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B.TECH CSE 2ND YEAR 4TH SEM

DBMS END-SEM

Q1.) SECTION A

1.

TABLE CITY:-

Create table city(

ID int PRIMARY KEY,

Name Varchar(20),

CountryCode Varchar(20) CHECK(CountryCode=UPPER(CountryCode)),

District Varchar(20),

Population int

);

Insert into city values(1,'Kabul','AFG','Kabol',1780000);

Insert into city values(3,'Herat','AFG','Herat',186800);

Insert into city values(1025,'Delhi','IND','Delhi',7206704);

Insert into city values(1032,'Nagpur','IND','Maharashtra',1624752);

Insert into city values(12,'Breda','NLD','Noord-Brabant',160398);

Insert into city values(16,'Haarlem','NLD','Noord-Brabant',148772);

Insert into city values(29,'Ede','NLD','Gelderland',101574);

Select * from city;

Output

```
1|Kabul|AFG|Kabul|1780000
3|Herat|AFG|Herat|186800
1025|Delhi|IND|Delhi|7206704
1032|Nagpur|IND|Maharashtra|1624752
12|Breda|NLD|Noord-Brabant|160398
16|Haarlem|NLD|Noord-Brabant|148772
29|Ede|NLD|Gelderland|101574

[Execution complete with exit code 0]
```

TABLE COUNTRY:-

Create table Country(

Code Varchar(20),

Name Varchar(50),

Continent Varchar(20),

Region Varchar(50),

SurfaceArea Int,

IndepYear Int,

Population Int

);

Insert INTO Country values('AFG','Afghanistan','Asia','Southern and Central Asia',652090.00,1919,22720000);

Insert INTO Country values('IND','India','Asia','Southern and Central Asia',3287263.00,1947,1013662000);

Insert INTO Country values('NLD','Netherlands','Europe','Western Europe',41526.00,1581,15864000);

Select * from Country;

Output

```
AFG|Afghanistan|Asia|Southern and Central  
Asia|652090|1919|22720000  
IND|India|Asia|Southern and Central  
Asia|3287263|1947|1013662000  
NLD|Netherlands|Europe|Western Europe|41526|1581|15864000  
  
[Execution complete with exit code 0]
```

TABLE COUNTRYLANGUAGE:-

Create table CountryLanguage(

Countrycode Varchar(5),

Language Varchar(20),

IsOfficial Varchar(3),

Percentage Int,

PRIMARY KEY(CountryCode,Language)

);

Insert into CountryLanguage values('AFG','Balochi','F',0.9);

Insert into CountryLanguage values('AFG','Dari','T',32.1);

Insert into CountryLanguage values('AFG','Pashto','T',52.4);

Insert into CountryLanguage values('AFG','Tukmenian','F',1.9);

Insert into CountryLanguage values('AFG','Uzbek','F',8.8);

Insert into CountryLanguage values('IND','Asami','F',1.5);

Insert into CountryLanguage values('IND','Bengali','F',8.2);

Insert into CountryLanguage values('IND','Gujarati','F',4.8);

Insert into CountryLanguage values('IND','Hindi','T',39.9);

Insert into CountryLanguage values('IND','Kannada','F',3.9);

Insert into CountryLanguage values('IND','Malyalam','F',3.6);

Insert into CountryLanguage values('IND','Marathi','F',7.4);

Select * from CountryLanguage;

Output

```
AFG|Balochi|F|0.9
AFG|Dari|T|32.1
AFG|Pashto|T|52.4
AFG|Tukmenian|F|1.9
AFG|Uzbek|F|8.8
IND|Asami|F|1.5
IND|Bengali|F|8.2
IND|Gujarati|F|4.8
IND|Hindi|T|39.9
IND|Kannada|F|3.9
IND|Malyalam|F|3.6
IND|Marathi|F|7.4

[Execution complete with exit code 0]
```

2.

```
SELECT COUNT(*) AS NumLanguages
FROM CountryLanguage
WHERE CountryCode = 'IND';
```

Output

```
AFG|Balochi|F|0.9
AFG|Dari|T|32.1
AFG|Pashto|T|52.4
AFG|Tukmenian|F|1.9
AFG|Uzbek|F|8.8
IND|Asami|F|1.5
IND|Bengali|F|8.2
IND|Gujarati|F|4.8
IND|Hindi|T|39.9
IND|Kannada|F|3.9
IND|Malyalam|F|3.6
IND|Marathi|F|7.4
7
```

3.

```
SELECT COUNT(DISTINCT Language) AS NumLanguages
FROM CountryLanguage
WHERE Percentage < 10;
```

Output

```
AFG|Balochi|F|0.9
AFG|Dari|T|32.1
AFG|Pashto|T|52.4
AFG|Tukmenian|F|1.9
AFG|Uzbek|F|8.8
IND|Asami|F|1.5
IND|Bengali|F|8.2
IND|Gujarati|F|4.8
IND|Hindi|T|39.9
IND|Kannada|F|3.9
IND|Malyalam|F|3.6
IND|Marathi|F|7.4
9
```

4.

```
SELECT Language
FROM CountryLanguage
WHERE CountryCode = 'AFG' AND IsOfficial = TRUE;
```

5.

```
SELECT Country.Name, MIN(City.Population) AS LowestPopulation, MAX(City.Population) AS
HighestPopulation
```

```
FROM Country
INNER JOIN City ON Country.Code = City.CountryCode
GROUP BY Country.Name;
```

6.

```
SELECT *
FROM City
WHERE Name LIKE 'H%' AND District LIKE 'H%';
```

7.

```
SELECT Name, Population
FROM Country
```

ORDER BY Population DESC

LIMIT 1 OFFSET 1;

8.

ALTER TABLE Country

DROP COLUMN IndepYear;

9.

SELECT Country.Name, SUM(City.Population) AS TotalPopulation

FROM Country

INNER JOIN City ON Country.Code = City.CountryCode

GROUP BY Country.Name;

10.

SELECT City.Name AS CityName, Country.Name AS CountryName, City.Population

FROM City

INNER JOIN Country ON City.CountryCode = Country.Code;

Q.2) SECTION B

DECLARE

a NUMBER := 1;

b NUMBER := 2;

c NUMBER := 3;

BEGIN

IF a > b

AND a > c THEN

dbms_output.Put_line('Greatest number is ' || a);

ELSIF b > a

AND b > c THEN

dbms_output.Put_line('Greatest number is ' || b);

ELSE

dbms_output.Put_line('Greatest number is ' || c);

END IF;

END;

/

Statement processed.
Greatest number is 3