

Smart Cliff Learning Solutions

MBT MERN 1 – Technical Assessment 04

Topic: Database

Date: 26/7/2023

Time: 9:15 am – 1:30 pm

Duration: 240min

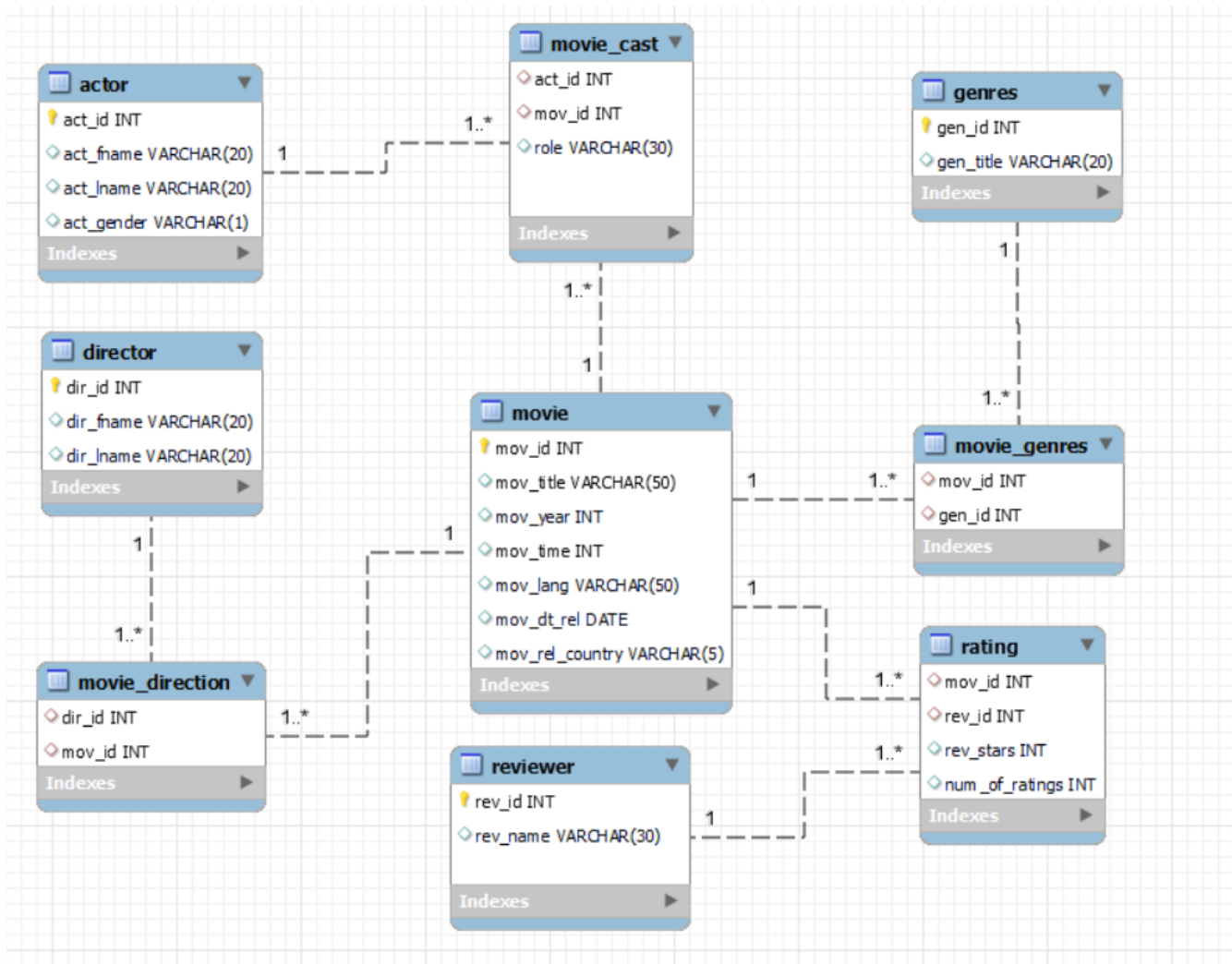
Total Marks: 70 Marks

MYSQL

PART A: MCQ (10 x 1 : 10 Marks)

PART B: QUERYING & PROGRAMMING (40 MARKS)

The sample database represents some of the data storage and retrieval about a movie related industry. Most of the people loves to watch movie, and for all of them we are providing a sample information about the movie related questions coming to their mind. This design of database will make it easier to the movie lovers to know the curiosities about the movies.



Execute the following queries in Oracle and attach the output along with queries.

1. Basic Queries (15 marks)

1. Create the above tables with the given fields with required keys. Insert the records using the given script for the respective tables which is attached as an Annexure-1(moviedbinsert.sql). **(6 marks)**

Note:

- a. Movie release date can be optional.
 - b. Reviewer may not want to give their name.
 - c. Rating stars are fractional.
 - d. Number of ratings can be skipped at times.
2. Write a SQL query to find those movies, which were released before 1998. Return movie title. **(2 marks)**
 3. Write a SQL query to find all reviewers who have rated seven or more stars to their rating. Return reviewer name. **(3 marks)**
 4. Write a SQL query to find the movie titles that contain the word 'Boogie Nights'. Sort the result-set in ascending order by movie year. Return movie ID, movie title and movie release year. **(3 marks)**

5. Write a SQL query to find when the movie 'American Beauty' released. Return movie release year. **(1 marks)**

2. Sub Queries (6 marks)

1. Write a SQL query to find the movies without any rating. Return movie title. (1 marks)
2. Write a SQL query to find the movies that have not been reviewed by any reviewer body other than 'Paul Monks'. Return movie title. (3 marks)
3. Write a SQL query to find the name of all reviewers and movies together in a single list. (2 marks)

3. Joins (4 marks)

1. Write a SQL query to find out who was cast in the movie 'Annie Hall'. Return actor first name, last name, and role. **(2 marks)**
2. Write a SQL query to find the directors who have directed films in a variety of genres. Group the result set on director first name, last name, and genres title. Sort the result-set in ascending order by director first name and last name. Return director first name, last name, and number of genres movies. **(2 marks)**

MongoDB

4. Insert the following documents into a movies collection.(5 Marks)

{title : Fight Club,writer : Chuck Palahniuk,year : 1999,actors : [Brad Pitt, Edward Norton]}

{title : Pulp Fiction,writer : Quentin Tarantino,year : 1994,actors : [John Travolta, Uma Thurman]}

{title : Inglorious Basterds,writer : Quentin Tarantino,year : 2009,actors : [Brad Pitt, Diane Kruger, Eli Roth]}

{title : The Hobbit: An Unexpected Journey,writer : J.R.R. Tolkein,year : 2012,franchise : The Hobbit}

{title : The Hobbit: The Desolation of Smaug,writer : J.R.R. Tolkein,year : 2013,franchise : The Hobbit}

{title : The Hobbit: The Battle of the Five Armies,writer : J.R.R. Tolkein,year : 2012,franchise : The Hobbit,synopsis : Bilbo and Company are forced to engage in a war against an array of combatants and keep the Lonely Mountain from falling into the hands of a rising darkness.}

{title : Pee Wee Herman's Big Adventure}

{title : Avatar}

5. Query / Find Documents(10 Marks)

1. Write a query to get all documents with writer set to "Quentin Tarantino".
2. Write a query to get all documents where actors include "Brad Pitt".
3. Write a query to get all documents with franchise set to "The Hobbit".
4. Write a query to get all movies released in the 90s
5. Write a query to get all movies released before the year 2000 or after 2010.

6. Update Documents(3Marks)

1. Add a synopsis to "The Hobbit: An Unexpected Journey" : "A reluctant hobbit, Bilbo Baggins, sets out to the Lonely Mountain with a spirited group of dwarves to reclaim their mountain home - and the gold within it - from the dragon Smaug."
2. Add a synopsis to "The Hobbit: The Desolation of Smaug" : "The dwarves, along with Bilbo Baggins and Gandalf the Grey, continue their quest to reclaim Erebor, their homeland, from Smaug. Bilbo Baggins is in possession of a mysterious and magical ring."
3. Add an actor named "Samuel L. Jackson" to the movie "Pulp Fiction"

7. Delete Documents(2Marks)

1. Delete the movie "Pee Wee Herman's Big Adventure"
2. Delete the movie "Avatar"

4. Aggregate (15 Marks)

Import the following documents(as csv file) into a collection 'cityPopulation'. (3Marks)

```
{ "_id" : "02906", "city" : "PROVIDENCE", "pop" : 31069, "state" : "RI", "capital" : { "name" :
"Providence", "electoralCollege" : 4 } }
{ "_id" : "02108", "city" : "BOSTON", "pop" : 3697, "state" : "MA", "capital" : { "name" :
"Boston", "electoralCollege" : 11 } }
{ "_id" : "10001", "city" : "NEW YORK", "pop" : 18913, "state" : "NY", "capital" : { "name" :
"Albany", "electoralCollege" : 29 } }
{ "_id" : "01012", "city" : "CHESTERFIELD", "pop" : 177, "state" : "MA", "capital" : { "name" :
"Boston", "electoralCollege" : 11 } }
{ "_id" : "32801", "city" : "ORLANDO", "pop" : 9275, "state" : "FL", "capital" : { "name" :
"Tallahassee", "electoralCollege" : 29 } }
{ "_id" : "12966", "city" : "BANGOR", "pop" : 2867, "state" : "NY", "capital" : { "name" :
"Albany", "electoralCollege" : 29 } }
{ "_id" : "32920", "city" : "CAPE CANAVERAL", "pop" : 7655, "state" : "FL", "capital" : {
"name" : "Tallahassee", "electoralCollege" : 29 } }
{ "_id" : "NY", "name" : "New York", "pop" : 28300000, "state" : 1788 }
{ "_id" : "33125", "city" : "MIAMI", "pop" : 47761, "state" : "FL", "capital" : { "name" :
"Tallahassee", "electoralCollege" : 29 } }
{ "_id" : "RI", "name" : "Rhode Island", "pop" : 1060000, "state" : 1790 }
{ "_id" : "MA", "name" : "Massachusetts", "pop" : 6868000, "state" : 1790 }
{ "_id" : "FL", "name" : "Florida", "pop" : 6800000, "state" : 1845 }
{ "_id" : "1", "name" : "Tom", "addresses" : [ "01001", "12997" ] }
{ "_id" : "02907", "city" : "CRANSTON", "pop" : 25668, "state" : "RI", "capital" : { "name" :
"Providence", "electoralCollege" : 4 } }
{ "_id" : "2", "name" : "Bill", "addresses" : [ "01001", "12967", "32920" ] }
{ "_id" : "3", "name" : "Mary", "addresses" : [ "32801", "32920", "33125" ] }
{ "_id" : "12967", "city" : "NORTH LAWRENCE", "pop" : 943, "state" : "NY", "capital" : {
"name" : "Albany", "electoralCollege" : 29 } }
{ "_id" : "01001", "city" : "AGAWAM", "pop" : 15338, "state" : "MA", "capital" : { "name" :
"Boston", "electoralCollege" : 11 } }
{ "_id" : "12997", "city" : "WILMINGTON", "pop" : 958, "state" : "NY", "capital" : { "name" :
"Albany", "electoralCollege" : 29 } }
```

1. Show name and population of the cities where the population is over 10000
2. Show the name and population of the state based on the cities shown
3. Show the total cities in NY as 'Population'
4. Show the _id, city, name of the capital city of each state with a populaion greater than 20,000.