
UNIVERSITI PENDIDIKAN SULTAN IDRIS
اونيۏرسيتي ڤندidikan سلطان ادريس
SULTAN IDRIS EDUCATION UNIVERSITY

**UNIVERSITI PENDIDIKAN SULTAN IDRIS**
**35900 TANJONG MALIM, PERAK.**

# MTD3033

# DATABASE MANAGEMENT SYSTEM

# ONLINE RENTAL MEDIA DATABASE PROGRAMMING

| BIL | NAMA PELAJAR | NO. MATRIK |
|---|---|---|
| 1 | HAZIQAH SYASYA BINTI NASIP | D20181083273 |
| 2 | AMIRUL ASYRAFF BIN AHMAD JAILANI | D20201095577 |
| 3 | MOHAMMAD YUSUF BIN SUMARDI | D20201095601 |
| 4 | MOHD IZZUL IKHWAN BIN MOHD YUSOF | D20201095609 |
| **KUMPULAN KULIAH** | E | |
| **NAMA PENGAJAR** | TS. DR. CHEE KEN NEE | |

## TABLE OF CONTENT

**SQL PROGRAMMING PROJECT EXCERSICE**

**ORACLE FLIX** ONLINE MEDIA RENTALS

## INTRODUCTION

Structured Query Language, commonly known as SQL, is a standard programming language for relational databases. Despite being older than many other types of code, it is the most widely implemented database language. Because SQL is so common, knowing it is valuable to anyone involved in computer programming or who uses databases to collect and organize information. This report will show about SQL Programming Project Exercise.

## CREATING TABLE AND MANAGING CONSTRAINTS

CUSTOMER

```
CREATE TABLE  "CUSTOMERS"
(       "CUSTOMER_ID" NUMBER(10) NOT NULL,
        "LAST_NAME" VARCHAR2(25) NOT NULL,
        "FIRST_NAME" VARCHAR2(25) NOT NULL,
        "HOME_PHONE" VARCHAR2(12) NOT NULL,
        "ADDRESS" VARCHAR2(100) NOT NULL,
        "CITY" VARCHAR2(30) NOT NULL,
        "STATE" VARCHAR2(10) NOT NULL,
        "EMAIL" VARCHAR2(25),
        "CELL_PHONE" VARCHAR2(12),
         CONSTRAINT "CUSTOMERS_PK" PRIMARY KEY ("CUSTOMER_ID")
);
```

MOVIES

```
CREATE TABLE  "MOVIES"
  ( "TITLE_ID" NUMBER(10,0) NOT NULL ENABLE,
        "TITLE" VARCHAR2(60) NOT NULL ENABLE,
        "DESCRIPTION" VARCHAR2(400) NOT NULL ENABLE,
        "RATING" VARCHAR2(4), CONSTRAINT MOVIES_RATING CHECK (RATING IN
      ('G','PG','R','PG13')),
        "CATEGORY" VARCHAR2(20), CHECK (CATEGORY IN ('DRAMA', 'COMEDY', 'ACTION',
      'CHILD', 'SCIFI', 'DOCUMENTARY')),
        "RELEASE_DATE" DATE NOT NULL ENABLE,
         CONSTRAINT "MOVIES_PK" PRIMARY KEY ("TITLE_ID")
  );
```

MEDIA

```
CREATE TABLE  "MEDIA"
(   "MEDIA_ID" NUMBER(10,0) NOT NULL ENABLE,
        "FORMAT" VARCHAR2(3) NOT NULL ENABLE,
        "TITLE_ID" NUMBER(10,0) NOT NULL ENABLE,
         CONSTRAINT "MEDIA_PK" PRIMARY KEY ("MEDIA_ID"),
     CONSTRAINT "MEDIA_FK" FOREIGN KEY ("TITLE_ID")
     REFERENCES MOVIES ("TITLE_ID")
);
```

RENTAL_HISTORY

```
CREATE TABLE  "RENTAL_HISTORY"
(     "MEDIA_ID" NUMBER(10,0) NOT NULL,
      "RENTAL_DATE" DATE DEFAULT SYSDATE NOT NULL,
      "CUSTOMER_ID" NUMBER(10,0) NOT NULL,
      "RETURN_DATE" DATE,
       CONSTRAINT "RENTAL_HISTORY_PK" PRIMARY KEY ("MEDIA_ID", "RENTAL_DATE"),
       CONSTRAINT "RENTAL_HISTORY_MEDIA_ID_FK" FOREIGN KEY ("MEDIA_ID")
          REFERENCES MEDIA ("MEDIA_ID"),
       CONSTRAINT "RENTAL_HISTORY_CUSTOMER_ID_FK" FOREIGN KEY ("CUSTOMER_ID")
          REFERENCES CUSTOMERS ("CUSTOMER_ID")
);
```

ACTORS

```
CREATE TABLE  "ACTORS"
  (      "ACTOR_ID" NUMBER(10,0) NOT NULL ENABLE,
         "STAGE_NAME" VARCHAR2(40) NOT NULL ENABLE,
         "FIRST_NAME" VARCHAR2(25) NOT NULL ENABLE,
         "LAST_NAME" VARCHAR2(25) NOT NULL ENABLE,
         "BIRTH_DATE" DATE NOT NULL ENABLE,
          CONSTRAINT "ACTORS_PK" PRIMARY KEY ("ACTOR_ID")
   );
```

STAR_BILLINGS

```
CREATE TABLE  "STAR_BILLINGS"
  (
    "ACTOR_ID" NUMBER(10,0) NOT NULL ENABLE,
        "TITLE_ID" NUMBER(10,0) NOT NULL ENABLE,
        "COMMENTS" VARCHAR2(40),
         CONSTRAINT "STAR_BILLINGS_PK" PRIMARY KEY ("ACTOR_ID", "TITLE_ID"),
         CONSTRAINT "ACTOR_ID_FK" FOREIGN KEY ("ACTOR_ID")
       REFERENCES "ACTORS"("ACTOR_ID"),
```

```
    CONSTRAINT "TITLE_ID_FK" FOREIGN KEY ("TITLE_ID")
       REFERENCES "MOVIES"("TITLE_ID")
  );
```

## CREATING AND MANAGING VIEWS

```
CREATE VIEW TITLE_UNAVAIL AS SELECT M.TITLE, E.MEDIA_ID, R.RENTAL_DATE, R.RETURN_DATE
FROM MOVIES M, MEDIA E, RENTAL_HISTORY R
WHERE M.TITLE_ID = E.TITLE_ID
AND R.MEDIA_ID = E.MEDIA_ID
AND RETURN_DATE IS NULL
WITH READ ONLY
```

## WORKING WITH SEQUENCES (INDEXES AND SYNONYMS)

### CREATING SEQUENCES

```
CREATE SEQUENCE CUSTOMER_ID_SEQ INCREMENT BY 1 START WITH 101 MAXVALUE 50000 NOCACHE
NOCYCLE
```

```
CREATE SEQUENCE TITLE_ID_SEQ INCREMENT BY 1 START WITH 1 MAXVALUE 50000 NOCACHE
NOCYCLE
```

```
CREATE SEQUENCE MEDIA_ID_SEQ INCREMENT BY 1 START WITH 92 MAXVALUE 50000 NOCACHE
NOCYCLE
```

```
CREATE SEQUENCE ACTOR_ID_SEQ INCREMENT BY 1 START WITH 1001 MAXVALUE 50000 NOCACHE
NOCYCLE
```

## INSERTING DATA TO EACH TABLE

CUSTOMERS:

```
INSERT INTO CUSTOMERS
(CUSTOMER_ID,LAST_NAME,FIRST_NAME,HOME_PHONE,ADDRESS, CITY, STATE, EMAIL,CELL_PHONE)
VALUES
(CUSTOMER_ID_SEQ.NEXTVAL,'PALOMBO', 'LISA','716-270-2669','123 MAIN
ST','BUFFALO','NY','PALOMBO@ECC.EDU','716-555-1212')


INSERT INTO CUSTOMERS
(CUSTOMER_ID,LAST_NAME,FIRST_NAME,HOME_PHONE,ADDRESS, CITY, STATE, EMAIL,CELL_PHONE)
VALUES
(CUSTOMER_ID_SEQ.NEXTVAL,'MCGREGOR', 'CONOR','716-262-5644','456 EAST ST','NEW
YORK','NY','CONOR@ECC.EDU','716-676-3232')


INSERT INTO CUSTOMERS
(CUSTOMER_ID,LAST_NAME,FIRST_NAME,HOME_PHONE,ADDRESS, CITY, STATE, EMAIL,CELL_PHONE)
VALUES
(CUSTOMER_ID_SEQ.NEXTVAL,'HART', 'KEVIN','716-310-6749','567 COLUMBUS ST','SAN
FRANCISCO','CH','KEVIN@ECC.EDU','716-787-1111')


INSERT INTO CUSTOMERS
(CUSTOMER_ID,LAST_NAME,FIRST_NAME,HOME_PHONE,ADDRESS, CITY, STATE, EMAIL,CELL_PHONE)
VALUES
(CUSTOMER_ID_SEQ.NEXTVAL,'WHETHER', 'MAY','716-567-9873','098 EAST MAIN ST','NEW
YORK','NY','MAYWHETHER@ECC.EDU','716-692-9999')


INSERT INTO CUSTOMERS
(CUSTOMER_ID,LAST_NAME,FIRST_NAME,HOME_PHONE,ADDRESS, CITY, STATE, EMAIL,CELL_PHONE)
VALUES
(CUSTOMER_ID_SEQ.NEXTVAL,'VECTOR', 'SINS','716-923-8463','876 MAIN
ST','CHICHAGO','CH','VECTOR@ECC.EDU','716-984-1289')


INSERT INTO CUSTOMERS
(CUSTOMER_ID,LAST_NAME,FIRST_NAME,HOME_PHONE,ADDRESS, CITY, STATE, EMAIL,CELL_PHONE)
VALUES
(CUSTOMER_ID_SEQ.NEXTVAL,'PAUL', 'LOGAN','716-904-7584','156 EAST
ST','LONDON','EN','LOGAN@ECC.EDU','716-947-9854')
```

MOVIES:

```
INSERT INTO MOVIES
(TITLE_ID,TITLE,DESCRIPTION,RATING,CATEGORY,RELEASE_DATE)
VALUES
(TITLE_ID_SEQ.NEXTVAL,'REMEMBER THE TITANS',’THE TRUE STORY OF A NEWLY APPOINTED
AFRICAN-AMERICAN COACH AND HIS HIGH SCHOOL TEAM ON THEIR FIRST SEASON AS A RACIALLY
INTEGRATED UNIT.', 'PG','DRAMA','29-SEP-2000')


INSERT INTO MOVIES
(TITLE_ID,TITLE,DESCRIPTION,RATING,CATEGORY,RELEASE_DATE)
VALUES
(TITLE_ID_SEQ.NEXTVAL,'GLADIATOR',’A FORMER ROMAN GENERAL SETS OUT TO EXACT VENGEANCE
AGAINST THE CORRUPT EMPEROR WHO MURDERED HIS FAMILY.', 'PG','SCIFI','12-MAY-2000')


INSERT INTO MOVIES
(TITLE_ID,TITLE,DESCRIPTION,RATING,CATEGORY,RELEASE_DATE)
VALUES
(TITLE_ID_SEQ.NEXTVAL,'THE GODFATHER','AN ORGANIZED CRIME DYNASTYS AGING PATRIARCH
TRANSFERS CONTROL OF HIS CLANDESTINE EMPIRE TO HIS RELUCTANT SON.','G','ACTION','24-
AUG-1974')


INSERT INTO MOVIES
(TITLE_ID,TITLE,DESCRIPTION,RATING,CATEGORY,RELEASE_DATE)
VALUES
(TITLE_ID_SEQ.NEXTVAL,'BAYWATCH',’DEVOTED LIFEGUARD MITCH BUCHANNON BUTTS HEADS WITH
A BRASH NEW RECRUIT, THEY UNCOVER A CRIMINAL PLOT THAT THREATENS THE FUTURE OF THE
BAY.', 'R','DOCUMENTARY','29-MAY-2017')


INSERT INTO MOVIES
(TITLE_ID,TITLE,DESCRIPTION,RATING,CATEGORY,RELEASE_DATE)
VALUES
(TITLE_ID_SEQ.NEXTVAL,'JAWS','WHEN A KILLER SHARK UNLEASHES CHAOS ON A BEACH
COMMUNITY, ITS UP TO A LOCAL SHERIFF, A MARINE BIOLOGIST, AND AN OLD SEAFARER TO HUNT
THE BEAST DOWN.', 'PG','DRAMA','26-DEC-1975')


INSERT INTO MOVIES
(TITLE_ID,TITLE,DESCRIPTION,RATING,CATEGORY,RELEASE_DATE)
VALUES
(TITLE_ID_SEQ.NEXTVAL,'HEAT',’A GROUP OF PROFESSIONAL BANK ROBBERS START TO FEEL THE
HEAT FROM POLICE WHEN THEY UNKNOWINGLY LEAVE A CLUE AT THEIR HEIST.',
'PG13','SCIFI','02-FEB-1995')
```

MEDIA:

```
INSERT INTO MEDIA
(MEDIA_ID, FORMAT, TITLE_ID)
VALUES
(MEDIA_ID_SEQ.NEXTVAL,'DVD','1')


INSERT INTO MEDIA
(MEDIA_ID, FORMAT, TITLE_ID)
VALUES
(MEDIA_ID_SEQ.NEXTVAL,'VHS','1')


INSERT INTO MEDIA
(MEDIA_ID, FORMAT, TITLE_ID)
VALUES
(MEDIA_ID_SEQ.NEXTVAL,'CD','1')


INSERT INTO MEDIA
(MEDIA_ID, FORMAT, TITLE_ID)
VALUES
(MEDIA_ID_SEQ.NEXTVAL,'WMV','1')


INSERT INTO MEDIA
(MEDIA_ID, FORMAT, TITLE_ID)
VALUES
(MEDIA_ID_SEQ.NEXTVAL,'MP4','1')


INSERT INTO MEDIA
(MEDIA_ID, FORMAT, TITLE_ID)
VALUES
(MEDIA_ID_SEQ.NEXTVAL,'DVD','1')
```

RENTAL HISTORY:

```
INSERT INTO RENTAL_HISTORY
(MEDIA_ID,RENTAL_DATE,CUSTOMER_ID,RETURN_DATE)
VALUES
(92,DEFAULT,101,SYSDATE+1)


INSERT INTO RENTAL_HISTORY
(MEDIA_ID,RENTAL_DATE,CUSTOMER_ID,RETURN_DATE)
VALUES
(93,DEFAULT,102,SYSDATE+1)


INSERT INTO RENTAL_HISTORY
(MEDIA_ID,RENTAL_DATE,CUSTOMER_ID,RETURN_DATE)
VALUES
(94,DEFAULT,103,SYSDATE+1)


INSERT INTO RENTAL_HISTORY
(MEDIA_ID,RENTAL_DATE,CUSTOMER_ID,RETURN_DATE)
VALUES
(95,DEFAULT,104,SYSDATE+1)


INSERT INTO RENTAL_HISTORY
(MEDIA_ID,RENTAL_DATE,CUSTOMER_ID,RETURN_DATE)
VALUES
(96,DEFAULT,105,SYSDATE+1)


INSERT INTO RENTAL_HISTORY
(MEDIA_ID,RENTAL_DATE,CUSTOMER_ID,RETURN_DATE)
VALUES
(97,DEFAULT,106,SYSDATE+1)
```

ACTORS:

```
INSERT INTO ACTORS (ACTOR_ID,STAGE_NAME,FIRST_NAME,LAST_NAME,BIRTH_DATE)
VALUES
(ACTOR_ID_SEQ.NEXTVAL,'BRAD PITT','WILLIAM','PITT','18-DEC-1963')


INSERT INTO ACTORS (ACTOR_ID,STAGE_NAME,FIRST_NAME,LAST_NAME,BIRTH_DATE)
VALUES
(ACTOR_ID_SEQ.NEXTVAL,'MAXIMUS','RUSSEL','CROWE','07-APRIL-1964')


INSERT INTO ACTORS (ACTOR_ID,STAGE_NAME,FIRST_NAME,LAST_NAME,BIRTH_DATE)
VALUES
(ACTOR_ID_SEQ.NEXTVAL,'DON VITO','MARLON','BRANDO','24-APRIL-1924')


INSERT INTO ACTORS (ACTOR_ID,STAGE_NAME,FIRST_NAME,LAST_NAME,BIRTH_DATE)
VALUES
(ACTOR_ID_SEQ.NEXTVAL,'MITCH BUCHANNON','DWAYNE','JOHNSON','02-MAY-1972')


INSERT INTO ACTORS (ACTOR_ID,STAGE_NAME,FIRST_NAME,LAST_NAME,BIRTH_DATE)
VALUES
(ACTOR_ID_SEQ.NEXTVAL,'BRODY','ROY','SCHEIDER','10-NOV-1932')


INSERT INTO ACTORS (ACTOR_ID,STAGE_NAME,FIRST_NAME,LAST_NAME,BIRTH_DATE)
VALUES
(ACTOR_ID_SEQ.NEXTVAL,'VINCENT HANNA','AL','PACINO','25-APRIL-1940')
```

STAR BILLINGS:

```
INSERT INTO STAR_BILLINGS
(ACTOR_ID,TITLE_ID ,COMMENTS)
VALUES
(1001, 1, 'ROMANTIC LEAD')


INSERT INTO STAR_BILLINGS
(ACTOR_ID,TITLE_ID ,COMMENTS)
VALUES
(1002, 2, 'STRONG VISSION')


INSERT INTO STAR_BILLINGS
(ACTOR_ID,TITLE_ID ,COMMENTS)
VALUES
(1003, 3, 'CLEVERNESS FOR CRAFT')


INSERT INTO STAR_BILLINGS
(ACTOR_ID,TITLE_ID ,COMMENTS)
VALUES
(1004, 4, 'SUPERHERO')


INSERT INTO STAR_BILLINGS
(ACTOR_ID,TITLE_ID ,COMMENTS)
VALUES
(1005, 5, 'HUMANITY MAN')


INSERT INTO STAR_BILLINGS
(ACTOR_ID,TITLE_ID ,COMMENTS)
VALUES
(1006, 6, 'CAREER RETROSPECTIVE')
```

## CREATE AN INDEX

```
CREATE INDEX CUSTOMER_LAST_NAME_IDX ON CUSTOMERS(LAST_NAME)
```

```
SELECT * FROM USER_INDEXES
WHERE INDEX_NAME = 'CUSTOMER_LAST_NAME_IDX'
```

| INDEX_NAME | INDEX_TYPE | TABLE_OWNER | TABLE_NAME | TABLE_TYPE | UNIQUENESS | COMPRESSION | PREFIX_LENGTH | TABLES |
|---|---|---|---|---|---|---|---|---|
| CUSTOMER_LAST_NAME_IDX | NORMAL | SQL_VZRXROLRNFFFKGLIPOTWCIPKN | CUSTOMERS | TABLE | NONUNIQUE | DISABLED | - | LIVESQ |

Download CSV

## CREATE AN SYNONYM

```
CREATE SYNONYM TU FOR TITLE_UNAVAIL
```

```
SELECT* FROM USER_SYNONYMS
WHERE SYNONYM_NAME = 'TU'
```

| SYNONYM_NAME | TABLE_OWNER | TABLE_NAME | DB_LINK | ORIGIN_CON_ID |
|---|---|---|---|---|
| TU | SQL_VZRXROLRNFFFKGLIPOTWCIPKN | TITLE_UNAVAIL | - | 3 |

Download CSV

TABLE DATA AFTER RUN SELECT*

CUSTOMER

| CUSTOMER_ID | LAST_NAME | FIRST_NAME | HOME_PHONE | ADDRESS | CITY | STATE | EMAIL | CELL_PHONE |
|---|---|---|---|---|---|---|---|---|
| 101 | PALOMBO | LISA | 716-270-2669 | 123 MAIN ST | BUFFALO | NY | PALOMBO@ECC.EDU | 716-555-1212 |
| 102 | MCGREGOR | CONOR | 716-262-5644 | 456 EAST ST | NEW YORK | NY | CONOR@ECC.EDU | 716-676-3232 |
| 103 | HART | KEVIN | 716-310-6749 | 567 COLUMBUS ST | SAN FRANCISCO | CH | KEVIN@ECC.EDU | 716-787-1111 |
| 104 | WHETHER | MAY | 716-567-9873 | 098 EAST MAIN ST | NEW YORK | NY | MAYWHETHER@ECC.EDU | 716-692-9999 |
| 105 | VECTOR | SINS | 716-923-8463 | 876 MAIN ST | CHICHAGO | CH | VECTOR@ECC.EDU | 716-984-1289 |
| 106 | PAUL | LOGAN | 716-904-7584 | 156 EAST ST | LONDON | EN | LOGAN@ECC.EDU | 716-947-9854 |

MOVIES

| TITLE_ID | TITLE | DESCRIPTION | RATING | CATEGORY | RELEASE_DATE |
|---|---|---|---|---|---|
| 1 | REMEMBER THE TITANS | THE TRUE STORY OF A NEWLY APPOINTED AFRICAN-AMERICAN COACH AND HIS HIGH SCHOOL TEAM ON THEIR FIRST SEASON AS A RACIALLY INTEGRATED UNIT. | PG | DRAMA | 29-SEP-00 |
| 2 | GLADIATOR | A FORMER ROMAN GENERAL SETS OUT TO EXACT VENGEANCE AGAINST THE CORRUPT EMPEROR WHO MURDERED HIS FAMILY. | PG | SCIFI | 12-MAY-00 |
| 3 | THE GODFATHER | AN ORGANIZED CRIME DYNASTYS AGING PATRIARCH TRANSFERS CONTROL OF HIS CLANDESTINE EMPIRE TO HIS RELUCTANT SON. | G | ACTION | 24-AUG-74 |
| 4 | BAYWATCH | DEVOTED LIFEGUARD MITCH BUCHANNON BUTTS HEADS WITH A BRASH NEW RECRUIT, THEY UNCOVER A CRIMINAL PLOT THAT THREATENS THE FUTURE OF THE BAY. | R | DOCUMENTARY | 29-MAY-17 |
| 5 | JAWS | WHEN A KILLER SHARK UNLEASHES CHAOS ON A BEACH COMMUNITY, ITS UP TO A LOCAL SHERIFF, A MARINE BIOLOGIST, AND AN OLD SEAFARER TO HUNT THE BEAST DOWN. | PG | DRAMA | 26-DEC-75 |
| 6 | HEAT | A GROUP OF PROFESSIONAL BANK ROBBERS START TO FEEL THE HEAT FROM POLICE WHEN THEY UNKNOWINGLY LEAVE A CLUE AT THEIR HEIST. | PG13 | SCIFI | 02-FEB-95 |

MEDIA

| MEDIA_ID | FORMAT | TITLE_ID |
|---|---|---|
| 92 | DVD | 1 |
| 93 | VHS | 1 |
| 94 | CD | 1 |
| 95 | WMV | 1 |
| 96 | MP4 | 1 |
| 97 | DVD | 1 |

RENTAL HISTORY

| MEDIA_ID | RENTAL_DATE | CUSTOMER_ID | RETURN_DATE |
|---|---|---|---|
| 92 | 09-JUN-21 | 101 | 10-JUN-21 |
| 93 | 09-JUN-21 | 102 | 10-JUN-21 |
| 94 | 09-JUN-21 | 103 | 10-JUN-21 |
| 95 | 09-JUN-21 | 104 | 10-JUN-21 |
| 96 | 09-JUN-21 | 105 | 10-JUN-21 |
| 97 | 09-JUN-21 | 106 | 10-JUN-21 |

ACTORS

| ACTOR_ID | STAGE_NAME | FIRST_NAME | LAST_NAME | BIRTH_DATE |
|---|---|---|---|---|
| 1001 | BRAD PITT | WILLIAM | PITT | 18-DEC-63 |
| 1002 | MAXIMUS | RUSSEL | CROWE | 07-APR-64 |
| 1003 | DON VITO | MARLON | BRANDO | 24-APR-24 |
| 1004 | MITCH BUCHANNON | DWAYNE | JOHNSON | 02-MAY-72 |
| 1005 | BRODY | ROY | SCHEIDER | 10-NOV-32 |
| 1006 | VINCENT HANNA | AL | PACINO | 25-APR-40 |

STAR BILLINGS

| ACTOR_ID | TITLE_ID | COMMENTS |
|---|---|---|
| 1001 | 1 | ROMANTIC LEAD |
| 1002 | 2 | STRONG VISSION |
| 1003 | 3 | CLEVERNESS FOR CRAFT |
| 1004 | 4 | SUPERHERO |
| 1005 | 5 | HUMANITY MAN |
| 1006 | 6 | CAREER RETROSPECTIVE |

**LINK APPLICATION AND LIVE SQL**

APPLICATIONS

(APEX ORACLE)

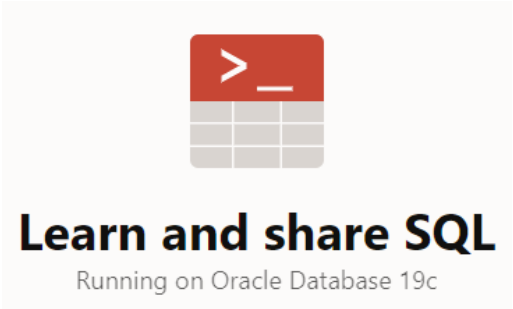

https://apex.oracle.com/pls/apex/mtd3033sol/r/online-media-rentals8/home?session=115227491456631

EMAIL: mtd3033@upsi.edu.my

PASSWORD: upsimtd3033

LIVE SQL

(REFERENCES)




https://livesql.oracle.com/apex/livesql/s/lwwyz17d2c1uxrud4tj3rza6l

## CONCLUSION

As a conclusion, we discuss some of the methods that have been developed for accessing database from programs. Most database access in practical application is accomplished through software programs that implement database application. Most database systems have an interactive interface where these SQL commands can be typed directly into a monitor for execution bye the database system. The interactive interface is quite convenient for schema and constraint creation or for accessional ad hoc queries. However, in practice, the majority of database interaction are executed through programs that have been carefully designed and tested. These programs are generally known as application programs or database application and are used canned transaction by the end users.