

# PROJECT

*by* Harmanjeet Singh

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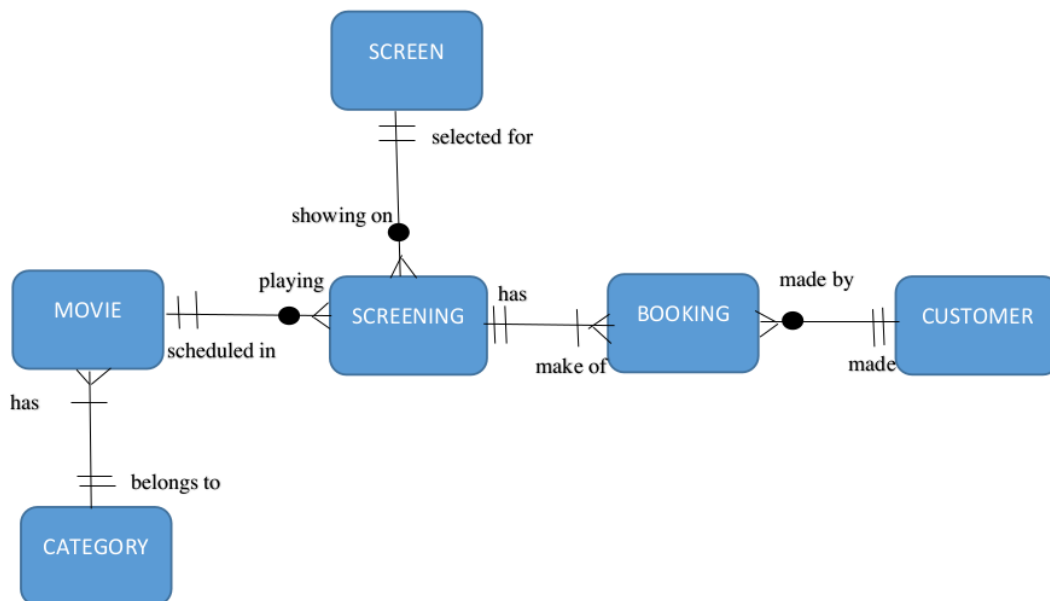
**Word count:** 1241

**Character count:** 10353

# PROJECT

## A) Conceptual Design

### SilverCity Richmond Hill Cinemas



1. MOVIE has one and only one CATEGORY
2. CATEGORY belongs to one or may MOVIE
3. MOVIE scheduled in zero or many SCREENING
4. SCREENING playing one and only one MOVIE
5. SCREEN selected for zero or many SCREENING
6. SCREENING showing on one and only one SCREEN
7. BOOKING made by one and only one CUSTOMER
8. CUSTOMER made zero or many BOOKING
9. BOOKING make of MOVIE SHOW
10. MOVIE SHOW has one or many BOOKING

## B) LOGICAL DESIGN

The skeleton relations are as follows

1. MOVIE ( Movie\_Id, Category\_ID)
2. CATEGORY ( Category\_ID)
3. SCREEN ( Screen\_No,)
4. CUSTOMER(Customer\_Contact)
5. SCREENING(Screening\_Id , Movie\_ID, Screen\_No)
6. BOOKING(Booking\_Reference\_no , Screening\_Id ,Customer\_Contact)

Relations of the SilverCity Richmond Hill Cinemas Booking System are follows

1. MOVIE ( Movie\_Id , Movie\_Name, Movie\_Actor , Movie\_Length , Category\_ID ,Movie\_Actor\_Role)
2. CATEGORY ( Category\_ID, Category\_Name )
3. SCREEN ( Screen\_No, Screen\_Capacity, Screen\_Location)
4. CUSTOMER(Customer\_Contact, Customer\_Name, Customer\_Address)
5. SCREENING(Screening\_Id , Movie\_ID, Screen\_No, Date)
6. BOOKING(Booking\_Reference\_no , Screening\_Id ,Customer\_Contact, Booking\_Date)

### C) PHYSICAL DESIGN

Line	Time	Statement	Result	Errors
124	0.00	INSERT INTO SCREENING VALUES (18,002,001, '12-10-2020')	1 row(s) inserted.	1
125	0.00	INSERT INTO SCREENING VALUES (19,003,001, '12-11-2020')	1 row(s) inserted.	1
126	0.01	INSERT INTO SCREENING VALUES (20,004,015, '12-12-2020')	1 row(s) inserted.	1
127	0.00	INSERT INTO SCREENING VALUES (21,001,016, '12-12-2020')	1 row(s) inserted.	1
128	0.01	INSERT INTO SCREENING VALUES (22,002,017, '12-13-2020')	1 row(s) inserted.	1
129	0.00	INSERT INTO SCREENING VALUES (23,003,016, '12-12-2020')	1 row(s) inserted.	1
130	0.00	INSERT INTO SCREENING VALUES (24,004,014, '12-15-2020')	1 row(s) inserted.	1
131	0.07	INSERT INTO BOOKING VALUES (501,16,9856231245, '12-15-2020')	1 row(s) inserted.	1
132	0.00	INSERT INTO BOOKING VALUES (502,17,9856231246, '12-15-2020')	1 row(s) inserted.	1
133	0.01	INSERT INTO BOOKING VALUES (503,17,9856231247, '12-15-2020')	1 row(s) inserted.	1
134	0.00	INSERT INTO BOOKING VALUES (504,17,9856231248, '12-15-2020')	1 row(s) inserted.	1
135	0.00	INSERT INTO BOOKING VALUES (505,17,9856231249, '12-15-2020')	1 row(s) inserted.	1

Statements Processed	Successful	With Errors
144	144	0

THE SCRIPT IS AS FOLLOWS

```
DROP TABLE SCREEN CASCADE CONSTRAINTS;
CREATE TABLE SCREEN(
    SCREEN_NO NUMBER(1) PRIMARY KEY,
    SCREEN_CAPACITY NUMBER (3) NOT NULL,
    SCREEN_LOCATION VARCHAR2 (15) NOT NULL
```

```
);
```

```
DROP TABLE CATEGORY CASCADE CONSTRAINTS;
CREATE TABLE CATEGORY(
    CATEGORY_ID NUMBER (3) PRIMARY KEY,
    CATEGORY_NAME VARCHAR2 (15) NOT NULL
```

```
);
```

```
DROP TABLE CUSTOMER CASCADE CONSTRAINTS;
CREATE TABLE CUSTOMER(

    CUSTOMER_CONTACT NUMBER (10) PRIMARY KEY,
    CUSTOMER_NAME VARCHAR2 (15) NOT NULL,
    CUSTOMER_ADDRESS VARCHAR2 (30) NOT NULL
```

```
);
```

```
DROP TABLE MOVIE CASCADE CONSTRAINTS;
CREATE TABLE MOVIE(
    MOVIE_ID NUMBER(3) PRIMARY KEY,
    MOVIE_NAME VARCHAR(20) NOT NULL,
    MOVIE_ACTOR VARCHAR(20) NOT NULL,
    MOVIE_LENGTH NUMBER(5,2) NOT NULL,
    MOVIE_CATEGORY_ID NUMBER(3) REFERENCES CATEGORY(CATEGORY_ID),
    MOVIE_ACTOR_ROLES NUMBER(2)
);
```

```
DROP TABLE SCREENING CASCADE CONSTRAINTS;
CREATE TABLE SCREENING(
    SCREENING_ID NUMBER (3) PRIMARY KEY,
    SCREENING_SCREEN_NO NUMBER (1) REFERENCES SCREEN (SCREEN_NO),
    SCREENING_MOVIE_ID NUMBER (3) REFERENCES MOVIE (MOVIE_ID),
    SCREENING_DATE DATE NOT NULL
);
```

```
DROP TABLE BOOKING CASCADE CONSTRAINTS;
```

```
CREATE TABLE BOOKING(  
    BOOKING_REFERENCE_NO NUMBER (3) PRIMARY KEY,  
    BOOKING_SCREENING_ID NUMBER (3) REFERENCES SCREENING (SCREENING_ID ),  
    BOOKING_CUSTOMER_CONTACT NUMBER (10) REFERENCES CUSTOMER (CUSTOMER_CONTACT  
) ,  
    BOOKING_DATE Date  
);
```

```
INSERT INTO SCREEN VALUES (1,80,'NORTH');  
INSERT INTO SCREEN VALUES (2,90,'SOUTH');  
INSERT INTO SCREEN VALUES (3,100,'EAST');  
INSERT INTO SCREEN VALUES (4,110,'WEST');
```

```
INSERT INTO CATEGORY VALUES (001,'CLASSIC');  
INSERT INTO CATEGORY VALUES (002,'ACTION');  
INSERT INTO CATEGORY VALUES (003,'SCI-FI');  
INSERT INTO CATEGORY VALUES (004,'ROMANTIC');  
INSERT INTO CATEGORY VALUES (005,'ANIMATED');  
INSERT INTO CATEGORY VALUES (006,'SCARY');  
INSERT INTO CATEGORY VALUES (007,'COMEDDY');  
INSERT INTO CATEGORY VALUES (008,'BIOPIC');  
INSERT INTO CATEGORY VALUES (009,'WAR');  
INSERT INTO CATEGORY VALUES (0010,'DOCUMENTARY');
```

```
INSERT INTO CUSTOMER VALUES (9856231245,'HARMAN','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231246,'GAGAN','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231247,'RAMAN','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231248,'HAN','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231249,'HAAN','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231250,'JIVAN','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231251,'HANA','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231252,'HARRY','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231253,'GAG','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231254,'LADDI','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231255,'SIA','Toronto');  
INSERT INTO CUSTOMER VALUES (9856231256,'ANGAD','Toronto');
```

```
INSERT INTO CUSTOMER VALUES (9856231257, 'SIA', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856231258, 'DAVINDER', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856231259, 'SUKH', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856231260, 'MANPREET', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856232251, 'PRIYA', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856233252, 'AMMY', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856234253, 'RAMAN', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856235254, 'JOHN', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856236245, 'JIO', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856237246, 'CHU', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856238247, 'LIO', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856239248, 'PRINKA', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856240249, 'NIKI', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856241250, 'GAGGY', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856242251, 'SARUCHI', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856243252, 'BHARTI', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856331253, 'PARAM', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856431254, 'MANTU', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856531245, 'GARISH', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856631246, 'ROCKY', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856731247, 'ISHA', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856831248, 'RAJIV', 'Toronto');
INSERT INTO CUSTOMER VALUES (9856931249, 'AJAY', 'Toronto');
INSERT INTO CUSTOMER VALUES (9857031250, 'KAMAL', 'Toronto');
INSERT INTO CUSTOMER VALUES (9857131251, 'KOMAL', 'Toronto');
INSERT INTO CUSTOMER VALUES (9857231252, 'RAJVIR', 'Toronto');
INSERT INTO CUSTOMER VALUES (9857331253, 'HARINDER', 'Toronto');
INSERT INTO CUSTOMER VALUES (9857431254, 'RAJAN', 'Toronto');
INSERT INTO CUSTOMER VALUES (9857531245, 'PRINCE', 'Toronto');
INSERT INTO CUSTOMER VALUES (9857631246, 'SIMA', 'Toronto');
INSERT INTO CUSTOMER VALUES (9857731247, 'BOND', 'Toronto');
INSERT INTO CUSTOMER VALUES (9857831248, 'JAMES', 'Toronto');
INSERT INTO CUSTOMER VALUES (9857931249, 'MICHAL', 'Toronto');
INSERT INTO CUSTOMER VALUES (9858031250, 'BAANS', 'Toronto');
INSERT INTO CUSTOMER VALUES (9858131251, 'ANURAG', 'Toronto');
INSERT INTO CUSTOMER VALUES (9858231252, 'HARMAN', 'Toronto');
INSERT INTO CUSTOMER VALUES (9858331253, 'AMAN', 'Toronto');
INSERT INTO CUSTOMER VALUES (9858431254, 'BILLI', 'Toronto');
INSERT INTO CUSTOMER VALUES (9866231245, 'BILLA', 'Toronto');
INSERT INTO CUSTOMER VALUES (9876231246, 'KAL', 'Toronto');
INSERT INTO CUSTOMER VALUES (9886231247, 'BALA', 'Toronto');
INSERT INTO CUSTOMER VALUES (9896231248, 'JOGI', 'Toronto');
INSERT INTO CUSTOMER VALUES (9906231249, 'MILKHA', 'Toronto');
INSERT INTO CUSTOMER VALUES (8856231250, 'ROCKY', 'Toronto');
INSERT INTO CUSTOMER VALUES (7856231251, 'ROCK', 'Toronto');
INSERT INTO CUSTOMER VALUES (6856231252, 'JACKY', 'Toronto');
INSERT INTO CUSTOMER VALUES (5856231253, 'JACK', 'Toronto');
INSERT INTO CUSTOMER VALUES (4856231254, 'WAON', 'Toronto');
```

```
INSERT INTO CUSTOMER VALUES (3856231245, 'PAN', 'Toronto');
INSERT INTO CUSTOMER VALUES (2856231246, 'OAN', 'Toronto');
INSERT INTO CUSTOMER VALUES (1856231247, 'PAWAN', 'Toronto');
```

```
INSERT INTO MOVIE VALUES (001, 'HOUSE', 'AAMIR KHAN', 123.23, 001, 1);
INSERT INTO MOVIE VALUES (002, 'FAMILY', 'LIONARDO', 120.23, 001, 2);
INSERT INTO MOVIE VALUES (004, 'WAR', 'MORGAN', 120.00, 002, 1);
INSERT INTO MOVIE VALUES (005, 'RAMBO', 'SLYVESTER', 110.15, 002, 1);
INSERT INTO MOVIE VALUES (006, 'WAR', 'R NOLD', 85.23, 002, 2);
INSERT INTO MOVIE VALUES (007, 'GRAVITY', 'LIONARDO', 123.23, 003, 3);
INSERT INTO MOVIE VALUES (008, 'MARS', 'LIONARDO', 100.10, 003, 3);
INSERT INTO MOVIE VALUES (009, 'MATRIX', 'JOHN', 90.15, 003, 1);
INSERT INTO MOVIE VALUES (010, 'ROSE', 'JACK', 120.00, 004, 1);
INSERT INTO MOVIE VALUES (011, 'LOVE', 'WILIAM', 220.25, 004, 1);
INSERT INTO MOVIE VALUES (012, 'LIO', 'JACKY', 85.23, 005, 1);
INSERT INTO MOVIE VALUES (013, 'NUN', 'JONNY BRAVO', 114.25, 006, 1);
INSERT INTO MOVIE VALUES (014, 'MASK', 'JIM CARRY', 120.23, 007, 1);
INSERT INTO MOVIE VALUES (015, 'MILKHA', 'FARHAN', 180.40, 008, 1);
INSERT INTO MOVIE VALUES (016, 'WW 2', 'JOHN', 220.33, 009, 1);
INSERT INTO MOVIE VALUES (017, 'TOURIST', 'OSCAR', 110.15, 002, 1);
INSERT INTO MOVIE VALUES (018, 'INDIA', 'RAKESH', 85.23, 002, 2);
```

```
INSERT INTO SCREENING VALUES (1, 001, 001, '12-01-2020');
INSERT INTO SCREENING VALUES (2, 002, 002, '12-01-2020');
INSERT INTO SCREENING VALUES (3, 003, 002, '12-02-2020');
INSERT INTO SCREENING VALUES (4, 004, 004, '12-02-2020');
INSERT INTO SCREENING VALUES (5, 001, 005, '12-03-2020');
INSERT INTO SCREENING VALUES (6, 002, 006, '12-04-2020');
INSERT INTO SCREENING VALUES (7, 003, 013, '12-05-2020');
INSERT INTO SCREENING VALUES (8, 004, 012, '12-06-2020');
INSERT INTO SCREENING VALUES (9, 001, 011, '12-07-2020');
INSERT INTO SCREENING VALUES (10, 002, 011, '12-07-2020');
INSERT INTO SCREENING VALUES (11, 003, 004, '12-07-2020');
INSERT INTO SCREENING VALUES (12, 004, 005, '12-07-2020');
INSERT INTO SCREENING VALUES (13, 001, 005, '12-08-2020');
INSERT INTO SCREENING VALUES (14, 002, 013, '12-09-2020');
INSERT INTO SCREENING VALUES (15, 003, 012, '12-09-2020');
INSERT INTO SCREENING VALUES (16, 004, 011, '12-10-2020');
INSERT INTO SCREENING VALUES (17, 001, 012, '12-10-2020');
INSERT INTO SCREENING VALUES (18, 002, 001, '12-10-2020');
INSERT INTO SCREENING VALUES (19, 003, 001, '12-11-2020');
INSERT INTO SCREENING VALUES (20, 004, 015, '12-12-2020');
INSERT INTO SCREENING VALUES (21, 001, 016, '12-12-2020');
INSERT INTO SCREENING VALUES (22, 002, 017, '12-13-2020');
INSERT INTO SCREENING VALUES (23, 003, 016, '12-12-2020');
INSERT INTO SCREENING VALUES (24, 004, 014, '12-15-2020');
```

```

INSERT INTO BOOKING VALUES (501,16,9856231245, '12-09-2020');
INSERT INTO BOOKING VALUES (502,17,9856231246, '12-10-2020');
INSERT INTO BOOKING VALUES (503,17,9856231247, '12-08-2020');
INSERT INTO BOOKING VALUES (504,17,9856231248, '12-07-2020');
INSERT INTO BOOKING VALUES (505,17,9856231249, '12-09-2020');
INSERT INTO BOOKING VALUES (506,17,9856231250, '12-10-2020');
INSERT INTO BOOKING VALUES (507,18,9856231251, '12-09-2020');
INSERT INTO BOOKING VALUES (508,18,9856231252, '12-07-2020');
INSERT INTO BOOKING VALUES (509,18,9856231253, '12-15-2020');
INSERT INTO BOOKING VALUES (510,19,9856231254, '12-08-2020');
INSERT INTO BOOKING VALUES (511,19,9856231255, '12-04-2020');
INSERT INTO BOOKING VALUES (512,20,9856231256, '12-06-2020');
INSERT INTO BOOKING VALUES (513,20,9856231257, '12-09-2020');
INSERT INTO BOOKING VALUES (514,20,9856231258, '12-10-2020');

```

1) Display all the films on screen tonight.

```

SELECT MOVIE.MOVIE_NAME,SCREENING.SCREENING_DATE from MOVIE ,SCREENING
where MOVIE.MOVIE_ID=SCREENING.SCREENING_MOVIE_ID AND SCREENING.SCREENI
NG_DATE= '12/10/2020;

```

The screenshot shows the Oracle APEX SQL Workshop interface. The SQL command entered is: `SELECT MOVIE.MOVIE_NAME,SCREENING.SCREENING_DATE from MOVIE ,SCREENING where MOVIE.MOVIE_ID=SCREENING.SCREENING_MOVIE_ID AND SCREENING.SCREENING_DATE= '12/10/2020';`. The results are displayed in a table with two columns: MOVIE\_NAME and SCREENING\_DATE. The results show three rows: LOVE, LJO, and HOUSE, all with a screening date of 12/10/2020. The interface also shows the user's name, Harmanjeet Singh, and the schema WKSP\_DATABASELAMBITOI.

MOVIE_NAME	SCREENING_DATE
LOVE	12/10/2020
LJO	12/10/2020
HOUSE	12/10/2020

3 rows returned in 0.03 seconds



The screenshot shows the APEX SQL Workshop interface. The 'SQL Commands' pane contains the following query:

```
SELECT MOVIE_NAME, SCREENING_DATE
FROM MOVIE
WHERE MOVIE_NAME LIKE '%o__';
```

The 'Results' pane displays the following data:

MOVIE_NAME	SCREENING_DATE
LOVE	12-10-2020
LJO	12-10-2020
HOUSE	12-10-2020

The status bar indicates '3 rows returned in 0.02 seconds'.

2) Display the film its name with the third letter from the end as "o."

```
SELECT MOVIE_NAME from MOVIE where MOVIE_NAME LIKE '%o__';
```

The screenshot shows the APEX SQL Workshop interface. The 'SQL Commands' pane contains the following query:

```
SELECT MOVIE_NAME from MOVIE where MOVIE_NAME LIKE '%o__';
```

The 'Results' pane displays the following data:

MOVIE_NAME
ROSE
LOVE

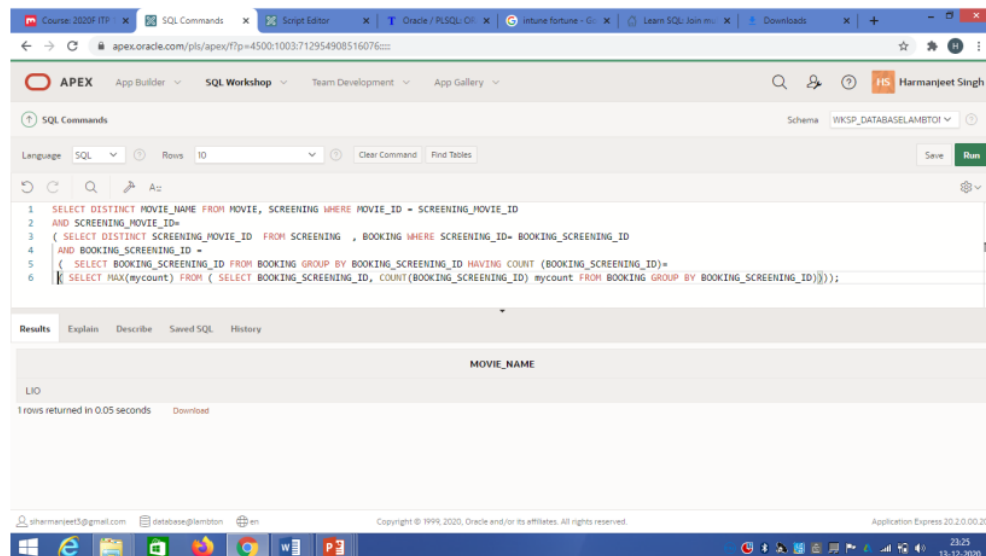
The status bar indicates '2 rows returned in 0.02 seconds'.

3.) Display which film has the most number of customers to watch

```

SELECT DISTINCT MOVIE_NAME FROM MOVIE, SCREENING WHERE
MOVIE_ID = SCREENING_MOVIE_ID AND SCREENING_MOVIE_ID=
( SELECT DISTINCT SCREENING_MOVIE_ID FROM SCREENING , BOOKING WHERE
SCREENING_ID= BOOKING_SCREENING_ID
AND BOOKING_SCREENING_ID =
( SELECT BOOKING_SCREENING_ID FROM BOOKING GROUP BY BOOKING_SCREENING_ID
HAVING COUNT (BOOKING_SCREENING_ID)=
( SELECT MAX(mycount) FROM ( SELECT BOOKING_SCREENING_ID,
COUNT(BOOKING_SCREENING_ID) mycount FROM BOOKING GROUP BY BOOKING_SCREENING_ID
))));

```



4) Display the actor who acts in the film, which has a length longer than 120 minutes

```

SELECT MOVIE_ACTOR, MOVIE_LENGTH from MOVIE where MOVIE_LENGTH >120.00;

```

The screenshot shows the Oracle APEX SQL Workshop interface. The SQL command entered is:

```
1 SELECT MOVIE_ACTOR, MOVIE_LENGTH from MOVIE where MOVIE_LENGTH >120.00;
```

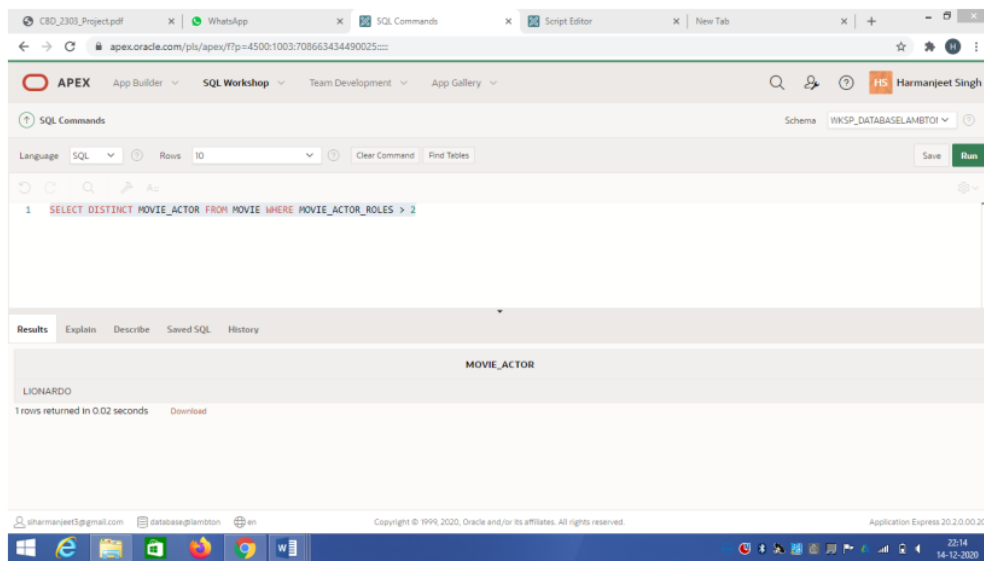
The results are displayed in a table:

MOVIE_ACTOR	MOVIE_LENGTH
AAMIR KHAN	123.23
LIONARDO	120.23
WILLIAM	123.23
WILLIAM	220.25
JIM CARRY	120.23
FARHAN	180.4
JOHN	220.33

The second screenshot shows the same query results exported into an Excel spreadsheet. The spreadsheet has columns A1 to M1, with the data from the first screenshot copied into cells A2 to A13 and B2 to B13.

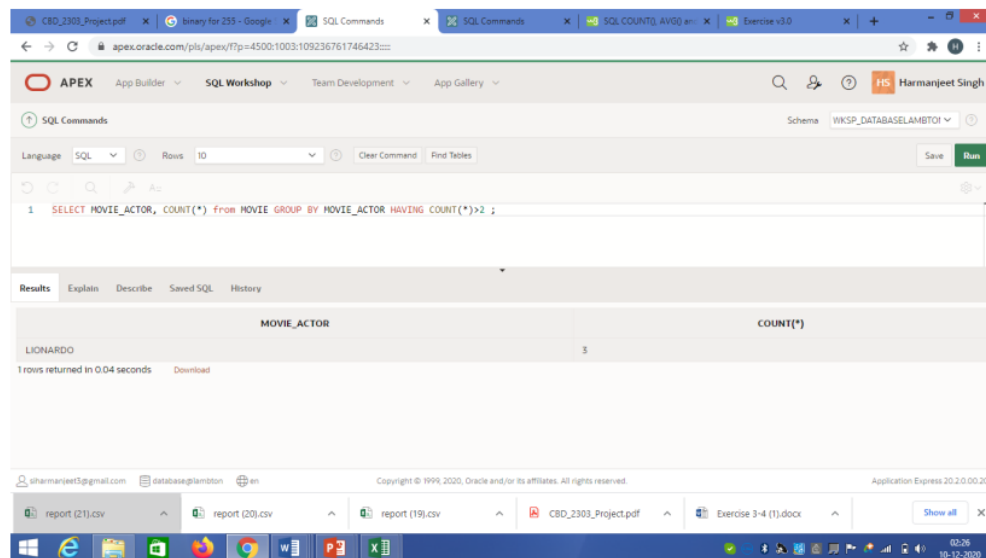
5) Display the actor who acts in more than two roles

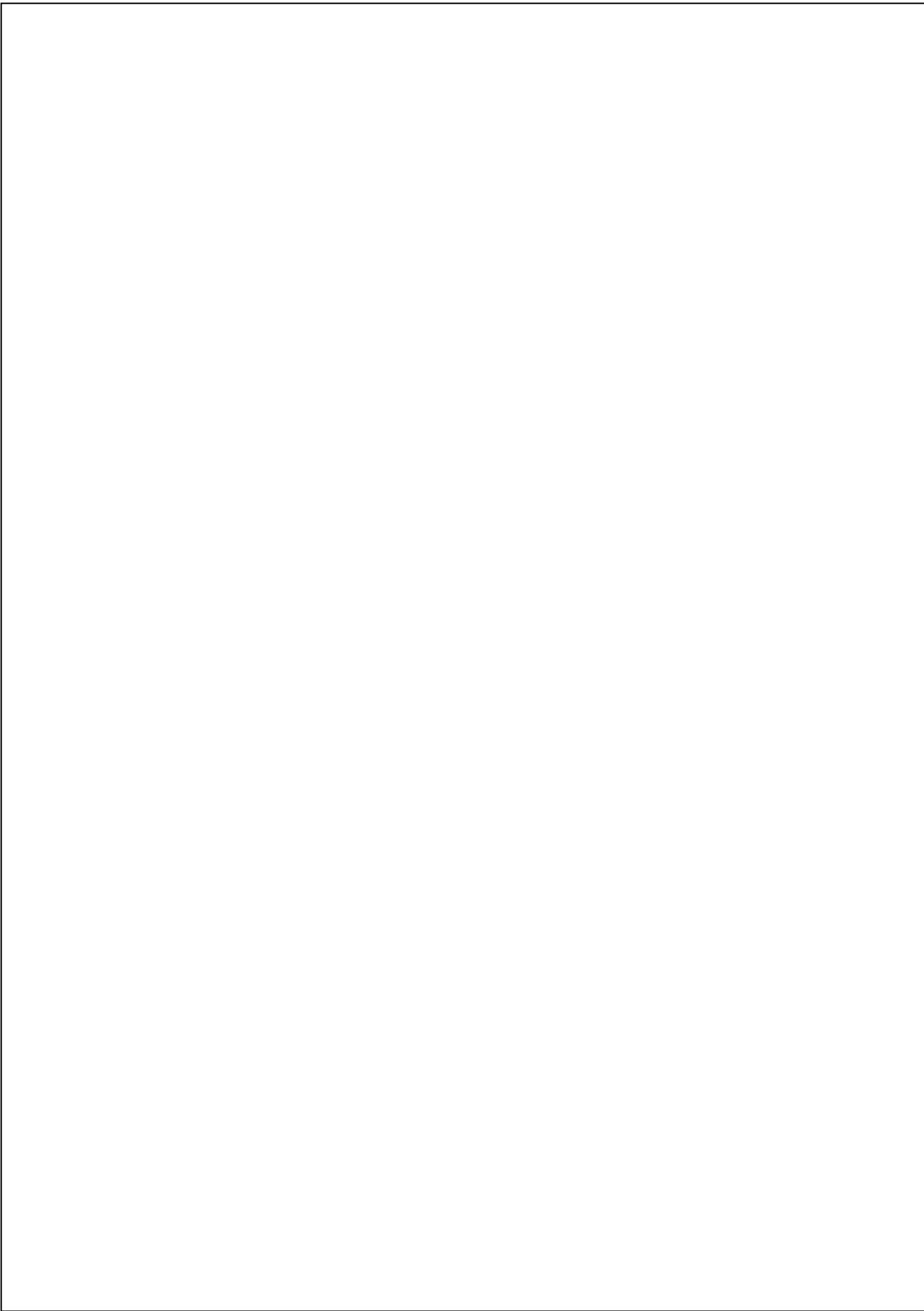
**SELECT DISTINCT MOVIE\_ACTOR FROM MOVIE WHERE MOVIE\_ACTOR\_ROLES > 2**



Displaying the actor who acts in more than two movies

```
SELECT MOVIE_ACTOR, COUNT(*) from MOVIE
GROUP BY MOVIE_ACTOR HAVING COUNT(*)>2 ;
```





# PROJECT

## GRADEMARK REPORT

FINAL GRADE

27 / 40

GENERAL COMMENTS

### Instructor

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Good

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