



GROUP COURSE WORK
SIS 2203 Database Systems Design and Implementation

BIS Year 2, Semester 2

Department of Computer Science

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Problem 1 (20 marks). Create a database for this schema and populate it using the database tables starting

from page 3 of this document. Properly specify the following constraints:

1) Primary keys and foreign keys necessary for each table. Maintain referential integrity by

making use of ON DELETE CASCADE.

2) Rating is an integer from 1 to 10.

3) movieType is either 'Action', 'Adventure', 'Comedy', 'Drama', 'Horror', 'Musical', 'Thriller', 'documentary', or 'Romance'.

Creating actors Table.

```
CREATE TABLE ACTORS
(
    actorId CHAR(4),
    fName VARCHAR2(20) NOT NULL,
    lName VARCHAR2(20) NOT NULL,
    gender VARCHAR2(6) NOT NULL CONSTRAINT CHECK_GENDER CHECK(gender in('Female','Male')),
    birthdate DATE,
    CONSTRAINT PK_ACTOR PRIMARY KEY(actorId)
);
```

Script Output x Query Result x
Task completed in 0.063 seconds

Table ACTORS created.

Creating movies table

```
CREATE TABLE MOVIES
(
    movieId CHAR(4),
    title VARCHAR2(30) NOT NULL,
    movieType VARCHAR2(20) NOT NULL
    CONSTRAINT CHK_MOVIE_TYPE CHECK(movieType in('Action','Adventure','Comedy','Drama','Horror','Musical','Thriller','documentary','Romance')),
    releaseDate DATE NOT NULL,
    language VARCHAR2(20) NOT NULL,
    releaseCountry VARCHAR2(30) NOT NULL,
    length_minutes INTEGER NOT NULL,
    rating INTEGER CONSTRAINT CHK_RATING CHECK(rating BETWEEN 1 AND 10),
);
```

Script Output x Query Result x
Task completed in 0.059 seconds
Table MOVIES created.

Creating MovieActor table

```
CREATE TABLE MOVIEACTOR
(
    actorId CHAR(4),
    movieId CHAR(4),
    CONSTRAINT PK_MOVIEACTOR PRIMARY KEY(actorId,movieId),
    CONSTRAINT FK_ACTORS FOREIGN KEY(actorId) REFERENCES ACTORS(actorId) ON DELETE CASCADE,
    CONSTRAINT FK_MOVIES FOREIGN KEY(movieId) REFERENCES MOVIES(movieId) ON DELETE CASCADE
);
```

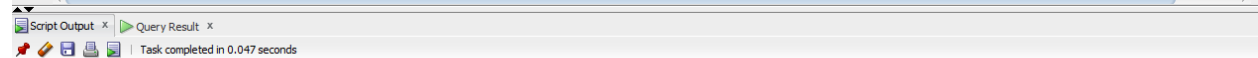


Table MOVIEACTOR created.

Creating Directors Table

```
CREATE TABLE DIRECTORS
(
    directorId CHAR(4),
    fName VARCHAR2(20) NOT NULL,
    lName VARCHAR2(20) NOT NULL,
    CONSTRAINT PK_DIRECTORS PRIMARY KEY(directorId)
);
```

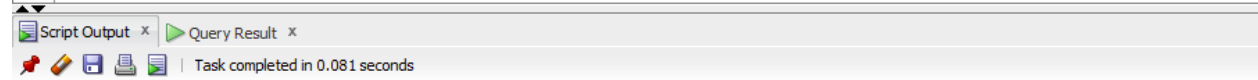


Table DIRECTORS created.

Creating MovieDirector Table

```
CREATE TABLE MOVIEDIRECTOR
(
    movieId CHAR(4),
    directorId CHAR(4),
    CONSTRAINT PK_MOVIEDIRECTOR PRIMARY KEY(movieId,directorId),
    CONSTRAINT FK_DMovies FOREIGN KEY(movieId) REFERENCES MOVIES(movieId) ON DELETE CASCADE,
    CONSTRAINT FK_DIRECTORS FOREIGN KEY(directorId) REFERENCES DIRECTORS(directorId) ON DELETE CASCADE
);
```

Script Output x Query Result x

Task completed in 0.05 seconds

Table MOVIEDIRECTOR created.

Creating Theaters Table

```
CREATE TABLE THEATERS
(
    theaterId CHAR(4),
    name VARCHAR2(20) NOT NULL,
    PHONE VARCHAR2(10) NOT NULL,
    TOWN VARCHAR2(25) NOT NULL,
    CONSTRAINT PK_THEATERS PRIMARY KEY(theaterId)
);
```

Script Output x Query Result x

Task completed in 0.058 seconds

Table THEATERS created.

Creating movieShowTimes Table

```
CREATE TABLE MOVIESHOWTIMES
(
    movieId CHAR(4),
    theaterId CHAR(4),
    showDate DATE NOT NULL,
    STARTTIME VARCHAR2(7) NOT NULL,
    CONSTRAINT PK_MOVIESHOWTIME PRIMARY KEY(movieId,theaterId),
    CONSTRAINT FK_DDMOVIES FOREIGN KEY(movieId) REFERENCES MOVIES(movieId) ON DELETE CASCADE,
    CONSTRAINT FK_THEATERS FOREIGN KEY(theaterId) REFERENCES THEATERS(theaterId) ON DELETE CASCADE
);
```

Script Output x Query Result x
Task completed in 0.05 seconds

Table MOVIESHOWTIMES created.

POPULATING DATA TO TABLES USING INSERT ALL

```
INSERT ALL
INTO MOVIEACTOR(actorId,movieId) VALUES ('AC01', 'MV01')
INTO MOVIEACTOR(actorId,movieId) VALUES ('AC02', 'MV01')
INTO MOVIEACTOR(actorId,movieId) VALUES ('AC03', 'MV01')
INTO MOVIEACTOR(actorId,movieId) VALUES ('AC04', 'MV01')
INTO MOVIEACTOR(actorId,movieId) VALUES ('AC05', 'MV02')
INTO MOVIEACTOR(actorId,movieId) VALUES ('AC06', 'MV02')
INTO MOVIEACTOR(actorId,movieId) VALUES ('AC07', 'MV02')
INTO MOVIEACTOR(actorId,movieId) VALUES ('AC08', 'MV02')
```

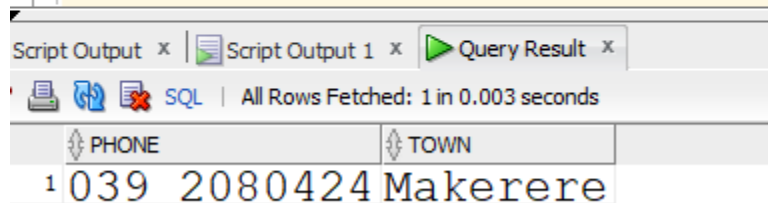
Script Output x Query Result x Script Output 1 x
Task completed in 0.035 seconds

32 rows inserted.

Problem 2 (60 marks). Write the following 30 queries in SQL.

- 1) Show the phone no and town of 'Cinemax' theater

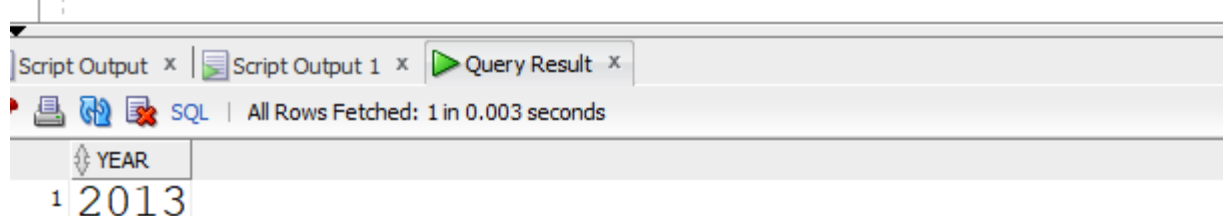
```
SELECT phone,town
FROM THEATERS
WHERE name='Cinemax';
```



	PHONE	TOWN
1	039 2080424	Makerere

2) Find the year in which the movie `Escape from Uganda` was released.

```
SELECT
    EXTRACT( YEAR FROM releasedate) YEAR
FROM Movies
WHERE title ='Escape from Uganda';
```



	YEAR
1	2013

3) Find details of all movies which were released in the year 2017.

```
SELECT *
FROM Movies
WHERE EXTRACT( YEAR FROM releasedate) = 2017;
```

Script Output x | Script Output 1 x | Query Result x

SQL | All Rows Fetched: 1 in 0.031 seconds

MOVIEID	TITLE	MOVIE TYPE	RELEASEDATE	LANGUAGE	RELEASECOUNTRY	LENGTH_MINUTES	RATING
1	MV03 Jumanji	Comedy	05-DEC-17	English	USA	119	7

4) Find titles of movies which were released between 2016 and 2018

```
SELECT title
FROM Movies
WHERE EXTRACT( YEAR FROM releasedate) BETWEEN 2016 AND 2018;
```

Script Output	Script Output 1	Query Result
SQL All Rows Fetched: 7 in 0.003 seconds		
TITLE		
1	Black Panther	
2	Den of Thieves	
3	Jumanji	
4	Proud Mary	
5	Queen of Katwe	
6	7 Days in Entebbe	
7	London Has Fallen	

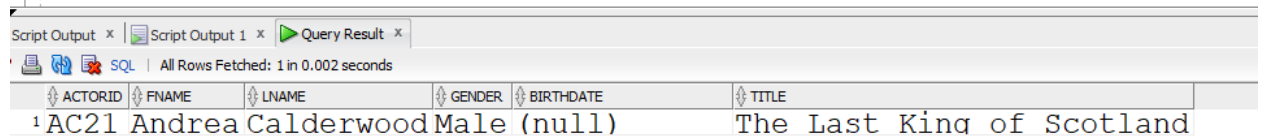
5) List titles of movies and names of their directors.

```
SELECT MOVIES.title, DIRECTORS.fName, DIRECTORS.lName
FROM ( ( MOVIEDIRECTOR
INNER JOIN MOVIES ON MOVIEDIRECTOR.movieId=MOVIES.movieId)
INNER JOIN DIRECTORS ON MOVIEDIRECTOR.directorId=DIRECTORS.directorId);
```

Script Output	Script Output 1	Query Result
SQL All Rows Fetched: 17 in 0.004 seconds		
TITLE	FNAME	LNAME
1	Christian	Gudegast
2	Jake	Kasdan
3	Wes	Ball
4	IGG	Nabwana
5	Babak	Naiafi
6	Dannv	Boyle
7	Raiesh	Nair
8	Kevin	Macdonald
9	Mira	Nair
10	Matt	Bish
11	Bashir	Lukyamuizi
12	Joe	Padilha
13	Roder	Ross
14	Jake	Kasdan
15	Babak	Naiafi
16	Seth	MacFarlane
17		

- 6) List all the information of the actors who played a role in the movie 'The Last King of Scotland'.

```
SELECT ACTORS.actorId, ACTORS.fName, ACTORS.lName, ACTORS.gender,
(TO_CHAR(ACTORS.birthdate, 'DD/MM/YYYY')) AS BIRTHDATE, MOVIES.title
FROM ( (MOVIEACTOR
INNER JOIN ACTORS ON MOVIEACTOR.actorId = ACTORS.actorId)
INNER JOIN MOVIES ON MOVIEACTOR.movieId = MOVIES.movieId)
WHERE MOVIES.title = 'The Last King of Scotland';
```



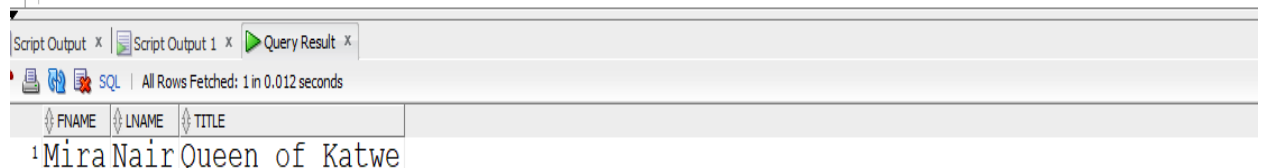
Script Output x | Script Output 1 x | Query Result x

SQL | All Rows Fetched: 1 in 0.002 seconds

ACTORID	FNAME	LNAME	GENDER	BIRTHDATE	TITLE
1AC21	Andrea	Calderwood	Male	(null)	The Last King of Scotland

- 7) Find the name of the director (first and last names) who directed a movie titled 'Queen of Katwe'.

```
SELECT DIRECTORS.fName, DIRECTORS.lName, MOVIES.title
FROM ( (MOVIEDIRECTOR
INNER JOIN DIRECTORS ON MOVIEDIRECTOR.directorId = DIRECTORS.directorId)
INNER JOIN MOVIES ON MOVIEDIRECTOR.movieId = MOVIES.movieId)
WHERE MOVIES.title = (SELECT title FROM MOVIES WHERE title = 'Queen of Katwe');
```



Script Output x | Script Output 1 x | Query Result x

SQL | All Rows Fetched: 1 in 0.012 seconds

FNAME	LNAME	TITLE
1Mira	Nair	Queen of Katwe

- 8) List all the movies which were released in the country other than USA.


```

SELECT title,TO_CHAR(releaseDate,'DD/MM/YYYY') AS "RELEASEDATE",
releaseCountry AS COUNTRY
FROM MOVIES
WHERE NOT releaseCountry ='USA';

```

TITLE	RELEASEDATE	COUNTRY
1 Who Killed Captain Alex?	01/01/2010	Uganda
2 SlumDogmillionaire	30/08/2008	United Kingdom
3 Escape from Uganda	29/11/2013	India
4 The Last King of Scotland	27/09/2006	United Kingdom
5 State Research Bureau	25/01/2011	Uganda
6 Bala Bala Sese	03/07/2015	Uganda
7 7 Days in Entebbe	09/03/2018	United Kingdom

9) List all the movies which were released in Uganda.

```

SELECT title,TO_CHAR(releaseDate,'DD/MM/YYYY') AS "RELEASEDATE",
releaseCountry AS COUNTRY
FROM MOVIES
WHERE releaseCountry ='Uganda';

```

TITLE	RELEASEDATE	COUNTRY
1 Who Killed Captain Alex?	01/01/2010	Uganda
2 State Research Bureau	25/01/2011	Uganda
3 Bala Bala Sese	03/07/2015	Uganda

10) Find the movie title, date of release and director for those movies whose rating is unknown.

```
SELECT Movies.title, Movies.releaseDate, Directors.fName, Directors.lName
FROM Directors
INNER JOIN movieDirector ON movieDirector.directorId = directors.directorId
INNER JOIN Movies ON Movies.movieId = movieDirector.movieId
WHERE Movies.rating IS NULL;
```

	TITLE	RELEASEDATE	FNAME	LNAME
1	State Research Bureau	25-JAN-11	Matt	Bish
2	7 Days in Entebbe	09-MAR-18	Joe	Padilha
3	A Million Ways to Die in the West	30-MAY-14	Seth	MacFarlane

11) Find the titles of all movies directed by the director whose first and last name are Jake Kasdan.

```
SELECT movies.title
FROM Movies
INNER JOIN movieDirector ON movieDirector.movieId = Movies.movieId
INNER JOIN Directors ON movieDirector.directorId = directors.directorId
WHERE Directors.fName = 'Jake' AND Directors.lName = 'Kasdan';
```

	TITLE
1	Jumanji
2	Bad Teacher

12) Find all the years that released at least one movie and that received a rating above 6

```
SELECT EXTRACT(YEAR FROM releaseDate) YEAR, rating FROM MOVIES
WHERE title IS NOT NULL AND rating > 6;
```

	YEAR	RATING
1	2018	7
2	2017	7
3	2010	8
4	2008	8
5	2006	7
6	2016	7
7	2015	8
8	2013	7

13) Find the highest-rated movie, and report its title, year, rating, and releasing country.

```
SELECT title, EXTRACT(YEAR FROM releaseDate) YEAR, rating, releaseCountry
FROM Movies
WHERE rating = (SELECT max(rating) FROM Movies);
```

	TITLE	YEAR	RATING	RELEASECOUNTRY
1	Who Killed Captain Alex?	2010	8	Uganda
2	SlumDoomillionaire	2008	8	United Kingdom
3	Bala Bala Sese	2015	8	Uganda

14) Find the lowest-rated movie, and report its title, year, rating, and releasing country.

```
SELECT title, EXTRACT(YEAR FROM releaseDate) YEAR, rating, releaseCountry
FROM Movies
WHERE rating = (SELECT min(rating) FROM Movies);
```

	TITLE	YEAR	RATING	RELEASECOUNTRY
1	Proud Marv	2018	5	USA
2	Bad Teacher	2011	5	USA

15) Find the highest-rated Action movie, and report the title, year, and rating.

```
SELECT title, EXTRACT(YEAR FROM releaseDate) YEAR, rating
FROM Movies
WHERE rating = (SELECT max(rating) FROM Movies) AND movieType = 'Action';
```

	TITLE	YEAR	RATING
1	Who Killed Captain Alex?	2010	8



16) Find details of movies in which 'Lupita Nyong'o' played a role.

```

SELECT MOVIES.movieId,MOVIES.title,MOVIES.movieType,MOVIES.releaseDate,
MOVIES.language,MOVIES.releaseCountry,MOVIES.length_minutes,MOVIES.rating
FROM ( (MOVIEACTOR
INNER JOIN MOVIES ON MOVIEACTOR.movieId =MOVIES.movieId)
INNER JOIN ACTORS ON MOVIEACTOR.actorId=ACTORS.actorId)
WHERE ACTORS.fName='Lupita' AND ACTORS.lName='Nyong'o';

```

cript Output x | Script Output 1 x | Query Result x

  | All Rows Fetched: 2 in 0.002 seconds

MOVIEID	TITLE	MOVIE TYPE	RELEASEDATE	LANGUAGE	RELEASECOUNTRY	LENGTH_MINUTES	RATING
1	MV01 Black Panther	Action	29-JAN-18	English	USA	134	6
2	MV10 Queen of Katwe	Drama	10-SEP-16	English	USA	124	7

17) Find titles of movies with ID 'MV04', 'MV08', 'MV13'.

```
SELECT title
FROM MOVIES
WHERE movieId IN('MV04','MV08','MV13');
```

Script Output x Script Output 1 x Query Result x	
SQL All Rows Fetched: 3 in 0.004 seconds	
TITLE	
1 Maze Runner	
2 Escape from Uganda	
3 7 Days in Entebbe	

18) List the first and last names of all the actors who acted in the movie 'Jumanji'.

```
SELECT ACTORS.fName,ACTORS.lName
FROM ( (MOVIEACTOR
INNER JOIN ACTORS ON MOVIEACTOR.actorId=ACTORS.actorId)
INNER JOIN MOVIES ON MOVIEACTOR.movieId =MOVIES.movieId)
WHERE MOVIES.title='Jumanji';
```

Script Output x Script Output 1 x Query Result x	
SQL All Rows Fetched: 2 in 0.006 seconds	
FNAME	LNAME
1 Gillan	Karen
2 Johnson	Dwayne

19) List all the actors who acted in a movie before 2013 alphabetically with the first and last name.

```

SELECT ACTORS.fName,ACTORS.lName
FROM ((MOVIEACTOR
INNER JOIN ACTORS ON MOVIEACTOR.actorId=ACTORS.actorId)
INNER JOIN MOVIES ON MOVIEACTOR.movieId =MOVIES.movieId)
WHERE MOVIES.releaseDate < TO_DATE('1/1/2013','DD/MM/YYYY')
ORDER BY ACTORS.fName,ACTORS.lName;

```

Script Output x Script Output 1 x Query Result x		
SQL All Rows Fetched: 8 in 0.002 seconds		
	FNAME	LNAME
1	Allan	Ssali
2	Andrea	Calderwood
3	Cameroon	Diaz
4	Cleopatra	Koheirwe
5	Jamal	Malik
6	Joel	Okuvo
7	Vikas	Swarup
8	Wilson	Kakule

20) List all the movies with title, date of release, movie duration, and first and last name of the director which released before 1st January 2017 and sort the result set according to release date from highest date to lowest.

```

SELECT MOVIES.title,TO_CHAR(MOVIES.releaseDate,'DD/MM/YYYY') AS YEAR,MOVIES.length_min
FROM ((MOVIEDIRECTOR
INNER JOIN MOVIES ON MOVIEDIRECTOR.movieId =MOVIES.movieId)
INNER JOIN DIRECTORS ON MOVIEDIRECTOR.directorId = DIRECTORS.directorId)
WHERE MOVIES.releaseDate < '1-JAN-2017'
ORDER BY MOVIES.releaseDate DESC ;

```

Script Output x Script Output 1 x Query Result x				
SQL All Rows Fetched: 12 in 0.004 seconds				
	TITLE	YEAR	DURATION	FNAME LNAME
2	London Has Fallen	01/03/2016	99	Babak Najafi
3	Bala Bala Sese	03/07/2015	102	Bashir Lukyamuzi
4	Maze Runner	19/09/2014	113	Wes Ball
5	A Million Ways to Die in the West	30/05/2014	116	Seth MacFarlane
6	Escape from Uganda	29/11/2013	120	Raiesh Nair
7	God Loves Uganda	18/01/2013	83	Roger Ross
8	Bad Teacher	24/06/2011	97	Jake Kasdan
9	State Research Bureau	25/01/2011	95	Matt Bish
10	Who Killed Captain Alex?	01/01/2010	64	IGG Nabwana
11	SlumDogmillionaire	30/08/2008	120	Danny Boyle
12	The Last King of Scotland	27/09/2006	123	Kevin Macdonald

21) Find those lowest duration movies along with the release year and director's name.

```

SELECT movies.title,movies.length_minutes,
EXTRACT(YEAR FROM movies.releaseDate) YEAR,
directors.fname,directors.lname
FROM Movies
INNER JOIN movieDirector ON movieDirector.movieId = movies.movieId
INNER JOIN Directors ON movieDirector.directorId = Directors.directorId
WHERE movies.length_minutes = (SELECT MIN(length_minutes) from movies);

```

Script Output x | Script Output 1 x | Query Result x | Query Result 1 x | Query Result 2 x

SQL | All Rows Fetched: 1 in 0.002 seconds

TITLE	LENGTH_MINUTES	YEAR	FNAME	LNAME
Who Killed Captain Alex?	64	2010	IGG	Nabwana

22) Find the director's first and last name together with the title of the movie(s) they directed and received the rating.

```

SELECT DIRECTORS.fName AS "FIRST NAME",DIRECTORS.lName AS "LAST NAME",MOVIES.title
FROM ((MOVIEDIRECTOR
INNER JOIN DIRECTORS
ON MOVIEDIRECTOR.directorId = DIRECTORS.directorId)
INNER JOIN MOVIES
ON MOVIEDIRECTOR.movieId =MOVIES.movieId) WHERE MOVIES.rating IS NOT NULL;

```

Script Output x | Script Output 1 x | Query Result x | Query Result 1 x | Query Result 2 x

SQL | All Rows Fetched: 14 in 0.012 seconds

FIRST NAME	LAST NAME	TITLE
3 Jake	Kasdan	Bad Teacher
4 Jake	Kasdan	Jumanji
5 Wes	Ball	Maze Runner
6 IGG	Nabwana	Who Killed Captain Alex?
7 Babak	Najafi	London Has Fallen
8 Babak	Najafi	Proud Mary
9 Danny	Boyle	SlumDogmillionaire
10 Rajesh	Nair	Escape from Uganda
11 Kevin	Macdonald	The Last Kind of Scotland
12 Mira	Nair	Queen of Katwe
13 Bashir	Lukvamuzi	Bala Bala Sese
14 Roger	Ross	God Loves Uganda

23) Find the movie title, actor first and last name where one or more actors acted in two or more movies.

```

SELECT MOVIES.title,ACTORS.fName AS "FIRST NAME",ACTORS.lName AS "LAST NAME"
FROM ( (MOVIEACTOR
INNER JOIN ACTORS ON MOVIEACTOR.actorId=ACTORS.actorId)
INNER JOIN MOVIES ON MOVIEACTOR.movieId =MOVIES.movieId) ORDER BY MOVIES.title;

```

Script Output x | Script Output 1 x | Query Result x | Query Result 1 x | Query Result 2 x

SQL | All Rows Fetched: 32 in 0.01 seconds

	TITLE	FIRST NAME	LAST NAME
18	Jumanji	Gillan	Karen
19	London Has Fallen	Gerald	Butler
20	Maze Runner	Kava	Scodelario
21	Maze Runner	Thomas	Brodie
22	Proud Mary	Taraji	Henson
23	Proud Mary	Billy	Brown
24	Queen of Katwe	Madina	Nalwanga
25	Queen of Katwe	Lupita	Nyong'o
26	Slumdogmillionaire	Vikas	Swarup
27	Slumdogmillionaire	Jamal	Malik
28	State Research Bureau	Cleopatra	Koheirwe
29	State Research Bureau	Joel	Okuyok
30	The Last King of Scotland	Andrea	Calderwood
31	Who Killed Captain Alex?	Wilson	Kakule

24) List all actors who played a role in a movie 'Black Panther'.


```

SELECT ACTORS.fName,ACTORS.lName
FROM ( (MOVIEACTOR
INNER JOIN ACTORS ON MOVIEACTOR.actorId=ACTORS.actorId)
INNER JOIN MOVIES ON MOVIEACTOR.movieId =MOVIES.movieId)
WHERE MOVIES.title='Black Panther';

```

Script Output	Script Output 1	Query Result	Query Result 1	Query Result 2
SQL All Rows Fetched: 4 in 0.002 seconds				
FNAME	LNAME			
1 Michael	Jordan			
2 Lupita	Nyong'o			
3 Angela	Basssett			
4 Chadwick	Boseman			

25) Select all data from all theaters and additionally, the data from the movie that is being shown in the theater on 2/14/2018 and the time of showing.

```

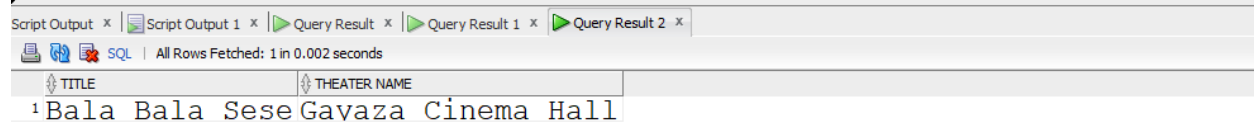
SELECT THEATERS.theaterId,THEATERS.name,THEATERS.PHONE,THEATERS.TOWN,MOVIES.title,
MOVIES.movieType,MOVIESHOWTIMES.STARTTIME
FROM(( THEATERS
LEFT OUTER JOIN MOVIESHOWTIMES ON THEATERS.theaterId=MOVIESHOWTIMES.theaterId)
INNER JOIN MOVIES ON MOVIESHOWTIMES.movieId = MOVIES.movieId)
WHERE MOVIESHOWTIMES.showDate=TO_DATE('2/14/2018','MM/DD/YYYY');

```

THEATERID	NAME	PHONE	TOWN	TITLE	MOVIE TYPE	STARTTIME
1 TH04	Cinemax	039 2080424	Makerere	Black Panther	Action	09:30 PM
2 TH02	Century Cinemax	0700 660415	Kamwokva	Black Panther	Action	10:00 PM
3 TH01	3D Cinema Magic	041 4240090	Naalva	Black Panther	Action	7:15 PM
4 TH03	Numax Cinema	041 4668818	Entebbe	Black Panther	Action	8:00 PM
5 TH04	Cinemax	039 2080424	Makerere	Den of Thieves	Drama	02:00 PM
6 TH02	Century Cinemax	0700 660415	Kamwokva	Den of Thieves	Drama	07:15 PM
7 TH01	3D Cinema Magic	041 4240090	Naalva	Den of Thieves	Drama	04:30 PM
8 TH03	Numax Cinema	041 4668818	Entebbe	Den of Thieves	Drama	7:45 PM
9 TH02	Century Cinemax	0700 660415	Kamwokva	Jumanji	Comedy	05:00 PM
10 TH01	3D Cinema Magic	041 4240090	Naalva	Jumanji	Comedy	02:15 PM
11 TH04	Cinemax	039 2080424	Makerere	Maze Runner	Action	05:00 PM
12 TH02	Century Cinemax	0700 660415	Kamwokva	Maze Runner	Action	11:30 AM
13 TH01	3D Cinema Magic	041 4240090	Naalva	Maze Runner	Action	02:00 PM
14 TH01	3D Cinema Magic	041 4240090	Naalva	Proud Mary	Action	07:15 PM

26) Show movies that have ever been shown at `Gayaza Cinema Hall`.

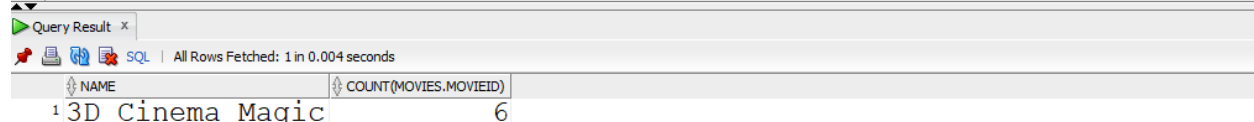
```
SELECT MOVIES.title, THEATERS.name AS "THEATER NAME"
FROM ( ( MOVIESHOWTIMES
INNER JOIN MOVIES ON MOVIESHOWTIMES.movieId=MOVIES.movieId)
INNER JOIN THEATERS ON MOVIESHOWTIMES.theaterId= THEATERS.theaterId)
WHERE THEATERS.name='Gayaza Cinema Hall';
```



TITLE	THEATER NAME
Bala Bala Sese Gavaza Cinema Hall	

27) Find a theater which has shown the highest number of movies.

```
SELECT THEATERS.name, COUNT(MOVIES.movieId)
FROM ( (MOVIESHOWTIMES
INNER JOIN THEATERS ON MOVIESHOWTIMES.theaterId =THEATERS.theaterId)
INNER JOIN MOVIES ON MOVIESHOWTIMES.movieId=MOVIES.movieId)
GROUP BY THEATERS.name
HAVING COUNT (MOVIES.movieId) > 5;
```



NAME	COUNT(MOVIES.MOVIEID)
3D Cinema Magic	6

28) Display each theater name and the total number of movies that have played at that theater.

```

SELECT THEATERS.name, COUNT (MOVIES.movieId)
FROM ( (MOVIESHOWTIMES
INNER JOIN THEATERS ON MOVIESHOWTIMES.theaterId =THEATERS.theaterId)
INNER JOIN MOVIES ON MOVIESHOWTIMES.movieId=MOVIES.movieId)
GROUP BY THEATERS.name;

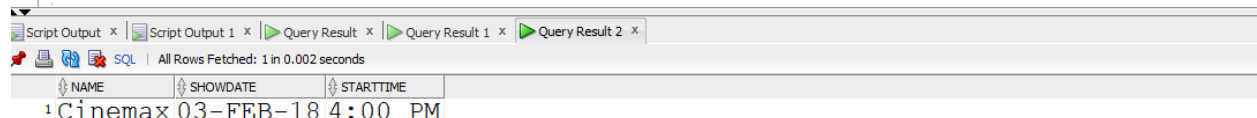
```

Script Output x	Script Output 1 x	Query Result x	Query Result 1 x	Query Result 2 x
SQL All Rows Fetched: 8 in 0.017 seconds				
NAME	COUNT(MOVIES.MOVIEID)			
1 3D Cinema Magic	6			
2 Numax Cinema	3			
3 Cinemax	4			
4 Century Cinemax	5			
5 WakaliWood	1			
6 Roston Theater	2			
7 Gavaza Cinema Hall	1			
8 SkveBlue Home Entertainment	3			

29) Find the titles and the directors of all movies that have played at `3D Cinema Magic`.

30) Find the theater, date and time on which the movie `The Last King of Scotland' will show.

```
SELECT theaters.name, movieShowTimes.showDate, MovieShowTimes.startTime
FROM theaters
INNER JOIN movieShowTimes ON movieShowTimes.theaterId = theaters.theaterId
INNER JOIN movies ON movies.movieId = movieShowTimes.movieId
WHERE movies.title = 'The Last King of Scotland';
```



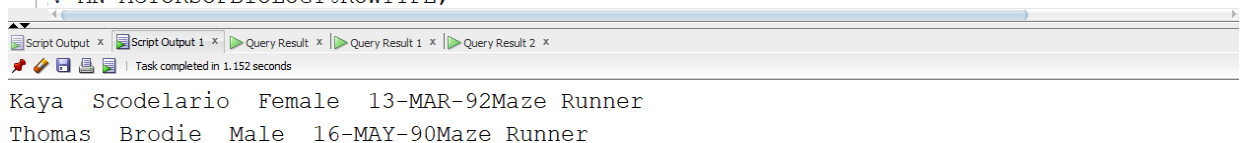
The screenshot shows a SQL query execution window with the following tabs: Script Output, Script Output 1, Query Result, Query Result 1, and Query Result 2. The status bar indicates 'All Rows Fetched: 1 in 0.002 seconds'. The query result is displayed in a table with columns NAME, SHOWDATE, and STARTTIME. The result row is: 1 Cinemax 03-FEB-18 4:00 PM.

NAME	SHOWDATE	STARTTIME
1 Cinemax	03-FEB-18	4:00 PM

Problem 3 (20 marks). Write the following PL/SQL blocks

1) Write a PL/SQL procedure to display details of all actors who acted in movie `Maze Runner'.

```
SET SERVEROUTPUT ON;
CREATE OR REPLACE PROCEDURE ATMO IS
CURSOR ACTORSOFBIOLOGY IS
SELECT ACTORS.actorId, ACTORS.fName, ACTORS.lName, ACTORS.gender, ACTORS.birthdate, MOVIES.title
FROM (( MOVIEACTOR
INNER JOIN ACTORS
ON MOVIEACTOR.actorId=ACTORS.actorId)
INNER JOIN MOVIES
ON MOVIEACTOR.movieId =MOVIES.movieId) WHERE MOVIES.title = 'Maze Runner';
V MN ACTORSOFBIOLOGY%ROWTYPE;
```



The screenshot shows a PL/SQL procedure execution window with the following tabs: Script Output, Script Output 1, Query Result, Query Result 1, and Query Result 2. The status bar indicates 'Task completed in 1.152 seconds'. The output of the procedure is displayed in a text area with the following content: Kaya Scodelario Female 13-MAR-92Maze Runner, Thomas Brodie Male 16-MAY-90Maze Runner.

```
Kaya Scodelario Female 13-MAR-92Maze Runner
Thomas Brodie Male 16-MAY-90Maze Runner
```

2) Write a cursor to display the list of directors and their movies for which their rate is greater than 7.

```
SET SERVEROUT ON;
DECLARE
CURSOR APP IS
SELECT DIRECTORS.fName,DIRECTORS.lName,MOVIES.title,MOVIES.rating
FROM (( MOVIEDIRECTOR
INNER JOIN DIRECTORS
ON MOVIEDIRECTOR.directorId=DIRECTORS.directorId)
INNER JOIN MOVIES
```

Script Output x | Script Output 1 x | Query Result x | Query Result 1 x | Query Result 2 x
Task completed in 0.078 seconds

FIRSTNAME:IGG LASTNAME: Nabwana MOVIEITITLE: Who Killed Captain Alex? MOVIERating: 8
FIRSTNAME:Danny LASTNAME: Boyle MOVIEITITLE: SlumDogmillionaire MOVIERating: 8
FIRSTNAME:Bashir LASTNAME: Lukyamuzi MOVIEITITLE: Bala Bala Sese MOVIERating: 8

- 3) Define a trigger before insert or update of each row of movie that movies released after 2010 be entered into movie table.

```
CREATE OR REPLACE TRIGGER MOVIEAFTER
BEFORE INSERT OR UPDATE ON MOVIES
FOR EACH ROW
BEGIN
IF TO_CHAR(:NEW.releaseDate, 'YYYY') < '2010'
THEN IF UPDATING THEN
RAISE_APPLICATION_ERROR(-20202, 'record insertion failed!');
ELSIF INSERTING THEN
RAISE_APPLICATION_ERROR(-20202, 'record update failed!');
END IF;
END IF;
END;
```

Query Result x | Script Output x
Task completed in 1.73 seconds

Trigger MOVIEAFTER compiled

- 4) Write a procedure to return the total number of movies that have been shown at a given theater.

```
SET SERVEROUTPUT ON;

CREATE OR REPLACE PROCEDURE TOTALMOVIES(N IN THEATERS.name%TYPE,VB OUT NUMBER) IS
BEGIN
SELECT COUNT(MOVIES.movieId) INTO VB
FROM ( ( MOVIESHOWTIMES
INNER JOIN MOVIES ON MOVIESHOWTIMES.movieId=MOVIES.movieId)
INNER JOIN THEATERS
ON MOVIESHOWTIMES.theaterId= THEATERS.theaterId) WHERE THEATERS.name=N;

END;
```

Script Output x Script Output 1 x Query Result x Query Result 1 x Query Result 2 x
Task completed in 0.314 seconds

FIRSTNAME:IGG LASTNAME: Nabwana MOVIEITITLE: Who Killed Captain Alex? MOVIERating: 8
FIRSTNAME:Danny LASTNAME: Boyle MOVIEITITLE: SlumDogmillionaire MOVIERating: 8
FIRSTNAME:Bashir LASTNAME: Lukyamuzi MOVIEITITLE: Bala Bala Sese MOVIERating: 8