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DITP2313: DATABASE PROGRAMMING

PROJECT GROUP 2

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1.0 Introduction

Procedural Language/Structured Query Language, or PL/SQL, is a major player in database administration and information systems. It is a strong tool that may be used to create reliable and effective applications. We investigate the lives and achievements of two notable individuals, Tan Sri Mohamed Nazir Tun Abdul and Tan Sri Robert Kuok Hock Nien, using PL/SQL to extract and arrange important data regarding their educational backgrounds, honors, accomplishments, publications, contributions, associations, and titles in the workplace.

Tan Sri Mohamed Nazir Tun Abdul, a prominent figure in the business and finance sector, has left an indelible mark on the corporate landscape. Our PL/SQL investigation seeks to uncover details about his educational journey, accolades received, participation in various activities, publications, significant contributions to society, and the organizations he has been associated with, along with his professional title.

In a similar vein, **Tan Sri Robert Kuok Hock Nien**, a business magnate in the maritime and agribusiness sectors, is well known for his aptitude for entrepreneurship. We intend to carefully gather data using PL/SQL on his academic accomplishments, honours and awards, participation in various activities, published works, notable contributions, organizational roles, and professional titles.

Advantages that we learn in grouping work is **Diverse Skills** which is each team member brought unique skills to the table, contributing to a well-rounded approach in tackling the challenges posed by the code battle. Not only that, we more efficient **Division of Tasks**, we can assigning specific roles based on individual expertise allowed us to streamline the workflow, ensuring optimal efficiency in handling different aspects of the project.

In conclusion, our experience in the code battle underscored the importance of teamwork in harnessing the full potential of PL/SQL for comprehensive data analysis and presentation. This collaborative effort not only showcased the power of this procedural language but also highlighted the advantages of pooling diverse talents towards a common goal.

1.1 Experience in Code Battle Teamwork

In a collaborative endeavor focusing on PL/SQL within a code battle scenario, our team worked seamlessly to extract, organize, and present data about Tansri Mohamed Nazir Tun Abdul and Tan Sri Robert Kuok Hock Nien. The synergy of our skills was evident as we navigated through databases, crafted PL/SQL queries, and conducted a thorough search for information.

2.0 Scope

- a) Figure
 - Tan Sri Mohamed Nazir Tun Abdul
 - Tan Sri Robert Kuok Hock Nien
- b) Information about the Tan Sri

i) Tan Sri Mohamed Nazir Tun Abdul

Background:

Well-known person in the finance and commercial industries.

Contributions:

Made a lasting impression on the corporate scene.

PL/SQL Examine Objectives:

- Learn more about his academic background.
- Examine the honors you've been given.
- Analyze involvement in different activities.
- Examine publications.
- Examine noteworthy societal accomplishments.
- Examine the associations he has been a part of.
- Recognize his title in the workplace.

ii) Tan Sri Robert Kuok Hock Nien

Background:

An agribusiness and maritime business magnate.

Contributions:

renowned for being an entrepreneur.

PL/SQL Examine Objectives:

- Compile information about his scholastic achievements.
- Examine awards and honors.
- Examine taking part in different activities.
- Look up published works.
- Analyze noteworthy input.
- Recognize the positions inside a company.
- Examine titles that are professional.

c) Specific Requirements of Project

Using PL/SQL:

Utilize PL/SQL for data extraction and analysis.

Data Searching:

Look up as much information as possible about both public figures.

Cooperative teamwork:

Utilize a variety of talents while working cooperatively as a team.

Effective Task Distribution:

For the best workflow, assign distinct jobs depending on individual knowledge.

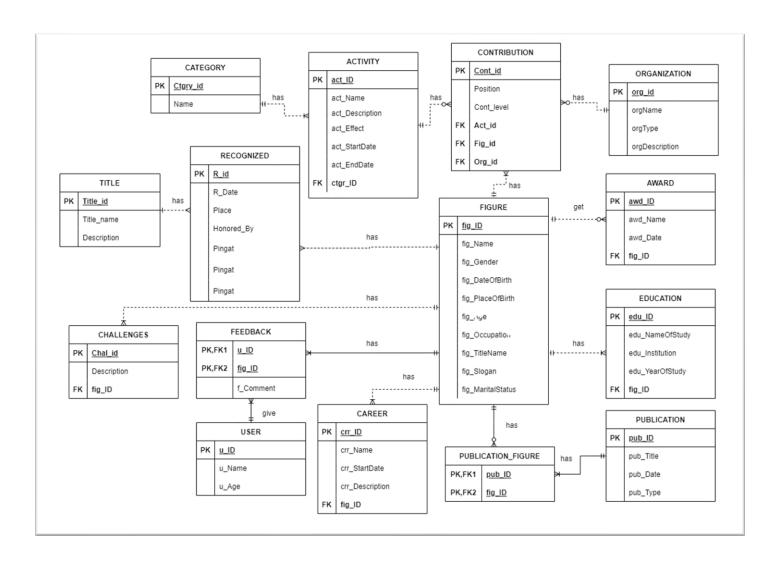
Data Display:

Give the gathered data a thorough, well-organized presentation.

Scenario of Code Battle:

The project is structured around a code battle scenario, which highlights the importance of effective teamwork and using PL/SQL skills to overcome obstacles.

3.0 Entity Relationship Diagram



4.0 Data Definition Language (DDL)

FIGURE

```
CREATE TABLE FIGURE (
FIG_ID VARCHAR2(50) PRIMARY KEY,
FIG_NAME VARCHAR2(255),
FIG_GENDER VARCHAR2(50),
FIG_DATEOFBIRTH VARCHAR2(50),
FIG_PLACEOFBIRTH VARCHAR2(50),
FIG_AGE NUMBER,
FIG_OCCUPATION VARCHAR2(255),
FIG_TITLENAME VARCHAR2(255),
FIG_SLOGAN VARCHAR2(255),
FIG_MARITALSTATUS VARCHAR2(30)
);
```

EDUCATION

```
CREATE TABLE EDUCATION (
    EDU_ID VARCHAR2(20) NOT NULL PRIMARY KEY ,
    EDU_NAMEOFSTUDY VARCHAR2(255),
    EDU_INSTITUTION VARCHAR2(255),
    EDU_YEAROFSTUDY VARCHAR2(50),
    FIG_ID VARCHAR2(50),
    CONSTRAINT fk_fig_id FOREIGN KEY (fig_ID) REFERENCES FIGURE(fig_ID)
    );
```

AWARD

```
CREATE TABLE AWARD (

AWD_ID VARCHAR2(50) PRIMARY KEY,

AWD_NAME VARCHAR2(255),

AWD_DATE VARCHAR2(50),

FIG_ID VARCHAR2(50),

SOURCE VARCHAR2(4000),

CONSTRAINT fk_fig_id_award FOREIGN KEY (fig_ID) REFERENCES figure(fig_ID)

);
```

CAREER

```
CREATE TABLE CAREER (
CRR_ID VARCHAR2(50) PRIMARY KEY,

CRR_NAME VARCHAR2(255),

CRR_STARTDATE VARCHAR2(50),

CRR_DESCRIPTION VARCHAR2(4000),

FIG_ID VARCHAR2(50),

CONSTRAINT fk_fig_id_career FOREIGN KEY (fig_ID) REFERENCES

FIGURE(fig_ID)

);
```

USER

```
CREATE TABLE USER (

U_ID VARCHAR2(50) PRIMARY KEY,

U_NAME VARCHAR2(255),

U_AGE NUMBER

);
```

FEEDBACK

```
CREATE TABLE FEEDBACK (

U_ID VARCHAR2(50),

FIG_ID VARCHAR2(50),

F_COMMENT VARCHAR2(4000),

CONSTRAINT pk_FEEDBACK PRIMARY KEY (u_ID, fig_ID),

CONSTRAINT fk_u_ID_feedback FOREIGN KEY (u_ID) REFERENCES
USERS(u_ID),

CONSTRAINT fk_fig_ID_feedback FOREIGN KEY (fig_ID) REFERENCES
FIGURE(fig_ID)

);
```

PUBLICATION

```
CREATE TABLE PUBLICATION (
PUB_ID VARCHAR2(50) PRIMARY KEY,
PUB_TITLE VARCHAR2(255),
PUB_DATE VARCHAR2(50),
PUB_TYPE VARCHAR2(50)
);
```

RECOGNIZED

```
CREATE TABLE RECOGNIZED(
R_ID NUMBER PRIMARY KEY,

TITLE_ID NUMBER,
R_DATE VARCHAR2(50),
PLACE VARCHAR2(255),
HONORED_BY VARCHAR2(255),
PINGAT VARCHAR2(255),
FIG_ID VARCHAR2(50),
CONSTRAINT fk_Title_id_R FOREIGN KEY (Title_id) REFERENCES
TITLE(Title_id),
CONSTRAINT fk_Fig_id_R FOREIGN KEY (Fig_id) REFERENCES
FIGURE(Fig_id)
);
```

TITLE

```
CREATE TABLE TITLE (

TITLE_ID NUMBER PRIMARY KEY,

TITLE_NAME VARCHAR2(255),

DESCRIPTION VARCHAR2(4000)

);
```

PUBLICATION FIGURE

```
CREATE TABLE PUBLICATION_FIGURE (
PUB_ID VARCHAR2(50),

FIG_ID VARCHAR2(50),

CONSTRAINT fk_pub_ID_fig FOREIGN KEY (pub_ID) REFERENCES PUBLICATION(pub_ID),

CONSTRAINT fk_fig_ID_pub FOREIGN KEY (fig_ID) REFERENCES FIGURE(fig_ID),
```

```
CONSTRAINT pk_pub_fig PRIMARY KEY (pub_ID, fig_ID)
);
```

CATEGORY

```
CREATE TABLE CATEGORY(

CTGRY_ID VARCHAR2(50) PRIMARY KEY,

NAME VARCHAR2(100)

);
```

CHALLENGES

```
CREATE TABLE CHALLENGES (
CHAL_ID NUMBER PRIMARY KEY,

DESCRIPTION VARCHAR2(4000),

FIG_ID VARCHAR2(50),

SOURCE VARCHAR2(255),

CONSTRAINT fk_Fig_ID_chal FOREIGN KEY (Fig_id) REFERENCES
FIGURE(Fig_ID)

);
```

ORGANIZATION

```
CREATE TABLE ORGANIZATION (
ORGID NUMBER PRIMARY KEY,
ORGNAME VARCHAR2(255),
ORGTYPE VARCHAR2(255),
ORGDESCRIPTION VARCHAR2(4000)
);
```

CONTRIBUTIONS

```
CREATE TABLE CONTRIBUTIONS (
CONT_ID VARCHAR2(50),

ACT_ID VARCHAR2(50),

FIG_ID VARCHAR2(50),

POSITION_ VARCHAR2(255),

ORG_ID VARCHAR2(50),

CON_LEVEL VARCHAR2(50),

CONSTRAINT fk_act_ID_con FOREIGN KEY (act_ID) REFERENCES ACTIVITY(act_ID),

CONSTRAINT fk_Fig_ID_con FOREIGN KEY (Fig_ID) REFERENCES FIGURE(Fig_ID),

CONSTRAINT fk_orgID_con FOREIGN KEY (orgID) REFERENCES ORGANIZATION(orgID)

);
```

ACTIVITY

```
CREATE TABLE ACTIVITY (
    ACT_ID VARCHAR2(50),
    ACT_NAME VARCHAR2(255),
    ACT_DESCRIPTION VARCHAR2(4000),
    ACT_EFFECT VARCHAR2(4000),
    ACT_STARTDATE VARCHAR2(50),
    ACT_ENDDATE VARCHAR2(50),
    CTGRY_ID VARCHAR2(50),
    CONSTRAINT fk_ctgry_ID FOREIGN KEY (Ctgry_id) REFERENCES CATEGORY(Ctgry_id)
    );
```

DROP TABLE

DROP TABLE FIGURE;--15

DROP TABLE EDUCATION;--11

DROP TABLE AWARD;--10

DROP TABLE CAREER;--9

DROP TABLE USERS;--8

DROP TABLE FEEDBACK;--7

DROP TABLE PUBLICATION;--6

DROP TABLE RECOGNITION;--5

DROP TABLE TITLE;--12

DROP TABLE PUBLICATION_FIGURE;--4

DROP TABLE CATEGORY;--14

DROP TABLE CHALLENGES;--3

DROP TABLE ORGANIZATION;--2

DROP TABLE CONTRIBUTIONS;--1

DROP TABLE ACTIVITY;--13

5.0 PL/SQL Code

1. When did the figure receive the title of Tan Sri?

```
CREATE OR REPLACE PROCEDURE getReceivedTanSri(v_fig_id IN FIGURE.FIG_ID%TYPE)
IS
CURSOR cur_rec (p_fig_id FIGURE.FIG_ID%TYPE) IS
  SELECT F.FIG_NAME, T.TITLE_NAME, R.R_DATE
  FROM RECOGNIZED R
  JOIN TITLE T
  ON R.TITLE_ID = T.TITLE_ID
  JOIN FIGURE F
  ON R.FIG_ID = F.FIG_ID
 WHERE R.FIG_ID = p_fig_id;
  v_figure_rec cur_rec%ROWTYPE;
BEGIN
  OPEN cur_rec(v_fig_id);
   LOOP
      FETCH cur_rec INTO v_figure_rec;
     IF cur rec%ROWCOUNT <=0
     THEN
        DBMS_OUTPUT.PUT_LINE('No Data Found');
     END IF;
      EXIT WHEN cur_rec%NOTFOUND;
      DBMS_OUTPUT.PUT_LINE(v_figure_rec.FIG_NAME||' received the Title ' ||
v_figure_rec.TITLE_NAME ||' on '|| v_figure_rec.R_DATE || '.' );
    END LOOP;
  CLOSE cur_rec;
EXCEPTION
 WHEN INVALID_CURSOR THEN
```

```
DBMS_OUTPUT_LINE('Cursor is facing problem !');

WHEN NO_DATA_FOUND THEN

-- Handle the case when no data is found

DBMS_OUTPUT_PUT_LINE('No Data Found');

WHEN OTHERS THEN

-- Handle other exceptions

DBMS_OUTPUT.PUT_LINE('Error, Please try again !');

END getReceivedTanSri;

BEGIN

getReceivedTanSri('F06');

END;
```



2. List the number of books and articles contributed by each figure

```
IS

CURSOR cur_pub

IS

SELECT F.FIG_NAME, COUNT(PF.PUB_ID) totals

FROM PUBLICATION_FIGURE PF

JOIN FIGURE F

ON PF.FIG_ID = F.FIG_ID
```

```
GROUP BY F.FIG_NAME;
v_pub cur_pub%ROWTYPE;
BEGIN
 OPEN cur_pub;
 LOOP
 FETCH cur_pub INTO v_pub;
 IF cur pub%ROWCOUNT <=0
   THEN
   DBMS_OUTPUT.PUT_LINE('No Data Found');
   END IF;
 EXIT WHEN cur_pub%NOTFOUND;
   DBMS_OUTPUT.PUT_LINE('The total number of publications made by
'||v_pub.FIG_NAME||' is ' || v_pub.totals || ' .');
 END LOOP;
 CLOSE cur_pub;
EXCEPTION
WHEN INVALID_CURSOR THEN
 DBMS_OUTPUT.PUT_LINE('Cursor is facing problem !');
WHEN NO_DATA_FOUND THEN
 -- Handle the case when no data is found
 DBMS_OUTPUT.PUT_LINE('No Data Found');
 WHEN OTHERS THEN
 -- Handle other exceptions
 DBMS_OUTPUT.PUT_LINE('Error, Please try again !');
END getFigurePub;
BEGIN
getFigurePub;
END;
RESULT:
```

```
Results Explain Describe Saved SQL History

The total number of publications made by Rafiah binti Salim is 2.

The total number of publications made by Lim Kit Siang is 33.

The total number of publications made by Mohamed Nazir Tun Abdul Razak is 1.

Statement processed.
```

3. Where did the figure receive Tan Sri?

```
CREATE OR REPLACE PROCEDURE getReceiveTitlePlace(v_fig_id IN FIGURE.FIG_ID%TYPE)
IS
CURSOR cur_rec (p_fig_id FIGURE.FIG_ID%TYPE)
IS
 SELECT F.FIG_ID, F.FIG_NAME, T.TITLE_NAME, R.PLACE
  FROM RECOGNIZED R
 JOIN TITLE T
 ON R.TITLE_ID = T.TITLE_ID
 JOIN FIGURE F
 ON R.FIG_ID = F.FIG_ID
 WHERE TITLE_NAME = 'Tan Sri'
 AND F.FIG_ID = p_fig_id;
 v_figure_rec cur_rec%ROWTYPE;
BEGIN
  OPEN cur_rec(v_fig_id);
   LOOP
      FETCH cur_rec INTO v_figure_rec;
      IF cur_rec%ROWCOUNT <=0
     THEN
        DBMS_OUTPUT.PUT_LINE('No Data Found');
      END IF;
      EXIT WHEN cur_rec%NOTFOUND;
```

```
DBMS_OUTPUT_LINE(v_figure_rec.FIG_NAME ||' received the title ' ||
v_figure_rec.TITLE_NAME ||' at '|| v_figure_rec.PLACE || '.' );
    END LOOP;
  CLOSE cur_rec;
EXCEPTION
 WHEN INVALID_CURSOR THEN
  DBMS_OUTPUT.PUT_LINE('Cursor is facing problem !');
 WHEN NO_DATA_FOUND THEN
  -- Handle the case when no data is found
  DBMS_OUTPUT.PUT_LINE('No Data Found');
 WHEN OTHERS THEN
 -- Handle other exceptions
  DBMS_OUTPUT.PUT_LINE('Error, Please try again !');
END getReceiveTitlePlace;
BEGIN
getReceiveTitlePlace('F04');
END;
RESULT:
 Results
          Explain
                  Describe
                            Saved SQL
                                       History
 Jeffrey Cheah Fook Ling received the title Tan Sri at Istana Negara.
 0.01 seconds
```

4. What category did that figure contribute to?

```
CREATE OR REPLACE PROCEDURE getCategory(v_fig_id IN FIGURE.FIG_ID%TYPE)

IS
```

```
v_count Number :=0;
BEGIN
  FOR v_fig_name IN (SELECT FIG_NAME FROM FIGURE WHERE FIG_ID = v_fig_id)
  LOOP
    DBMS\_output.put\_line('The \ \ category \ \ that \ \ '|| \ \ v\_fig\_name.FIG\_NAME \ \ ||'
contributed is :');
  END LOOP;
  FOR v_fig_rec IN (
        SELECT F.FIG_ID ,F.FIG_NAME,CAT.NAME
        FROM CONTRIBUTIONS CS
        JOIN FIGURE F
        ON CS.FIG_ID = F.FIG_ID
        JOIN ACTIVITY ACT
        ON CS.ACT_ID = ACT.ACT_ID
        JOIN CATEGORY CAT
        ON ACT.CTGRY_ID = CAT.CTGRY_ID
        WHERE F.FIG_ID = v_fig_id
   )
  LOOP
    v_count:=v_count+1;
    DBMS_output.put_line(v_count||')'||v_fig_rec.NAME || '.');
  END LOOP;
EXCEPTION
 WHEN NO_DATA_FOUND THEN
  -- Handle the case when no data is found
  DBMS_OUTPUT.PUT_LINE('No Data Found');
 WHEN OTHERS THEN
 -- Handle other exceptions
  DBMS_OUTPUT.PUT_LINE('Error, Please try again !');
END getCategory;
```

```
BEGIN
getCategory('F02');
END;

RESULT:

The category that Robert Kuok Hock Nien contributed is:
1) Bussinessman.

Statement processed.

0.07 seconds
```

5. What was the award the figure received?

```
CREATE OR REPLACE PROCEDURE getAward(v_fig_id IN FIGURE.FIG_ID%TYPE)
IS
--Count Variable
v_count NUMBER :=0;
CURSOR cur_awd IS
SELECT F.FIG_NAME,AWD.AWD_NAME
FROM AWARD AWD
JOIN FIGURE F
ON AWD.FIG_ID = F.FIG_ID
WHERE AWD.FIG_ID = v_fig_id;
BEGIN
 FOR v_fig_name IN (SELECT FIG_NAME FROM FIGURE WHERE FIG_ID = v_fig_id)
 LOOP
  is : ');
 END LOOP;
```

```
FOR v_fig_rec IN cur_awd LOOP
   v_count := v_count + 1;
    DBMS\_OUTPUT\_LINE(\ v\_count\ |\ |\ '\ |\ |\ v\_fig\_rec.AWD\_NAME\ );
 END LOOP;
EXCEPTION
WHEN NO_DATA_FOUND THEN
 -- Handle the case when no data is found
 DBMS_OUTPUT.PUT_LINE('No Data Found');
WHEN OTHERS THEN
 -- Handle other exceptions
 DBMS_OUTPUT.PUT_LINE('Error, Please try again !');
END getAward;
BEGIN
getAward('F02');
END;
RESULT
 Results
             Explain
                        Describe
                                    Saved SQL
                                                   History
 The award that Robert Kuok Hock Nien received is :
 1) Sugar King of Asia
 2) The Richest Man
 Statement processed.
```

6. List of the companies that the figure has managed.

```
CREATE OR REPLACE PROCEDURE getOrganization(v_fig_id IN FIGURE.FIG_ID%TYPE)

IS

--Count Variable
```

```
v_count NUMBER :=0;
CURSOR cur_comp IS
 SELECT F.FIG_NAME,ORG.ORGNAME
 FROM ORGANIZATION ORG
 JOIN CONTRIBUTIONS CS
 ON ORG.ORGID = CS.ORG_ID
 JOIN FIGURE F
 ON CS.FIG_ID = F.FIG_ID
 WHERE CS.FIG_ID = v_fig_id;
BEGIN
  FOR v_fig_name IN (SELECT FIG_NAME FROM FIGURE WHERE FIG_ID = v_fig_id)
 LOOP
   DBMS_OUTPUT.PUT_LINE('The list of organization that '|| v_fig_name.FIG_NAME
||' managed are:');
  END LOOP;
 FOR v_fig_rec IN cur_comp LOOP
   v_count := v_count + 1;
    DBMS_OUTPUT.PUT_LINE( v_count ||') ' || v_fig_rec.ORGNAME );
  END LOOP;
EXCEPTION
WHEN INVALID_CURSOR THEN
 DBMS_OUTPUT.PUT_LINE('Cursor is facing problem !');
WHEN NO_DATA_FOUND THEN
 -- Handle the case when no data is found
 DBMS_OUTPUT.PUT_LINE('No Data Found');
 WHEN OTHERS THEN
 -- Handle other exceptions
 DBMS_OUTPUT.PUT_LINE('Error, Please try again !');
END getOrganization;
```

BEGIN			
getOrganization('F04');			
END;			
RESULT:			
Results Explain Describe Saved SQL History			
The list of organization that Robert Kuok Hock Nien managed are : 1) Kuok Brothers Sdn Bhd			
Statement processed.			
0.00 seconds			

7. Who honored each figure with the Tan Sri title?

```
CREATE OR REPLACE PROCEDURE getHonouredBy(v fig id IN FIGURE.FIG ID%TYPE)
IS
CURSOR cur_rec (p_fig_id FIGURE.FIG_ID%TYPE) IS
 SELECT F.FIG_NAME, T.TITLE_NAME, R.HONORED_BY
 FROM RECOGNIZED R
 JOIN TITLE T
 ON R.TITLE_ID = T.TITLE_ID
 JOIN FIGURE F
 ON R.FIG ID = F.FIG ID
 WHERE R.FIG_ID = p_fig_id AND TITLE_NAME = 'Tan Sri';
 v_figure_rec cur_rec%ROWTYPE;
BEGIN
  OPEN cur_rec(v_fig_id);
   LOOP
      FETCH cur_rec INTO v_figure_rec;
      IF cur_rec%ROWCOUNT <=0
      THEN
        DBMS_OUTPUT.PUT_LINE('No Data Found');
      END IF;
      EXIT WHEN cur_rec%NOTFOUND;
       DBMS_OUTPUT.PUT_LINE(v_figure_rec.FIG_NAME ||' received the title ' ||
v_figure_rec.TITLE_NAME ||' honored by '|| v_figure_rec.HONORED_BY || '.' );
    END LOOP;
 CLOSE cur rec;
EXCEPTION
WHEN INVALID_CURSOR THEN
 DBMS_OUTPUT.PUT_LINE('Cursor is facing problem !');
WHEN NO_DATA_FOUND THEN
 -- Handle the case when no data is found
  DBMS_OUTPUT.PUT_LINE('No Data Found');
```



8. What is the motivational slogan or motto of life for each figure?

```
CREATE OR REPLACE PROCEDURE displaySlogan (p_fig_id IN FIGURE.FIG_ID%TYPE)
IS
CURSOR cur_slog IS
 SELECT FIG_NAME, FIG_SLOGAN
 FROM FIGURE
 WHERE FIG_ID = p_fig_id;
BEGIN
 FOR v_slogan IN cur_slog LOOP
   If v_slogan.FIG_SLOGAN = '-' THEN
      DBMS_OUTPUT.PUT_LINE(' Oh no , ' || v_slogan.FIG_NAME ||' does not have
a slogan.');
   ELSE
      DBMS_OUTPUT.PUT_LINE(' The
                                                      slogan for ' ||
                                        motivational
v_slogan.FIG_NAME ||' is '|| v_slogan.FIG_SLOGAN || '. ');
```

```
END IF;
  END LOOP;
EXCEPTION
WHEN NO_DATA_FOUND THEN
 -- Handle the case when no data is found
 DBMS_OUTPUT.PUT_LINE('No Data Found');
 WHEN OTHERS THEN
 -- Handle other exceptions
 DBMS_OUTPUT.PUT_LINE('Error, Please try again !');
END displaySlogan;
BEGIN
displaySlogan('F02');
END;
RESULT
 Results
            Explain
                      Describe
                                 Saved SQL
                                              History
 Oh no , Robert Kuok Hock Nien does not have a slogan.
 Statement processed.
```

9. When did the figure start his or her career?

```
CREATE OR REPLACE PROCEDURE getStartCareer(v_fig_id FIGURE.FIG_ID%TYPE)

IS

BEGIN

FOR v_fig_rec IN (

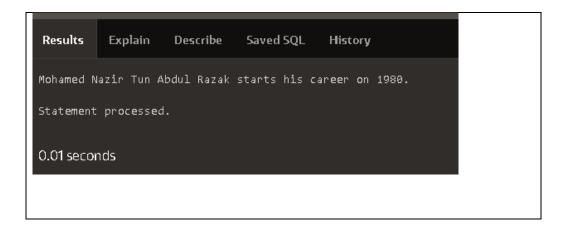
SELECT F.FIG_ID ,F.FIG_NAME,F.FIG_GENDER,MIN(CRR.CRR_STARTDATE)

STARTDATE

FROM CAREER CRR

JOIN FIGURE F
```

```
ON CRR.FIG_ID = F.FIG_ID
        WHERE F.FIG_ID = v_fig_id
        GROUP BY F.FIG_ID,F.FIG_NAME,F.FIG_GENDER
   )
 LOOP
   IF v_fig_rec.FIG_GENDER = 'Male' THEN
      DBMS_output.put_line(v_fig_rec.FIG_NAME ||' starts his career on '||
v_fig_rec.STARTDATE || '.');
    ELSE
      DBMS_output.put_line(v_fig_rec.FIG_NAME ||' starts her career on '||
v_fig_rec.STARTDATE || '.');
    END IF;
 END LOOP;
EXCEPTION
WHEN NO_DATA_FOUND THEN
 -- Handle the case when no data is found
 DBMS_OUTPUT.PUT_LINE('No Data Found');
WHEN OTHERS THEN
 -- Handle other exceptions
 DBMS_OUTPUT.PUT_LINE('Error, Please try again !');
END getStartCareer;
BEGIN
getStartCareer('F02');
END;
RESULT:
```



10. How did the figure inspire the younger generation?

```
CREATE
          OR
                REPLACE
                            PROCEDURE
                                          displayInspiration
                                                                         IN
                                                              (p_fig_id
FIGURE.FIG_ID%TYPE)
IS
v_inspiration FEEDBACK%ROWTYPE;
BEGIN
 SELECT FIG_ID,F_COMMENT
 INTO v_inspiration.FIG_ID,v_inspiration.F_COMMENT
 FROM FEEDBACK
 WHERE FIG_ID = p_fig_id;
 DBMS_OUTPUT.PUT_LINE(v_inspiration.F_COMMENT);
EXCEPTION
WHEN NO_DATA_FOUND THEN
 -- Handle the case when no data is found
 DBMS_OUTPUT.PUT_LINE('No Data Found');
 WHEN OTHERS THEN
 -- Handle other exceptions
 DBMS_OUTPUT.PUT_LINE('Error, Please try again !');
END displayInspiration;
CREATE OR REPLACE PROCEDURE getInspiration(v_fig_id FIGURE.FIG_ID%TYPE)
IS
CURSOR cur_ins IS
```

```
SELECT FIG_ID,FIG_NAME
FROM FIGURE
WHERE FIG_ID = v_fig_id;
BEGIN
  FOR v_fig_name IN (SELECT FIG_NAME FROM FIGURE WHERE FIG_ID = v_fig_id)
  LOOP
    DBMS_OUTPUT.PUT_LINE(v_fig_name.FIG_NAME ||' has inspire younger
generation by :');
  END LOOP;
  FOR v_figure_record IN cur_ins LOOP
    displayInspiration(v_figure_record.FIG_ID);
  END LOOP;
EXCEPTION
 WHEN NO_DATA_FOUND THEN
  -- Handle the case when no data is found
  DBMS_OUTPUT.PUT_LINE('Oh no , No data found');
 WHEN OTHERS THEN
 -- Handle other exceptions
  DBMS_OUTPUT.PUT_LINE('Error, Please try again !');
END getInspiration;
BEGIN
getInspiration('F02');
END;
RESULT:
        Explain Describe Saved SQL
 Robert Kuok Hock Nien has inspire younger generation by :
 Through a strong strategic vision, he has clear objectives and inventive techniques for organisational succes
 Statement processed.
```

11. What are the social activities in which the figure participated?

```
CREATE OR REPLACE PROCEDURE getSocAct (v_fig_id IN FIGURE.FIG_ID%TYPE)
IS
-- Count Variable
v_count NUMBER := 0;
CURSOR cur_act (p_fig_id FIGURE.FIG_ID%TYPE) IS
 SELECT F.FIG_NAME , ACT.ACT_NAME , ACT.ACT_DESCRIPTION
 FROM ACTIVITY ACT
 JOIN CONTRIBUTIONS CS
 ON ACT.ACT_ID = CS.ACT_ID
 JOIN FIGURE F
 ON CS.FIG_ID = F.FIG_ID
 WHERE F.FIG_ID = p_fig_id;
 v_figure_rec cur_act%ROWTYPE;
BEGIN
  --OPEN FIRST
  OPEN cur_act(v_fig_id);
    FETCH cur_act INTO v_figure_rec;
    DBMS_OUTPUT.PUT_LINE(' The social activities that '|| v_figure_rec.FIG_NAME
|| ' has participated are : ');
  CLOSE cur_act;
  -- OPEN SECOND
  OPEN cur_act(v_fig_id);
    LOOP
      FETCH cur_act INTO v_figure_rec;
      IF cur_act%ROWCOUNT <=0
      THEN
        DBMS_OUTPUT.PUT_LINE(' Oh no , No Data Found');
      END IF;
      EXIT WHEN cur_act%NOTFOUND;
        v_count := v_count + 1;
```

```
DBMS_OUTPUT.PUT_LINE(v_count ||')'|| v_figure_rec.ACT_NAME);
        DBMS_OUTPUT.PUT_LINE('-'|| v_figure_rec.ACT_DESCRIPTION);
    END LOOP;
  CLOSE cur_act;
EXCEPTION
 WHEN NO_DATA_FOUND THEN
  -- Handle the case when no data is found
  DBMS_OUTPUT.PUT_LINE(' Oh no , No data found');
 WHEN OTHERS THEN
  -- Handle other exceptions
  DBMS_OUTPUT.PUT_LINE(' Error, Please try again !');
END getSocAct;
BEGIN
getSocAct('F02');
END;
RESULT:
  The social activities that Robert Kuok Hock Nien has participated are :
 1 )FOUNDATION OF KUOK GROUP
  - Kuok and his cousin, Kuok Hock Chin established the Kuok Foundation in 1970 to reduce
 poverty the economic gap between the rich and poor communities and in Malaysia. The Kuok
 family strongly believes in its social responsibility to share wealth with the less fortunate.
 Statement processed.
```

12. How did the figure start his or her career?

```
CREATE OR REPLACE PROCEDURE displayCrr(v_fig_id IN FIGURE.FIG_ID%TYPE,v_crr_date IN CAREER.CRR_STARTDATE%TYPE)

IS

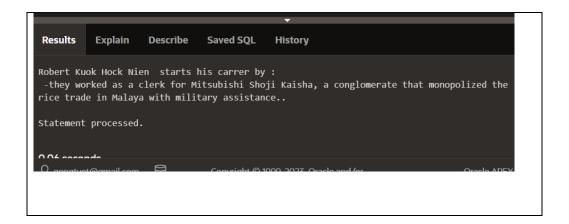
BEGIN

FOR v_fig_rec IN (

SELECT FIG_ID,CRR_STARTDATE,CRR_DESCRIPTION
```

```
FROM CAREER
     WHERE FIG_ID = v_fig_id AND CRR_STARTDATE = v_crr_date
   )
 LOOP
    DBMS_output.put_line('-'|| v_fig_rec.CRR_DESCRIPTION || '.');
  END LOOP;
EXCEPTION
WHEN NO_DATA_FOUND THEN
 -- Handle the case when no data is found
 DBMS_OUTPUT.PUT_LINE(' Oh no , No data found');
WHEN OTHERS THEN
 -- Handle other exceptions
 DBMS_OUTPUT.PUT_LINE(' Error, Please try again !');
END displayCrr;
CREATE OR
                 REPLACE PROCEDURE
                                            getHowStartCareer(v_fig_id
                                                                         IN
FIGURE.FIG_ID%TYPE )
CURSOR cur_crr
SELECT F.FIG_ID ,MIN(CRR.CRR_STARTDATE) STARTDATE
FROM CAREER CRR
JOIN FIGURE F
ON CRR.FIG_ID = F.FIG_ID
WHERE F.FIG_ID =v_fig_id
GROUP BY F.FIG_ID;
v_crr cur_crr%ROWTYPE;
BEGIN
 FOR v_fig_name IN (SELECT FIG_NAME, FIG_GENDER FROM FIGURE WHERE FIG_ID
= v_fig_id)
```

```
LOOP
   IF v_fig_name.FIG_GENDER = 'Male' THEN
      DBMS_OUTPUT_LINE( v_fig_name.FIG_NAME || starts his carrer by : ');
   ELSE
      DBMS_OUTPUT.PUT_LINE( v_fig_name.FIG_NAME || ' starts her carrer by : ');
   END IF;
 END LOOP;
 OPEN cur_crr;
   LOOP
     FETCH cur_crr INTO v_crr;
      EXIT WHEN cur_crr%NOTFOUND;
     displayCrr(v_crr.FIG_ID,v_crr.STARTDATE);
    END LOOP;
 CLOSE cur_crr;
EXCEPTION
WHEN NO_DATA_FOUND THEN
 -- Handle the case when no data is found
 DBMS_OUTPUT.PUT_LINE(' Oh no , No data found');
WHEN OTHERS THEN
 -- Handle other exceptions
 DBMS_OUTPUT.PUT_LINE(' Error, Please try again !');
END getHowStartCareer;
BEGIN
getHowStartCareer('F02');
END;
RESULT:
```



13. What is the place of birth of each figure?

```
CREATE OR REPLACE FUNCTION findPOB(p_fig_id FIGURE.FIG_ID%TYPE)
RETURN VARCHAR IS
v_pob FIGURE.FIG_PLACEOFBIRTH%TYPE;
BEGIN
 SELECT FIG_PLACEOFBIRTH
 INTO v_pob
 FROM FIGURE
 WHERE FIG_ID = p_fig_id;
 RETURN v_pob;
END findPOB;
CREATE OR REPLACE PROCEDURE displayAllPOB
IS
CURSOR cur_pob IS
SELECT FIG_ID,FIG_NAME
FROM FIGURE;
BEGIN
  FOR v_figure_record IN cur_pob LOOP
    DBMS_OUTPUT.PUT_LINE(v_figure_record.FIG_NAME||' was born at ' ||
findPOB(v_figure_record.FIG_ID)||'.');
 END LOOP;
EXCEPTION
```



14. What are the challenges did each figure faced and how did their overcome?

```
CREATE OR REPLACE PROCEDURE displayAllChall

IS

CURSOR cur_chall IS

SELECT F.FIG_ID,F.FIG_NAME ,CH.DESCRIPTION

FROM CHALLENGES CH
```

```
JOIN FIGURE F
ON CH.FIG_ID = F.FIG_ID;
BEGIN
 FOR v_fig_record IN cur_chall LOOP
   FOR v_fig_name IN (SELECT FIG_NAME, FIG_GENDER FROM FIGURE WHERE
FIG_ID = v_fig_record.FIG_ID)
   LOOP
     DBMS_OUTPUT.PUT_LINE('The challenges that '|| v_fig_name.FIG_NAME ||'
faced are :');
     DBMS_OUTPUT.PUT_LINE('-' || v_fig_record.DESCRIPTION || '.');
     DBMS_OUTPUT_LINE('----');
   END LOOP;
 END LOOP;
EXCEPTION -- Exception Part
 WHEN NO_DATA_FOUND THEN
 DBMS_OUTPUT.PUT_LINE ('Data cannot be found !');
 WHEN OTHERS THEN
 DBMS_OUTPUT.PUT_LINE ('Error, Please try Again.');
END displayAllChall;
BEGIN
displayAllChall;
END;
RESULT:
```

ne challenges that Rafiah binti Salim faced are : -Breaking Gender Barriers in a traditionally male-dominated field. This would have required overcoming biases and stereotypes..

The challenges that Rafiah binti Salim faced are :
-Leading Change at the United Nations, as the first Malaysian to be appointed Assistant Secretary-General for Human Resource Management at the United Nations, she was tasked with implementing the UN thange on such a large scale is a significant challenge.

he challenges that Ananda Krishnan faced are

-Tycoon Tan Sri T Ananda Krishnan will face the twin challenges of pricing and political risks in his attempt to sell his entire power portfolio, held under Tanjong Energy Sdn Bhd, in Asia and the Porice tag of US\$2 billion (about RM6 billion)..

he challenges that Ananda Krishnan faced are :
-Before the pandemic hit the whole world, A.K was Listed under Malaysia's third-richest on Forbes' 2020 Malaysia's 50 Richest list despite his Indian telecom firm Aircel, opted for bankruptcy protect
n estimated amount of US\$7 billion investment into the company.

The challenges that Annuar bin Musa faced are:
-In 2016, Annuar's decision to quit as Kafa president during Kelantan football team, The Red Warriors (TRW) was going through bad performances and the financial problem of settling outstanding footballing salaries was questioned by many who had likened him to "the captain abandoning his sinking ship"..

The challenges that Abdul Rashid Hussain faced are :
-On December 3, 2010, his case of being swindled RM7 million by Singaporean businessperson Sharida Abdul Majid was brought to the Kuala Lumpur Sessions Court. In September 2009 and on November 13, 2
Building B, Peremba Square, Saujana Resort, he was deceived into receiving a 'gift contract' valued at B\$8 million (approximately RM19.2 million) to hand over RM7 million in the form of three Standar

The challenges that Abdul Rashid Hussain faced are :
-RHB Equities Sdn Bhd and RHB Investment Bank Bhd (formerly RHB Securities Berhad) sued Tan Sri Rashid Hussain and five other individuals for a total sum of RM1.43 billion for alleged breach of fidu negligence in 2005..

```
CREATE OR REPLACE PROCEDURE getKeyEvent(v_fig_id IN FIGURE.FIG_ID%TYPE)
IS
--Declaration
v_count NUMBER :=0;
BEGIN
 FOR v_fig_rec IN (
      SELECT ACT.ACT_NAME, ACT.ACT_DESCRIPTION, ACT.ACT_EFFECT
      FROM ACTIVITY ACT
      JOIN CONTRIBUTIONS CS
      ON ACT.ACT_ID = CS.ACT_ID
     JOIN FIGURE F
      ON CS.FIG_ID = F.FIG_ID
     WHERE F.FIG_ID = v_fig_id
   )
  LOOP
   v_count := v_count + 1;
    DBMS_output.put_line(v_count || ') ' ||v_fig_rec.ACT_NAME);
    DBMS_output.put_line('Decsription:'||v_fig_rec.ACT_DESCRIPTION||'.');
    DBMS_output.put_line('Effects:'||v_fig_rec.ACT_EFFECT||'.');
    DBMS_output.put_line(' ');
 END LOOP;
EXCEPTION -- Exception Part
 WHEN NO_DATA_FOUND THEN
 DBMS_OUTPUT.PUT_LINE ('Data cannot be found !');
 WHEN OTHERS THEN
 DBMS_OUTPUT.PUT_LINE ('Error, Please try Again.');
END getKeyEvent;
CREATE OR REPLACE PROCEDURE displayAllKeyEvent
IS
```

```
BEGIN
FOR v_fig IN (
     SELECT FIG_ID,FIG_NAME
     FROM FIGURE
   )
 LOOP
   DBMS_OUTPUT.PUT_LINE (v_fig.FIG_NAME);
   DBMS_output_line('-----');
   getKeyEvent(v_fig.FIG_ID);
 END LOOP;
EXCEPTION
 WHEN NO_DATA_FOUND THEN
 -- Handle the case when no data is found
   DBMS_OUTPUT_LINE(' Oh no , No data found');
 WHEN OTHERS THEN
 -- Handle other exceptions
   DBMS_OUTPUT_LINE(' Error, Please try again !');
END displayAllKeyEvent;
BEGIN
display All Key Event;\\
END;
RESULT:
```

```
Abdul Hadi bin Haji Awang

Robert Kuok Hock Nien

1) FOUNDATION OF KUOK GROUP

Decsription: Kuok and his cousin, Kuok Hock Chin established the Kuok Foundation in 1970 to reduce poverty the e responsibility to share wealth with the less fortunate. .

Effects: overcome poor issue.

Annuar bin Musa

1) attended in a virtual manner the launch of the national-level HSN celebration

Decsription: Communications and Multimedia Minister Tan Sri Annuar Musa has described the National Sports Day (H line with the aspirations of the Malaysian Family. .

Effects: strengthen racial ties and boost the spirit of patriotism. .

Jeffrey Cheah Fook Ling

1) Sunway City Development

Decsription: Malaysia's first fully integrated green township recognition .

Effects: Established a healthy environment for Malaysians .

2) Philantropic Activity

Decsription: US 39 million donation to scholarships .

Effects: Create a future for Malaysians to pursue their studies in .
```

16. What are the process to be nominated and conferring the Tan Sri title for figure work in Malaysia ?

CREATE OR REPLACE PROCEDURE displayNominatedProcess
IS
CURSOR cur_title IS
SELECT TITLE_NAME, DESCRIPTIONStatement
FROM TITLE
WHERE TITLE_ID = 1 OR TITLE_NAME = 'Tan Sri';
v_count Number :=0;
BEGIN
DBMS_OUTPUT_LINE('The process nominated to get the title of Tan Sri :');
FOR v_fig_record IN cur_title LOOP
v_count := v_count + 1;
DBMS_OUTPUT.PUT_LINE(v_count ') ' v_fig_record.DESCRIPTION '.');
DBMS_output.put_line(' ');
END LOOP;
EXCEPTION Exception Part
WHEN NO_DATA_FOUND THEN
DBMS_OUTPUT_LINE ('Data cannot be found !');
WHEN OTHERS THEN
DBMS_OUTPUT_LINE ('Error, Please try Again.');
END displayNominatedProcess;
BEGIN
displayNominatedProcess;
END;
RESULT:

Results Explain Describe Saved SQL History

- The process nominated to get the title of Tan Sri :

 1) Tan Sri is the second-most senior federal title and a honorific, used to denote recipients of the Panglima Mangku N of the Order of Loyalty to the Crown of Malaysia) (PSM)..
- 3) Tan Sri is an honorary title conferred on distinguished persons by the King of Malaysia or the Sultan of their Stat

17. How many of young generation know the figure?

```
CREATE OR REPLACE FUNCTION countPopular(p_fig_id FIGURE.FIG_ID%TYPE) --
function
RETURN NUMBER IS
v_total NUMBER;
BEGIN
 SELECT COUNT(FB.U_ID)
 INTO v_total
 FROM FEEDBACK FB
 WHERE FB.FIG_ID = p_fig_id;
 RETURN v_total;
END countPopular;
CREATE OR REPLACE PROCEDURE getFigurePopularity(p_fig_id FIGURE.FIG_ID%TYPE)
CURSOR cur_pop IS
SELECT FIG_ID,FIG_NAME
FROM FIGURE
WHERE FIG_ID = p_fig_id;
BEGIN
 FOR v_figure_record IN cur_pop LOOP
    DBMS_OUTPUT.PUT_LINE('Total young generation that knows' ||
    v_figure_record.FIG_NAME || ' is ' || countPopular(v_figure_record.FIG_ID) || '
.');
 END LOOP;
EXCEPTION -- Exception Part
 WHEN NO_DATA_FOUND THEN
  DBMS_OUTPUT.PUT_LINE ('Data cannot be found !');
  WHEN OTHERS THEN
  DBMS_OUTPUT.PUT_LINE ('Error, Please try Again.');
```



```
Package Code
--Package Code
CREATE OR REPLACE PACKAGE tansrigroup2 pkg
PROCEDURE getReceivedTanSri(v fig id IN
FIGURE.FIG ID%TYPE);
PROCEDURE getFigurePub;
PROCEDURE getReceiveTitlePlace(v fig id IN
FIGURE.FIG ID%TYPE);
PROCEDURE getCategory(v fig id IN FIGURE.FIG ID%TYPE);
PROCEDURE getAward(v fig id IN FIGURE.FIG ID%TYPE);
PROCEDURE getOrganization(v fig id IN
FIGURE.FIG ID%TYPE);
PROCEDURE getHonouredBy(v fig id IN FIGURE.FIG ID%TYPE);
PROCEDURE displaySlogan (p fig id IN FIGURE.FIG ID%TYPE);
PROCEDURE getStartCareer(v fig id FIGURE.FIG ID%TYPE);
PROCEDURE displayInspiration (p fig id IN
FIGURE.FIG ID%TYPE);
PROCEDURE getInspiration(v fig id FIGURE.FIG ID%TYPE);
PROCEDURE getSocAct (v fig id IN FIGURE.FIG ID%TYPE);
PROCEDURE displayCrr(v fig id IN
FIGURE.FIG ID%TYPE, v crr date IN
CAREER.CRR STARTDATE%TYPE);
PROCEDURE getHowStartCareer(v fig id IN
FIGURE.FIG ID%TYPE);
FUNCTION findPOB (p fig id FIGURE.FIG ID%TYPE) RETURN
VARCHAR;
PROCEDURE displayAllPOB;
PROCEDURE displayAllChall;
PROCEDURE getKeyEvent(v fig id IN FIGURE.FIG ID%TYPE);
PROCEDURE displayAllKeyEvent;
PROCEDURE displayNominatedProcess;
FUNCTION countPopular(p fig id FIGURE.FIG ID%TYPE) RETURN
NUMBER;
PROCEDURE getFigurePopularity(p fig id
FIGURE.FIG ID%TYPE);
END tansrigroup2 pkg;
CREATE OR REPLACE PACKAGE BODY tansrigroup2 pkg
IS
--Q1
```

```
PROCEDURE getReceivedTanSri(v fig id IN
FIGURE.FIG ID%TYPE)
IS
CURSOR cur rec (p fig id FIGURE.FIG ID%TYPE) IS
    SELECT F.FIG NAME , T.TITLE NAME , R.R DATE
    FROM RECOGNIZED R
    JOIN TITLE T
   ON R.TITLE ID = T.TITLE ID
    JOIN FIGURE F
    ON R.FIG ID = F.FIG ID
    WHERE R.FIG ID = p fig id;
   v figure rec cur rec%ROWTYPE;
BEGIN
    OPEN cur rec(v fig id);
        LOOP
            FETCH cur rec INTO v figure rec;
            IF cur rec%ROWCOUNT <=0
            THEN
                DBMS OUTPUT.PUT LINE('No Data Found');
            END IF;
            EXIT WHEN cur rec%NOTFOUND;
             DBMS_OUTPUT.PUT_LINE(v figure rec.FIG NAME
|| received the Title ' || v figure rec.TITLE NAME || '
on '|| v figure rec.R DATE || '.' );
        END LOOP;
    CLOSE cur rec;
EXCEPTION
  WHEN INVALID CURSOR THEN
   DBMS OUTPUT.PUT LINE('Cursor is facing problem !');
 WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
   DBMS OUTPUT.PUT LINE('No Data Found');
 WHEN OTHERS THEN
    -- Handle other exceptions
   DBMS OUTPUT.PUT LINE('Error, Please try again !');
END getReceivedTanSri;
--End Q1
--Q2
PROCEDURE getFigurePub
CURSOR cur pub
IS
SELECT F.FIG NAME, COUNT(PF.PUB ID) totals
FROM PUBLICATION FIGURE PF
```

```
JOIN FIGURE F
ON PF.FIG ID = F.FIG ID
GROUP BY F.FIG NAME;
v pub cur pub%ROWTYPE;
BEGIN
   OPEN cur pub;
    LOOP
    FETCH cur pub INTO v pub;
    IF cur pub%ROWCOUNT <=0</pre>
        THEN
        DBMS OUTPUT.PUT LINE('No Data Found');
        END IF;
   EXIT WHEN cur pub%NOTFOUND;
        DBMS OUTPUT.PUT LINE('The total number of
publications made by '||v pub.FIG NAME||' is ' ||
v pub.totals || ' .');
    END LOOP;
    CLOSE cur pub;
EXCEPTION
  WHEN INVALID CURSOR THEN
    DBMS OUTPUT.PUT LINE('Cursor is facing problem !');
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
   DBMS OUTPUT.PUT LINE('No Data Found');
  WHEN OTHERS THEN
    -- Handle other exceptions
   DBMS OUTPUT.PUT LINE('Error, Please try again !');
END getFigurePub;
--End 02
--Q3
PROCEDURE getReceiveTitlePlace(v fig id IN
FIGURE.FIG ID%TYPE)
IS
CURSOR cur rec (p fig id FIGURE.FIG ID%TYPE)
    SELECT F.FIG ID, F.FIG NAME , T.TITLE NAME , R.PLACE
    FROM RECOGNIZED R
    JOIN TITLE T
    ON R.TITLE ID = T.TITLE ID
    JOIN FIGURE F
    ON R.FIG ID = F.FIG ID
   WHERE TITLE NAME = 'Tan Sri'
    AND F.FIG ID = p fig id ;
    v figure rec cur rec%ROWTYPE;
```

```
BEGIN
    OPEN cur rec (v fig id);
        LOOP
            FETCH cur rec INTO v figure rec;
            IF cur rec%ROWCOUNT <=0</pre>
            THEN
                DBMS OUTPUT.PUT LINE('No Data Found');
            END IF;
            EXIT WHEN cur rec%NOTFOUND;
              DBMS OUTPUT.PUT LINE (v figure rec.FIG NAME
||' received the title ' || v figure rec.TITLE NAME ||'
at '|| v figure rec.PLACE || '.' );
        END LOOP;
    CLOSE cur rec;
EXCEPTION
  WHEN INVALID CURSOR THEN
    DBMS OUTPUT.PUT LINE('Cursor is facing problem !');
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
    DBMS OUTPUT.PUT LINE('No Data Found');
  WHEN OTHERS THEN
    -- Handle other exceptions
    DBMS OUTPUT.PUT LINE('Error, Please try again !');
END getReceiveTitlePlace;
--End Q3
--Q4
PROCEDURE getCategory(v fig id IN FIGURE.FIG ID%TYPE)
v count Number :=0;
BEGIN
     FOR v fig name IN (SELECT FIG NAME FROM FIGURE WHERE
FIG ID = v fig id)
     LOOP
        DBMS output.put line('The category that '||
v fig name.FIG NAME ||' contributed is :');
     END LOOP;
    FOR v fig rec IN (
                SELECT F.FIG ID , F.FIG NAME, CAT.NAME
                FROM CONTRIBUTIONS CS
                JOIN FIGURE F
                ON CS.FIG ID = F.FIG ID
                JOIN ACTIVITY ACT
                ON CS.ACT ID = ACT.ACT ID
```

```
JOIN CATEGORY CAT
                ON ACT.CTGRY ID = CAT.CTGRY ID
                WHERE F.FIG ID = v fig id
        )
   TIOOP
        v count:=v count+1;
        DBMS output.put line(v count||')
'||v fig rec.NAME || '.');
   END LOOP;
EXCEPTION
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
    DBMS OUTPUT.PUT LINE('No Data Found');
  WHEN OTHERS THEN
    -- Handle other exceptions
    DBMS OUTPUT.PUT LINE('Error, Please try again !');
END getCategory;
--End Q4
--Q5
PROCEDURE getAward(v fig id IN FIGURE.FIG ID%TYPE)
--Count Variable
v count NUMBER :=0;
CURSOR cur awd IS
SELECT F.FIG NAME, AWD.AWD NAME
FROM AWARD AWD
JOIN FIGURE F
ON AWD.FIG ID = F.FIG ID
WHERE AWD.FIG ID = v fig id;
BEGIN
    FOR v fig name IN (SELECT FIG NAME FROM FIGURE WHERE
FIG ID = v fig id)
    LOOP
       DBMS OUTPUT.PUT LINE('The award that
'||v fig name.FIG NAME||' received is : ');
   END LOOP;
    FOR v fig rec IN cur awd LOOP
        v count := v count + 1;
        DBMS OUTPUT.PUT LINE ( v count ||') ' ||
v fig rec.AWD NAME );
   END LOOP;
EXCEPTION
```

```
WHEN NO DATA FOUND THEN
   -- Handle the case when no data is found
   DBMS OUTPUT.PUT LINE('No Data Found');
 WHEN OTHERS THEN
    -- Handle other exceptions
   DBMS OUTPUT.PUT LINE('Error, Please try again !');
END getAward;
-- End Q5
--Q6
PROCEDURE getOrganization(v fig id IN FIGURE.FIG ID%TYPE)
IS
--Count Variable
v count NUMBER :=0;
CURSOR cur comp IS
   SELECT F.FIG NAME, ORG. ORGNAME
   FROM ORGANIZATION ORG
    JOIN CONTRIBUTIONS CS
   ON ORG.ORGID = CS.ORG ID
    JOIN FIGURE F
    ON CS.FIG ID = F.FIG ID
   WHERE CS.FIG ID = v fig id;
BEGIN
    FOR v fig name IN (SELECT FIG NAME FROM FIGURE WHERE
FIG ID = v fig id)
    LOOP
       DBMS OUTPUT.PUT LINE('The list of organization
that '|| v fig name.FIG NAME ||' managed are : ');
   END LOOP;
    FOR v fig rec IN cur comp LOOP
       v count := v count + 1;
        DBMS OUTPUT.PUT LINE( v count ||') ' ||
v fig rec.ORGNAME );
   END LOOP;
EXCEPTION
  WHEN INVALID CURSOR THEN
    DBMS OUTPUT.PUT LINE('Cursor is facing problem !');
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
   DBMS OUTPUT.PUT LINE('No Data Found');
 WHEN OTHERS THEN
    -- Handle other exceptions
    DBMS OUTPUT.PUT LINE('Error, Please try again !');
```

```
END getOrganization;
--End Q6
--Q7
PROCEDURE getHonouredBy(v fig id IN FIGURE.FIG ID%TYPE)
CURSOR cur rec (p fig id FIGURE.FIG ID%TYPE) IS
    SELECT F.FIG NAME , T.TITLE NAME , R.HONORED BY
    FROM RECOGNIZED R
    JOIN TITLE T
   ON R.TITLE ID = T.TITLE ID
    JOIN FIGURE F
    ON R.FIG ID = F.FIG ID
   WHERE R.FIG ID = p fig id AND TITLE NAME = 'Tan Sri'
    v figure rec cur rec%ROWTYPE;
BEGIN
    OPEN cur rec(v fig id);
        LOOP
            FETCH cur rec INTO v figure rec;
            IF cur rec%ROWCOUNT <=0</pre>
            THEN
                DBMS OUTPUT.PUT LINE('No Data Found');
            END IF;
            EXIT WHEN cur rec%NOTFOUND;
              DBMS OUTPUT.PUT LINE (v figure rec.FIG NAME
|| received the title ' || v figure rec.TITLE NAME ||'
honored by '|| v_figure_rec.HONORED BY || '.' );
        END LOOP;
    CLOSE cur rec;
EXCEPTION
  WHEN INVALID CURSOR THEN
    DBMS OUTPUT.PUT LINE('Cursor is facing problem !');
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
   DBMS OUTPUT.PUT LINE('No Data Found');
 WHEN OTHERS THEN
    -- Handle other exceptions
   DBMS OUTPUT.PUT LINE('Error, Please try again !');
END getHonouredBy;
--End Q7
--Q8
PROCEDURE displaySlogan (p fig id IN FIGURE.FIG ID%TYPE)
```

```
IS
CURSOR cur slog IS
    SELECT FIG NAME, FIG SLOGAN
    FROM FIGURE
   WHERE FIG ID = p fig id;
    FOR v slogan IN cur slog LOOP
        If v slogan.FIG SLOGAN = '-' THEN
            DBMS OUTPUT.PUT LINE(' Oh no , ' ||
v slogan.FIG NAME ||' does not have a slogan.');
        ELSE
            DBMS OUTPUT.PUT LINE(' The motivational
slogan for ' || v slogan.FIG NAME ||' is '||
v slogan.FIG SLOGAN || '. ');
        END IF;
    END LOOP;
EXCEPTION
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
    DBMS OUTPUT.PUT LINE('No Data Found');
  WHEN OTHERS THEN
    -- Handle other exceptions
    DBMS OUTPUT.PUT LINE('Error, Please try again !');
END displaySlogan;
--End Q8
--09
PROCEDURE getStartCareer(v fig id FIGURE.FIG ID%TYPE)
IS
BEGIN
    FOR v fig rec IN (
                SELECT F.FIG ID
, F.FIG NAME, F.FIG GENDER, MIN (CRR.CRR STARTDATE) STARTDATE
                FROM CAREER CRR
                JOIN FIGURE F
                ON CRR.FIG ID = F.FIG_ID
                WHERE F.FIG ID = v fig id
                GROUP BY F.FIG ID, F.FIG NAME, F.FIG GENDER
        )
    LOOP
        IF v fig rec.FIG GENDER = 'Male' THEN
            DBMS output.put line(v fig rec.FIG NAME ||'
starts his career on '|| v fig rec.STARTDATE || '.');
```

```
ELSE
            DBMS output.put line(v fig rec.FIG NAME | | '
starts her career on '|| v fig rec.STARTDATE || '.');
        END IF;
   END LOOP;
EXCEPTION
 WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
   DBMS OUTPUT.PUT LINE('No Data Found');
 WHEN OTHERS THEN
    -- Handle other exceptions
   DBMS OUTPUT.PUT LINE('Error, Please try again !');
END getStartCareer;
--End Q9
--Q10
PROCEDURE displayInspiration (p fig id IN
FIGURE.FIG ID%TYPE)
IS
v inspiration FEEDBACK%ROWTYPE;
BEGIN
    SELECT FIG ID, F COMMENT
    INTO v inspiration.FIG ID, v inspiration.F COMMENT
    FROM FEEDBACK
    WHERE FIG ID = p fig id;
    DBMS OUTPUT.PUT LINE(v inspiration.F COMMENT);
EXCEPTION
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
   DBMS OUTPUT.PUT LINE('No Data Found');
 WHEN OTHERS THEN
    -- Handle other exceptions
    DBMS_OUTPUT.PUT_LINE('Error, Please try again !');
END displayInspiration;
PROCEDURE getInspiration(v fig id FIGURE.FIG ID%TYPE)
CURSOR cur ins IS
SELECT FIG ID, FIG NAME
FROM FIGURE
WHERE FIG ID = v fig id;
BEGIN
    FOR v fig name IN (SELECT FIG NAME FROM FIGURE WHERE
FIG ID = v fig id)
    LOOP
```

```
DBMS OUTPUT.PUT LINE(v fig name.FIG_NAME | | has
inspire younger generation by :');
    END LOOP;
    FOR v figure record IN cur ins LOOP
        displayInspiration(v figure record.FIG ID);
EXCEPTION
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
    DBMS OUTPUT.PUT LINE('Oh no , No data found');
  WHEN OTHERS THEN
    -- Handle other exceptions
    DBMS OUTPUT.PUT LINE('Error, Please try again !');
END getInspiration;
--End Q10
--Q11
PROCEDURE getSocAct (v fig id IN FIGURE.FIG ID%TYPE)
IS
--Count Variable
v count NUMBER := 0;
CURSOR cur act (p fig id FIGURE.FIG ID%TYPE) IS
   SELECT F.FIG NAME , ACT.ACT NAME , ACT.ACT DESCRIPTION
  FROM ACTIVITY ACT
   JOIN CONTRIBUTIONS CS
   ON ACT.ACT ID = CS.ACT ID
   JOIN FIGURE F
   ON CS.FIG ID = F.FIG ID
   WHERE F.FIG ID = p fig id ;
   v figure rec cur act%ROWTYPE;
BEGIN
    --OPEN FIRST
    OPEN cur act(v fig id);
        FETCH cur act INTO v figure rec;
        DBMS OUTPUT.PUT LINE(' The social activities that
'|| v figure rec.FIG NAME || ' has participated are : ');
   CLOSE cur act;
    -- OPEN SECOND
    OPEN cur act (v fig id);
        LOOP
            FETCH cur act INTO v figure rec;
            IF cur act%ROWCOUNT <=0</pre>
            THEN
                DBMS OUTPUT.PUT LINE(' Oh no , No Data
Found');
```

```
END IF;
            EXIT WHEN cur act%NOTFOUND;
                v count := v count + 1;
                DBMS OUTPUT.PUT LINE(v count | | ' ) ' | |
v figure rec.ACT NAME);
                DBMS OUTPUT.PUT LINE(' - '|
v figure rec.ACT DESCRIPTION);
        END LOOP;
    CLOSE cur act;
EXCEPTION
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
    DBMS OUTPUT.PUT LINE(' Oh no , No data found');
 WHEN OTHERS THEN
    -- Handle other exceptions
    DBMS OUTPUT.PUT LINE(' Error, Please try again !');
END getSocAct;
--End Q11
--Q12
PROCEDURE displayCrr(v fig id IN
FIGURE.FIG ID%TYPE, v crr date IN
CAREER.CRR STARTDATE%TYPE )
IS
BEGIN
FOR v fig rec IN (
            SELECT FIG ID, CRR STARTDATE, CRR DESCRIPTION
            FROM CAREER
            WHERE FIG ID = v fig id AND CRR STARTDATE =
v crr date
        )
    LOOP
        DBMS output.put line(' -'||
v fig rec.CRR DESCRIPTION || '.');
    END LOOP;
EXCEPTION
 WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
   DBMS OUTPUT.PUT LINE(' Oh no , No data found');
 WHEN OTHERS THEN
    -- Handle other exceptions
   DBMS OUTPUT.PUT LINE(' Error, Please try again !');
END displayCrr;
```

```
PROCEDURE getHowStartCareer(v fig id IN
FIGURE.FIG ID%TYPE )
IS
CURSOR cur crr
IS
SELECT F.FIG ID ,MIN(CRR.CRR STARTDATE) STARTDATE
FROM CAREER CRR
JOIN FIGURE F
ON CRR.FIG ID = F.FIG ID
WHERE F.FIG ID =v fig id
GROUP BY F.FIG ID;
v crr cur crr%ROWTYPE;
BEGIN
    FOR v fig name IN (SELECT FIG NAME, FIG GENDER FROM
FIGURE WHERE FIG ID = v fig id)
    LOOP
       IF v fig name.FIG GENDER = 'Male' THEN
            DBMS OUTPUT.PUT LINE ( v fig name.FIG NAME | | '
starts his carrer by : ');
       ELSE
           DBMS OUTPUT.PUT LINE ( v fig name.FIG NAME | | '
starts her carrer by : ');
       END IF;
   END LOOP;
    OPEN cur crr;
        LOOP
            FETCH cur crr INTO v crr;
            EXIT WHEN cur crr%NOTFOUND;
            displayCrr(v crr.FIG ID, v crr.STARTDATE);
        END LOOP;
    CLOSE cur crr;
EXCEPTION
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
    DBMS_OUTPUT.PUT_LINE(' Oh no , No data found');
 WHEN OTHERS THEN
    -- Handle other exceptions
    DBMS OUTPUT.PUT LINE(' Error, Please try again !');
END getHowStartCareer;
--End Q12
--Q13
FUNCTION findPOB(p fig id FIGURE.FIG ID%TYPE)
RETURN VARCHAR
```

```
IS
v pob FIGURE.FIG PLACEOFBIRTH%TYPE;
BEGIN
    SELECT FIG PLACEOFBIRTH
   INTO v pob
   FROM FIGURE
   WHERE FIG ID = p_fig_id;
   RETURN v pob;
END findPOB;
PROCEDURE displayAllPOB
CURSOR cur pob IS
SELECT FIG ID, FIG NAME
FROM FIGURE;
BEGIN
    FOR v figure record IN cur pob LOOP
        DBMS OUTPUT.PUT LINE (v figure record.FIG NAME | | '
was born at ' || findPOB(v figure record.FIG ID)|| ' .');
    END LOOP;
EXCEPTION
  WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
   DBMS OUTPUT.PUT LINE(' Oh no , No data found');
  WHEN OTHERS THEN
    -- Handle other exceptions
   DBMS OUTPUT.PUT LINE(' Error, Please try again !');
END displayAllPOB;
--End 013
--Q14
PROCEDURE displayAllChall
IS
CURSOR cur chall IS
SELECT F.FIG ID, F.FIG NAME , CH.DESCRIPTION
FROM CHALLENGES CH
JOIN FIGURE F
ON CH.FIG ID = F.FIG ID;
BEGIN
    FOR v fig record IN cur chall LOOP
        FOR v fig name IN (SELECT FIG NAME, FIG GENDER
FROM FIGURE WHERE FIG ID = v fig record.FIG ID)
        LOOP
            DBMS OUTPUT.PUT LINE('The challenges that '||
v fig name.FIG NAME ||' faced are :');
```

```
DBMS OUTPUT.PUT LINE(' -' ||
v fig record.DESCRIPTION || '.');
           DBMS OUTPUT.PUT LINE (' -----
 -----');
       END LOOP;
   END LOOP;
EXCEPTION -- Exception Part
   WHEN NO DATA FOUND THEN
   DBMS OUTPUT.PUT LINE ('Data cannot be found !');
   WHEN OTHERS THEN
    DBMS OUTPUT.PUT LINE ('Error, Please try Again.');
END displayAllChall;
--End 14
--Q15
PROCEDURE getKeyEvent(v fig id IN FIGURE.FIG ID%TYPE)
IS
--Declaration
v count NUMBER :=0;
BEGIN
   FOR v fig rec IN (
            SELECT ACT.ACT NAME , ACT.ACT DESCRIPTION ,
ACT.ACT EFFECT
           FROM ACTIVITY ACT
            JOIN CONTRIBUTIONS CS
           ON ACT.ACT ID = CS.ACT ID
           JOIN FIGURE F
           ON CS.FIG ID = F.FIG ID
           WHERE F.FIG ID = v fig id
       )
   LOOP
        v count := v count + 1;
       DBMS output.put line(v count || ') '
| | v fig rec.ACT NAME);
        DBMS output.put line('Decsription :
'||v fig rec.ACT DESCRIPTION|| ' . ');
       DBMS output.put line('Effects : '
||v_fig_rec.ACT EFFECT|| ' . ');
       DBMS_output.put line(' ');
   END LOOP;
EXCEPTION -- Exception Part
   WHEN NO DATA FOUND THEN
   DBMS OUTPUT.PUT LINE ('Data cannot be found !');
   WHEN OTHERS THEN
   DBMS OUTPUT.PUT LINE ('Error, Please try Again.');
END getKeyEvent;
```

```
PROCEDURE displayAllKeyEvent
IS
BEGIN
FOR v fig IN (
            SELECT FIG ID, FIG NAME
            FROM FIGURE
   LOOP
       DBMS OUTPUT.PUT LINE (v fig.FIG_NAME);
       DBMS output.put line('-----
  ----');
       getKeyEvent(v fig.FIG ID);
   END LOOP;
EXCEPTION
   WHEN NO DATA FOUND THEN
    -- Handle the case when no data is found
       DBMS OUTPUT.PUT LINE(' Oh no , No data found');
   WHEN OTHERS THEN
    -- Handle other exceptions
        DBMS OUTPUT.PUT LINE(' Error, Please try again
!');
END displayAllKeyEvent;
--End Q15
--Q16
PROCEDURE displayNominatedProcess
IS
CURSOR cur title IS
SELECT TITLE NAME, DESCRIPTION --Statement
FROM TITLE
WHERE TITLE ID = 1 OR TITLE NAME = 'Tan Sri';
v count Number :=0;
BEGIN
   DBMS OUTPUT.PUT LINE ('The process nominated to get
the title of Tan Sri :');
    FOR v fig record IN cur title LOOP
        v count := v count + 1;
        DBMS OUTPUT.PUT LINE (v count | | ')
'||v fig record.DESCRIPTION || '.');
       DBMS output.put line(' ');
   END LOOP;
EXCEPTION -- Exception Part
   WHEN NO DATA FOUND THEN
    DBMS OUTPUT.PUT LINE ('Data cannot be found !');
```

```
WHEN OTHERS THEN
    DBMS OUTPUT.PUT LINE ('Error, Please try Again.');
END displayNominatedProcess;
--End Q16
--Q17
FUNCTION countPopular(p fig id FIGURE.FIG ID%TYPE) --
function
RETURN NUMBER
IS
v total NUMBER;
BEGIN
    SELECT COUNT (FB.U ID)
    INTO v total
   FROM FEEDBACK FB
   WHERE FB.FIG ID = p fig id;
   RETURN v total;
END countPopular;
PROCEDURE getFigurePopularity(p fig id
FIGURE.FIG ID%TYPE)
IS
CURSOR cur pop IS
SELECT FIG ID, FIG NAME
FROM FIGURE
WHERE FIG ID = p fig id ;
BEGIN
    FOR v figure record IN cur pop LOOP
        DBMS OUTPUT.PUT LINE('Total young generation that
knows ' ||
        v figure record.FIG NAME || ' is ' ||
countPopular(v figure record.FIG ID) || ' .');
   END LOOP;
EXCEPTION -- Exception Part
   WHEN NO DATA FOUND THEN
   DBMS OUTPUT.PUT LINE ('Data cannot be found !');
   WHEN OTHERS THEN
    DBMS OUTPUT.PUT LINE ('Error, Please try Again.');
END getFigurePopularity;
--End Q17
END tansrigroup2 pkg;
-- Result Code
BEGIN
tansrigroup2 pkg.getReceivedTanSri('F02');
tansrigroup2 pkg.getFigurePub;
```

```
tansrigroup2_pkg.getReceiveTitlePlace('F04');
tansrigroup2 pkg.getCategory('F02');
tansrigroup2 pkg.getAward('F02');
tansrigroup2 pkg.getOrganization('F02');
tansrigroup2 pkg.getHonouredBy('F04');
tansrigroup2 pkg.displaySlogan('F02');
tansrigroup2 pkg.getStartCareer('F12');
tansrigroup2_pkg.getInspiration('F02');
tansrigroup2_pkg.getSocAct('F02');
tansrigroup2_pkg.getHowStartCareer('F02');
tansrigroup2 pkg.displayAllPOB;
tansrigroup2_pkg.displayAllChall;
tansrigroup2 pkg.displayAllKeyEvent;
tansrigroup2 pkg.displayNominatedProcess;
tansrigroup2 pkg.getFigurePopularity('F02');
END;
```

7.0 References

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