Wallace Vanborn;Atom Juggler
```

```xml
▼<compilation>
  ▼<track>
      <artist>Jasper Erkens</artist>
      <song>The Brighter Story</song>
  </track>
  ▼<track>
      <artist>Milow</artist>
      <song>Darkness Ahead and Behind</song>
  </track>
  ▼<track>
      <artist>Kings of Leon</artist>
      <song>Revelry</song>
  </track>
  ▼<track>
      <artist>Muse</artist>
      <song>Undisclosed Desires</song>
  </track>
  ▼<track>
      <artist>Kings of Leon</artist>
      <song>Sex on fire</song>
  </track>
  ▼<track>
      <artist>Mumford and Sons</artist>
      <song>Little Lion Man</song>
  </track>
  ▼<track>
      <artist>Them Crooked Vultures</artist>
      <song>New Fang</song>
  </track>
  ▼<track>
      <artist>Pearl Jam</artist>
      <song>The Fixer</song>
  </track>
  ▼<track>
      <artist>Daan</artist>
      <song>Icon</song>
  </track>
  ▼<track>
      <artist>Wallace Vanborn</artist>
      <song>Atom Juggler</song>
  </track>
</compilation>
```