

Tema 4

1: Creati doua Scheme XML care sa corespunda urmatoarei specificatii.

Sa presupunem ca lucrati intr-un magazin de inchiriat DVD-uri. Trebuie sa stocati informatii referitoare la titlurile DVD-urilor aflate in magazin si la review-urile lor folosind urmatoarea structura:

Pentru fiecare titlu de DVD:

- DVD title (1 aparitie, required)
- DVD Release Date (CCYY-MM-DD) (0 sau o aparitie, optional)
- Studio/Production (0 sau o aparitie, optional)
- Rated (NC-17/R/PG/PG-13/G/NR) (0 sau o aparitie, optional)
- Region code (int cuprins intre 0 si 8, required)
- Director (0 sau mai multe aparitii, optional)
- Starring (0 sau mai multe aparitii, optional)

Pentru fiecare review:

- DVD title (1 aparitie, required)
- Rating (int cuprins intre 1 si 5, required)
- Reviewer (0 sau o aparitie, optional)
- Review date (CCYY-MM-DD) (0 sau o aparitie, optional)
- Location of the reviewer (City, State) (1 aparitie, required)
- Review Description (1 aparitie, required)

Observatii:

- 1) Trebuie realizate doua XML Schema: una pentru titlurile DVD-urilor (dvdtitle.xsd) si una pentru review-uri (review.xsd)
- 2) Se vor impune restrictii referitoare la formatul datei (regular expressions), la valorile posibile pentru pentru campul "Rated" si pentru limitele valorilor ce indica codul regiunii si ratingul

Part 2: Creati doua documente XML care sa respecte Schemele de la punctul 1 si care sa contina datele din tabellele de mai jos.

DVD Title

<u>DVD title</u>	<u>DVD Release Date</u>	<u>Studio/Production</u>	<u>Rated</u>	<u>Region Code</u>	<u>Director</u>	<u>Starring</u>
A.I. Artificial Intelligence	2002-03-05	Universal Studios	PG-13	1	Steven Spielberg	Haley Joel Osment, Jude Law
Beauty and the	2002-	Walt Disney Home	G	4	Kirk Wise,	Paige O'Hara,

Beast	10-08	Video			Gary Trousdale	Robby Benson
Disclosure	1997-08-22	Warner Studios	R	1	Barry Levinson	Michael Douglas, Demi Moore
Ghost	2001-04-24	Paramount Home Video	PG-13	1	Jerry Zucker	Patrick Swayze, Demi Moore
Legally Blonde	2001-11-06	MGM	PG-13	8	Robert Luketic	Reese Witherspoon, Luke Wilson
Moulin Rouge	2001-12-18	Twentieth Century Fox	PG-13	1	Baz Luhrmann	Nicole Kidman, Ewan McGregor
Terminator 2 - Judgment Day	2001-01-01	ARTISAN ENTERTAINMENT	R	6	James Cameron	Arnold Schwarzenegger, Linda Hamilton
The Matrix	1999-09-21	Warner Studios	R	2	Larry Wachowski, Andy Wachowski	Keanu Reeves, Laurence Fishburne
The Mummy Returns	2001-10-02	Universal/MCA	PG-13	3	Stephen Sommers	Brendan Fraser, Rachel Weisz
Titanic	1999-08-31	Paramount Home Video	PG-13	2	James Cameron	Leonardo DiCaprio, Kate Winslet

Review

DVD title	Rating	Reviewer	Review Date	Location	Review
A.I. Artificial Intelligence	5	Andrew	2002-01-31	San Diego, CA	Amazing, visually stunning and thought-inspiring
A.I. Artificial Intelligence	1	Chris	2002-01-09	Deerfield, IL	What a JOKE!
Beauty and the Beast	5	George	2002-02-27	Baltimore, MD	A Disney film that deserves its Best Picture Nomination.
Beauty and the Beast	2	Robert	2002-03-19	LA, CA	Disappointed.
Disclosure	1	George	2002-03-03	Baltimore, MD	This movie is insulting.
Disclosure	5	Matthew	2002-03-11	Topsail Beach, NC	An Excellent Adaptation
Ghost	2	Alex	2002-03-01	Chicago, IL	A tremendous disappointment.
Ghost	5	Robert	2002-03-13	LA, CA	YOU'LL FALL IN LOVE WITH "GHOST"!
Legally Blonde	1	Jeremy	2002-02-18	Buffalo, NY	Looks Good Enough - Too Bad It Makes No Sense
Legally Blonde	4	Robert	2002-01-11	LA, CA	Alright DVD

Moulin Rouge	3	Angela	2002-03-16	NYC, NY	You have to watch it twice.,
Moulin Rouge	5	John	2002-02-19	Houston, TX	Love it or Hate it--it is a great film and an awesome DVD!.,
Moulin Rouge	5	Robert	2002-01-22	LA, CA	Best movie of 2001 and a great DVD to own.
Terminator 2 - Judgment Day	5	Angela	2002-02-28	NYC, NY	Oh, boy. This is the best special edition DVD yet
Terminator 2 - Judgment Day	4	Christine	2002-01-14	El Paso, TX	SciFi Winner
The Matrix	5	David	2002-03-14	Palos Park, IL	WITHOUT A DOUBT A MASTERPIECE OF A MOVIE
The Matrix	2	Eugene	2002-01-25	Riverside, CA	Great idea swiftly plums downhill
The Mummy Returns	2	Eugene	2002-01-02	Riverside, CA	Indiana Jones Revisited
The Mummy Returns	1	Justine	2002-03-12	San Francisco, CA	You've got to be kidding me!!!
The Mummy Returns	5	Tom	2002-02-12	La Habra, CA	The Mummy - the best DVD you can buy
Titanic	5	Angela	2002-03-06	NYC, NY	The most triumphant romance film of all time
Titanic	2	Bill	2002-01-28	Casper, WY	Hollywood produces another sinking ship.

Datele din tabelul DVD title vor fi utilizate pentru popularea documentului dvdtitle.xml iar cele din tabelul Review vor fi utilizate pentru a popula documentul review.xml. Verificati ca XML-urile sunt validate cu XML Schemele propuse.

Part 3: Folositi XQuery pentru a raspunde la urmatoarele 4 interogari.

Interogari:

1. Pentru fiecare studio in parte, afisati titlurile DVD-urilor care au fost realizate la studioul respectiv. Sortati iesirea in functie de numele studioului si de titlul DVD-ului in ordine crescatoare (de la A la Z)

Ex:

```
<Studios>
  <Studio>
    <name>..... </name>
  </DVDTitles>
```

```

                <Title> ..... </Title>
                <Title> ..... </Title>
                <Title> ..... </Title>
            </DVDTitles>
        </Studio>
        .....
        <Studio>
            <name>..... </name>
            <DVDTitles>
                <Title> ..... </Title>
                <Title> ..... </Title>
                <Title> ..... </Title>
            </DVDTitles>
        </Studio>
    </Studios>

```

2. Afisati media ratingurilor reviewerilor pentru fiecare titlu de DVD. Sortati iesirea in functie de media obtinuta in ordine descrescatoare (de la cele cu media mare la cele cu media mica)

Ex:

```

<Ratings>
    <Title-Rating>
        <Title>Terminator 2 - Judgment Day</Title>
        <avgrating> 4 </avgrating>
    </Title-Rating>
    ...
    <Title-Rating>
        <Title>Terminator 2 - Judgment Day</Title>
        <avgrating> 4 </avgrating>
    </Title-Rating>
</Ratings>

```

3. Pentru fiecare reviewer in parte afisati numele tuturor DVD-urilor carora le-a facut review respectivul reviewer.

Ex:

```

<Reviewers>
    <Reviewer>
        <name> ... </name>
        <DVDTitles>
            <Title> ... </Title>
            ...
            <Title> ... </Title>
        </DVDTitles>
    </Reviewer>
    ....
    <Reviewer>
        <name> ... </name>
        <DVDTitles>
            <Title> ... </Title>
            ...
            <Title> ... </Title>
        </DVDTitles>

```

```
</Reviewer>
</Reviewers>
```

4. Pentru toate studiourile care au media ratingurilor reviewerilor pentru toate DVD-urile produse la acel studio mai mare ca 3, afisati numele studioului, titlurile DVD-urilor realizate la acel studio si media ratingurilor reviewerilor.

OBS: La punctul 2 aveati de calculat media reviewerilor pentru fiecare film in parte. La acest punct, trebuie calculata media reviewerilor pe intregul studio (adica daca un studio a produs mai multe filme, media studioului este data de media tuturor reviewerilor pentru toate filmele produse la acel studio).

Ex:

```
<Studios>
  <Studio>
    <name> ... </name>
    <Title> .... </Title>
    <AverageRating> ... </AverageRating>
  </Studio>
  ....
  <Studio>
    <name> ... </name>
    <Title> .... </Title>
    <AverageRating> ... </AverageRating>
  </Studio>
</Studios>
```

Instructiuni:

Se va uploada o arhiva (preferabil .zip) care sa contina urmatoarele fisiere:

1. Readme.txt
2. Schemele XML dvdtitles.xsd (pentru dvdtitles.xml) si reviews.xsd (pentru reviews.xml)
3. Fisierele XML dvdtitles.xml si reviews.xml completate cu informatiile din tabele
4. Cele 4 XQueries q1.xquery, q2.xquery, q3.xquery, q4.xquery