GITAM SCHOOL OF SCIENCES (GSS)

GITAM (Deemed to be University), Bengaluru Campus – 562163

DEPARTMENT OF COMPUTER SCIENCE

Program : B.C.A **Semester : IV**

Course Code : CSCI2071 **Course Title : DBMS Lab**

Course Faculty : Dr. Rajesh L

Experiment 4: To demonstrate SQL Constructs

Create a Database and name it as **"movieinvoice"**

Syntax:

CREATE DATABASE databasename

Example:

CREATE DATABASE movieinvoice;

To ensure whether the database name already exists or not, Use the following command:

CREATE DATABASE IF NOT EXISTS movieinvoice;

Create a Table **cust** and save it in the invoice database

Name of the Table	**cust**	
Column Name	**Format**	**Remarks**
cust_id	Varchar(3)	Primary Key, NOT NULL
Lname	Varchar(15)	
Fname	Varchar(15)	
Area	Varchar(2)	
Mobile	Number(10)	

Syntax:

```
CREATE TABLE cust (
        cust_id varchar(3) NOT NULL,
        lname varchar(15),
        fname varchar(15),
        area varchar(2),
        mobile number(10),
        PRIMARY KEY (cust_id)
);
```

Insert the following data into the cust table:

Cust_id	Lname	Fname	Area	mobile
a01	Gill	Shubman	sa	9944123456
a02	Rajesh	Siddharth	mu	9444123456
a03	Kohli	Virat	da	9894123456
a04	Mirza	Sania	ba	8148123456
a05	Mandhana	Smriti	va	9800123456
a06	Dhoni	MS	gh	9700123456

Create a Table **movie** and save it in the invoice database

Name of the Table	**movie**	
Column Name	**Format**	**Remarks**
mv_no	number(2)	Primary Key, NOT NULL
Title	Varchar(25)	
mov_type	Varchar(10)	
star	Varchar(25)	
Price	Number(8,2)	

Syntax:

```
CREATE TABLE movie (
        mv_no number(2) NOT NULL,
        title varchar(25),
        mov_type varchar(10),
        star varchar(25),
        price number(8,2),
        PRIMARY KEY (mv_no)
);
```

Insert the following data into the movie table:

mv_no	title	mov_type	star	price
1	Bloody vengenance	action	Jackie chan	180.95
2	The firm	thriller	Tom cruise	160.25
3	Home alone	comedy	Macaulay	200.00
4	The fugitive	horror	Ford	150.55
5	Gone with the wind	drama	clarke	100.00
6	Quick change	comedy	Bill	200.00
7	dracula	horror	Gary	100.00
8	coma	drama	Doughlas	100.00
9	Carry on doctor	comedy	Philips	150.25
10	vivegam	action	Ajith	200.00

Create a Table **invoice** and save it in the invoice database

Name of the Table	**invoice**	
Column Name	**Format**	**Remarks**
inv_no	varchar2(3)	Primary Key, NOT NULL
mv_no	number(2)	
cust_id	varchar2(3)	
issue_date	date	
return_date	date	

Syntax:

Syntax:

```
CREATE TABLE invoice (
        inv_no varchar(3) NOT NULL,
        mv_no number(2),
        cust_id varchar(3),
        issue_date date,
        return_date date,
        UNIQUE (inv_no),
        FOREIGN KEY (cust_id) REFERENCES cust(cust_id),
        CHECK (mv_no < 10)
    );
```

Insert the following data into the invoice table:

inv_no	mv_no	cust_id	issue_date	return_date
i01	4	a01	23-jul-22	25-jul-22
i02	3	a02	12-aug-22	15-aug-22
i03	1	a02	15-aug-22	18-aug-22
i04	6	a03	10-sep-22	13-sep-22
i05	7	a04	05-aug-22	08-aug-22
i06	2	a06	18-sep-22	21-sep-22
i07	9	a05	07-jul-22	10-jul-22
i08	9	a01	11-aug-22	14-aug-22
i09	5	a03	06-jul-22	09-jul-22
i10	8	a06	03-sep-22	06-sep-22

Write the SQL Sentence Constructs for the following Queries.

1. Find out the names of all the customers.
2. Print the entire customer table.
3. Retrieve the list of fname and the area of all the customers.
4. List the various movie types available from the movie table.
5. Find the names of all customers having ‘a’ as the second letter in their fnames.
6. Find the lnames of all customers that begin with ‘s’ or ‘j’.
7. Find out the customers who stay in an area whose second letter is ‘a’
8. Find the list of all customers who stay in area ‘da’ or area ‘mu’ or area ‘gh’
9. Print the list of employees whose phone numbers are greater than the value 9445000000
10. Print the information from invoice table of customers who have been issued movies in the month of September.
11. Display the invoice table informationfor cust_id ‘a01’ and ‘a02’
12. Find the movies of type ‘action’ and ‘comedy’
13. Find the movies whose price is greater than 150 and less than or equal to 200
14. Find the movies that cost more than 150 and also find the new cost as original cost * 15
15. Rename the new coloumn in the above query as new_price
16. List the movies in sorted order of their titles.
17. Print the names and types of all the movies except horror movies.
18. Calculate the square root of the price of each movie.
19. Divide the cost of movie ‘home alone’ by difference between its price and 100.
20. List the names, areas and cust_id of customers without phone numbers.
21. List the names of customers without lname.
22. List the mv_no, title, type of movies whose stars begin with letter ‘,’.
23. List the mv_no and inv_no of customers having inv_no less than ‘i05’ from the Invoice Transaction Table.

Set Functions

24. Count the total number of customers.
25. Calculate the total price of all the movies.
26. Calculate the average price of all the movies.
27. Determine the maximum and minimum movie prices. Rename the title as max_price and min_price respectively.
28. Count the number of movies having price greater than or equal to 150.

Having and Group By:

29. Print the type and average price of each movie.
30. Find the number of movies in each type.
31. Count separately the number of movies in the ‘Comedy’ and ‘Thriller’ types.
32. Calculate the average price for each type that has a maximum price of 150.
33. Calculate the average price of all movies where type is ‘Comedy’ or ‘Thriller’ and price is greater than or equal to 150.

Join

34. Find out the movie number which has been issued to Dhoni
35. Find the names and movie numbers of all the customers who have been issued a movie.
36. Select the title, cust_id, mv_no for all the movies that are issued.
37. Find out the title and types of the movies that have been issued to ‘Kohli’
38. Find the names of customers who have been issued movie of type ‘drama’

Nested Queries:

39. Find out which customers have been issued movie number 8
40. Find the customer name and area with invoice number ‘i10’
41. Find the customer names and phone numbers who have been issued movies before the month of August.
42. Find the name of the movie issued to ‘Mandana’ and ‘Gill’
43. List the movie number, movie names issued to all customers.
44. Find the type and movie number of movie issued to cust_id ‘a01’ and ‘a02’
45. Find the lname, fname who have been issued movies.

Table Updation

46. Change the mobile number of “Mirza” to 123456
47. Change the issue_date of cust_id ‘A01’ to 16/03/23
48. Change the price of ‘Carry on Doctor” to 200
49. Delete the record with invoice number ‘i08’ from the invoice table.
50. Change the area of cust_id ‘A05’ to ‘VS’.