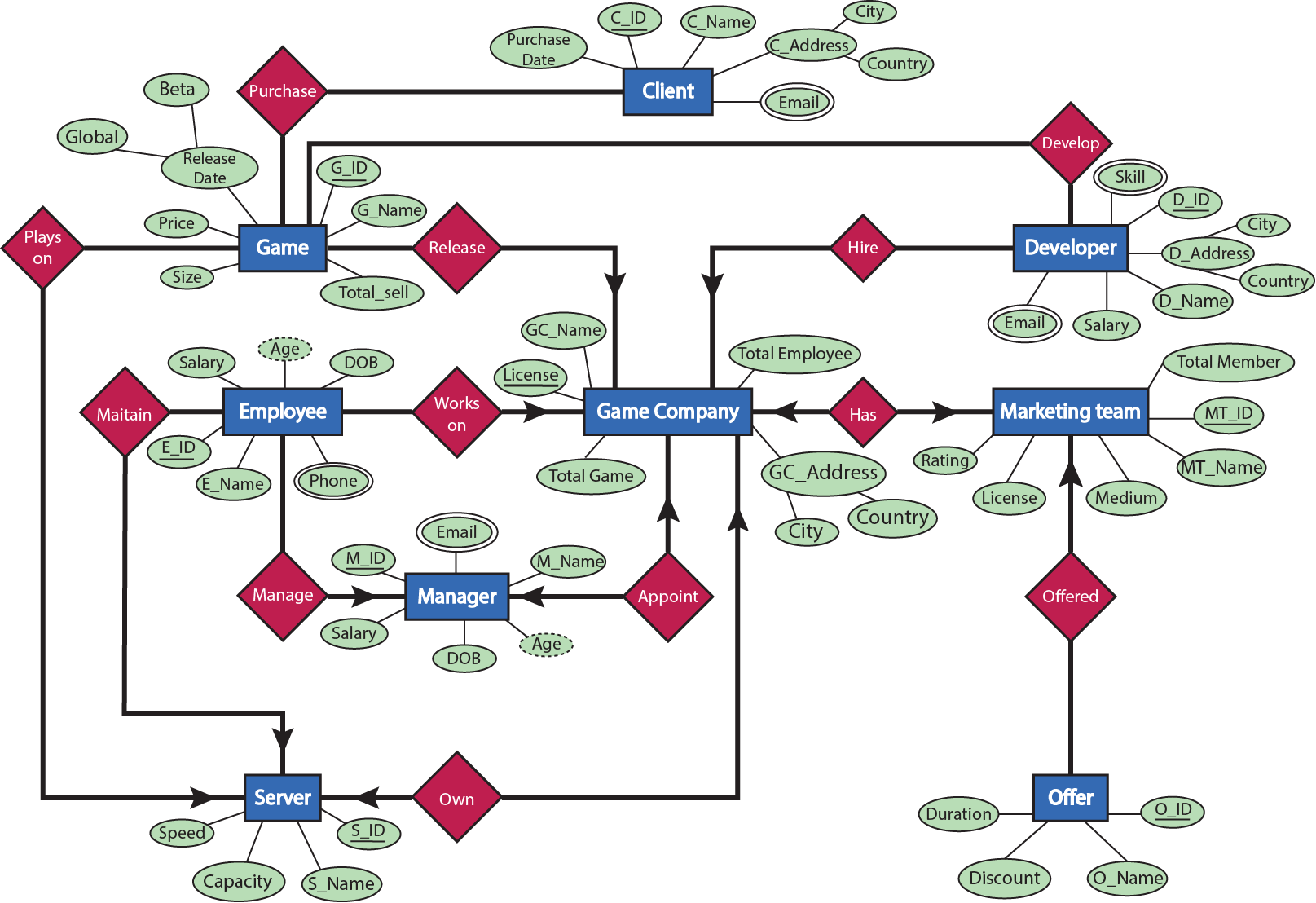
**Introduction**

The topic of the project is "Game Management System”. We are using Oracle 10g to manage data, prevent security breaches, and provide seamless access to applications. This project is designed to keep a record of a Game Company, their games, developer of that company, their employees, manager who manage employees, server information on which games are played, and many more things. The game management system is developed by the company owners to manage different activities in the company. It saves time in carrying out daily activities and the automation of different processes brings efficiency to the system. It is a part of the corporate industry. The main purpose is to make our project easy and simple so that it can be implemented at any level and can be productive and useful for any game development company.

**Scenario**

In a Game Company Management System there will be a company which develops and releases games. Company has its name, unique license number, total employee, total number of games, address. City and country can be derived from address. The information of the game will be game name, game id, total sell, price size, release date. Release date consists of beta release date and global release date. Game id makes the game distinguished from other games. Under the company there will be many employees. Employee name, employee id, phone, salary, date of birth, age will be stored in the system. An employee can be uniquely identified by employee id. Company appoints manager to manage employee. Managers have unique manager id, manager name, email, salary, date of birth, age. Company hires developers for developing games. Developers have names, unique id, skill, email, salary, address. Game companies have their own server for storing and playing their game. Server id, server name, speed, capacity should be identifiers for server. Server id is different for each of the servers. Company has a marketing team. The marketing team offered offer. The marketing team has marketing team id, name, medium, license, rating, total ember. Marketing team is uniquely identified by their id. Unique offer id, offer name, discount, duration will be the offers for a client. A client can purchase game and his/her name, Cid, email, address, purchase date are also stored in the client. A Client can be uniquely identified by Cid.

 **ER Diagram**

**NORMALIZATION**

1.Game Company Release Game

Diagram

Description automatically generated

UNF: G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global, GC\_name, License, Total\_Employee, Total\_Game, city, country

1NF : 1st :G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global, GC\_name, License, Total\_Employee, Total\_Game, city, country **(No Multi-value found)**

2NF : 1st : G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global, License (FK)

2nd: GC\_name, License, Total\_Employee, Total\_Game, city, country

3NF: 1st: G\_ID, G\_name, Size, Price, Total\_sell, Global, License (FK)

2nd: GC\_name, License, Total\_Employee, Total\_Game, city

3rd: Global, Beta

4th: City, Country

2.Client Purchase Game

Diagram

Description automatically generated

UNF : 1st: G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global, C\_id, C\_name, Purchase\_Date, city, country, Email

1NF : 1st: G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global, C\_id, C\_name, Purchase\_Date, city, country, Email **(Email is multivalued)**

2NF : 1st: G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global

2nd: C\_id, C\_name, Purchase\_Date, city, country, Email

3rd: C\_id (FK), G\_id

3NF: 1st: G\_ID, G\_name, Size, Price, Total\_sell, Global

2nd: C\_id, C\_name, Purchase\_Date, City, Email

3rd: Global, Beta

4th: C\_id (FK), G\_id

5th: City, country

3.Game Plays\_on Server

Diagram

Description automatically generated

UNF: 1st: G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global, S\_id, Speed, Capacity, S\_name

1NF: 1st: G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global, S\_id, Speed, Capacity, S\_name **(No Multivalue)**

2NF : 1st: G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global, S\_id

2nd: S\_id, Speed, Capacity, S\_name

3rd: G\_id, S\_id (FK)

3NF : 1st: G\_ID, G\_name, Size, Price, Total\_sell, Global

2nd: S\_id, Speed, Capacity, S\_name

3rd: Global, Beta

4th: G\_id, S\_id (FK)

4.Developer Develop Game

Diagram

Description automatically generated

UNF : 1st: G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global, D\_id, city, country, D\_name, Salary, Email, Skill

1NF : 1st: G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global, D\_id, city, country, D\_name, Salary, Email, Skill **(Skill & Email are Multivalued)**

2NF : 1st: G\_ID, G\_name, Size, Price, Total\_sell, Beta, Global

2nd: D\_id, D\_name, Salary, Email, Skill\_id

3rd: Skill\_id, Skill

4th: G\_id, D\_id (FK)

3NF: 1st: G\_ID, G\_name, Size, Price, Total\_sell, Global

2nd: D\_id, city, D\_name, Salary, Email, Skill\_id

3rd: Skill\_id, Skill

4th: G\_id, D\_id (FK)

5th: Global, Beta

6th: City, country

5.Game Company has Marketing Team

Diagram

Description automatically generated

UNF: GC\_name, License, Total\_Employee, Total\_Game, city, country, MT\_id, MT\_name, Medium, Licence, Rating

1NF : 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country, MT\_id, MT\_name, Medium, Licence, Rating **(No Multivalue)**

2NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country, MT\_id (FK)

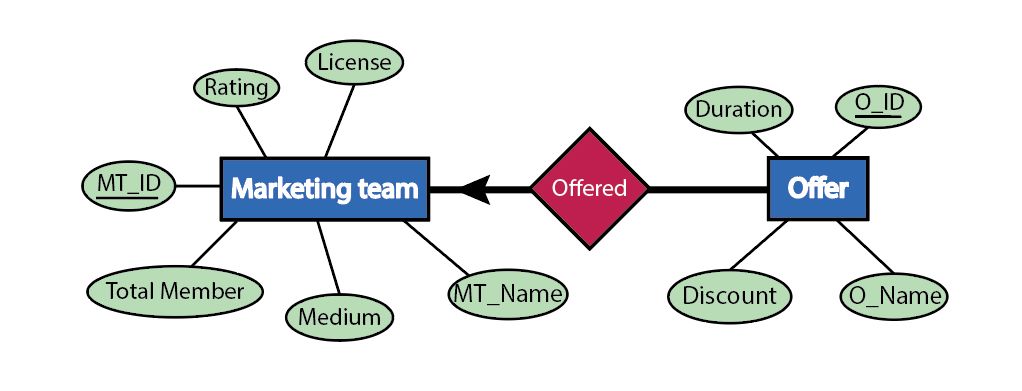
2nd: MT\_id, MT\_name, Medium, Licence, Rating

3NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, MT\_id (FK)

2nd: MT\_id, MT\_name, Medium, Licence, Rating

3rd: City, country

6.Marketing Team offered Offer.



UNF: 1st: MT\_id, MT\_name, Medium, Licence, Rating, O\_id, Duration, Discount, O\_name

1NF: 1st: MT\_id, MT\_name, Medium, Licence, Rating, O\_id, Duration, Discount, O\_name **(No Multivalue)**

2NF: 1st: MT\_id, MT\_name, Medium, Licence, Rating

2nd: O\_id, Duration, Discount, O\_name, MT\_id (FK)

3NF: 1st: MT\_id, MT\_name, Medium, Licence, Rating

2nd: O\_id, Duration, Discount, O\_name, MT\_id (FK)

7.Game Company Hire Developer

Diagram

Description automatically generated

UNF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country, D\_id, D\_name, Salary, Email, Skill

1NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country, D\_id, D\_name, Salary, Email, Skill **(Skill & Email are Multivalued)**

2NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country

2nd: D\_id, D\_name, Salary\_id, Email, Skill, License (FK)

3NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city

2nd: D\_id, city, country, D\_name, Salary\_id, Email, Skill, License (FK)

3rd: City, Country

8.Employee Works on Game Company

Diagram

Description automatically generated

UNF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country, E\_id, E\_name, Salary, Age, DOB, Phone

1NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country, E\_id, E\_name, Salary, Age, DOB, Phone (**Phone is multivalued)**

2NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country

2nd: E\_id, E\_name, Salary, Age, DOB, Phone, License (FK)

3NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city

2nd: E\_id, E\_name, Salary, Age, DOB, Phone, city, License (FK)

3rd: City, Country

9.Game Company Appoint Manager

Diagram

Description automatically generated

UNF : 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country, M\_ID, M\_name, Age, DOB, Salary, Phone **(Email is Multivalued)**

1NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, M\_ID, M\_name, Age, DOB, Salary, Email, City, Country

2NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, City, country

2nd: M\_ID, M\_name, Age, DOB, Salary, Email, License (FK)

3NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city

2nd: M\_ID, M\_name, Age, DOB, Salary, Email, License (FK)

3rd: City, Country

10.Game Company Owns Server

A picture containing text, clock, clipart

Description automatically generated

UNF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country, S\_id, Speed, Capacity, S\_name

1NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country, S\_id, Speed, Capacity, S\_name  **(No Multivalue)**

2NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city, country

2nd: S\_id, Speed, Capacity, S\_name, License (FK)

3NF: 1st: GC\_name, License, Total\_Employee, Total\_Game, city

2nd: S\_id, Speed, Capacity, S\_name, License (FK)

3rd: City, Country

11.Employee Maintain Server

A picture containing text, clipart

Description automatically generated

UNF: 1st: E\_id, E\_name, Salary, Age, DOB, Phone, S\_id, Speed, Capacity, S\_name

1NF: 1st: E\_id, E\_name, Salary, Age, DOB, Phone, S\_id, Speed, Capacity, S\_name **(Phone Multivalued)**

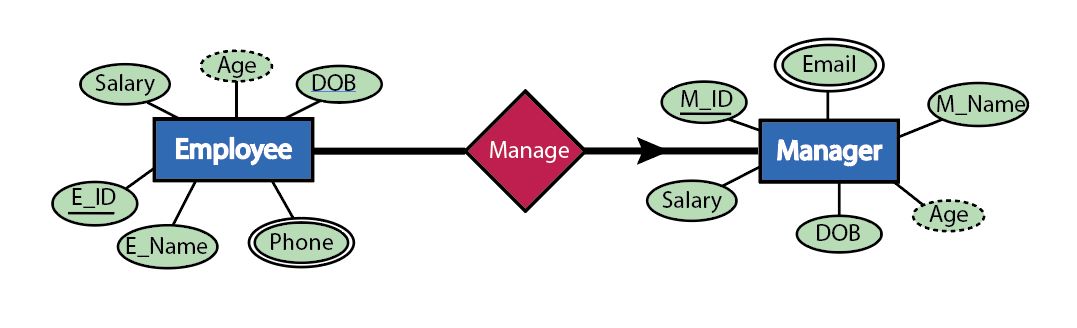
2NF: 1st: E\_id, E\_name, Salary, Age, DOB, Phone, S\_id (FK)

2nd: S\_id, Speed, Capacity, S\_name

3NF: 1st: E\_id, E\_name, Salary, Age, DOB, Phone, S\_id (FK)

2nd: S\_id, Speed, Capacity, S\_name

12.Manager manage Employee



UNF: 1st: M\_ID, M\_name, Age, DOB, Salary, Phone, E\_id, E\_name, Salary, Age, DOB, Phone

1NF: 1st: M\_ID, M\_name, Age, DOB, Salary, Email, E\_id, E\_name, Salary, Age, DOB, Phone **(Phone & Email Multivalued)**

2NF: 1st: M\_ID, M\_name, Age, DOB, Salary, Email

2nd: E\_id, E\_name, Salary, Age, DOB, Phone, M\_id(FK)

3NF: 1st: M\_ID, M\_name, Age, DOB, Salary, Email

2nd: E\_id, E\_name, Salary, Age, DOB, Phone, M\_id(FK)

**FINALIZATION**

**Final Table**

1st: G\_ID, G\_name, Size, Price, Total\_sell, Global, License (FK)

2nd: GC\_name, License, Total\_Employee, Total\_Game, City

3rd: Global, Beta

4th: City, Country

5th: C\_id, C\_name, Purchase\_Date, City, Email

6th: C\_id (FK), G\_id

7th: G\_id, S\_id (FK)

8th: Skill\_id, Skill

9th: G\_id, D\_id (FK)

10th : GC\_name, License, Total\_Employee, Total\_Game, city, MT\_id (FK)

11th: MT\_id, MT\_name, Medium, Licence, Rating

12th: O\_id, Duration, Discount, O\_name, MT\_id (FK)

13th: D\_id, D\_name, Salary, Email, Skill\_id, License (FK)

14th: E\_id, E\_name, Salary, Age, DOB, Phone, City, License (FK)

15th: M\_ID, M\_name, Age, DOB, Salary, Email, License (FK)

16st: S\_id, Speed, Capacity, S\_name, License (FK)

17nd: E\_id, E\_name, Salary, Age, DOB, Phone, S\_id (FK)

18th : E\_id, E\_name, Salary, Age, DOB, Phone, M\_id(FK)

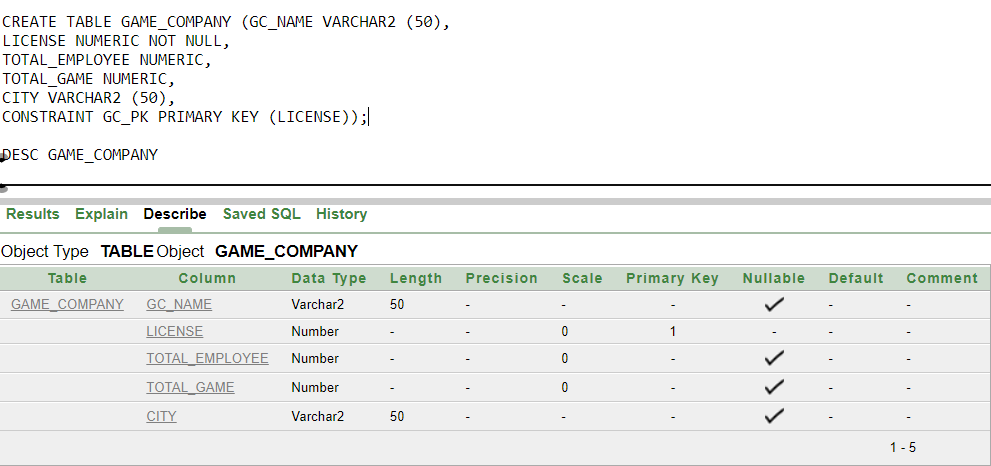
**TABLE CREATION**

1.CREATE TABLE GAME (G\_ID NUMERIC NOT NULL, G\_NAME VARCHAR2 (50), G\_SIZE VARCHAR2 (20), PRICE NUMERIC, TOTAL\_SELL NUMERIC NOT NULL, GLOBAL\_RELEASE DATE, LICENSE NUMERIC NOT NULL, CONSTRAINT GAME\_PK PRIMARY KEY (G\_ID),CONSTRAINT GAME\_FK FOREIGN KEY (LICENSE) REFERENCES GAME\_COMPANY(LICENSE));

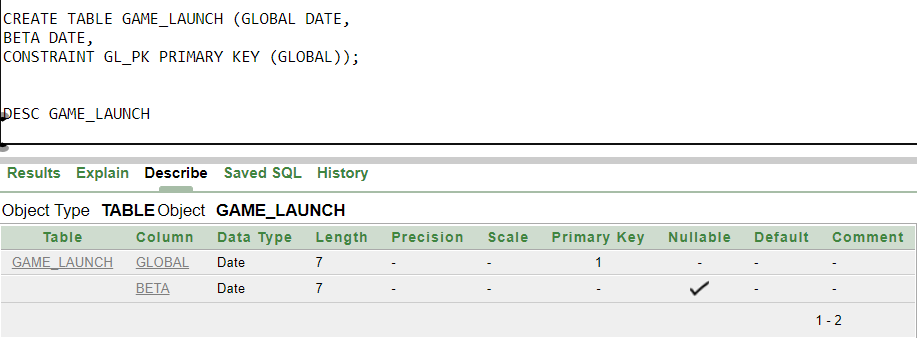
Application

Description automatically generated with low confidence

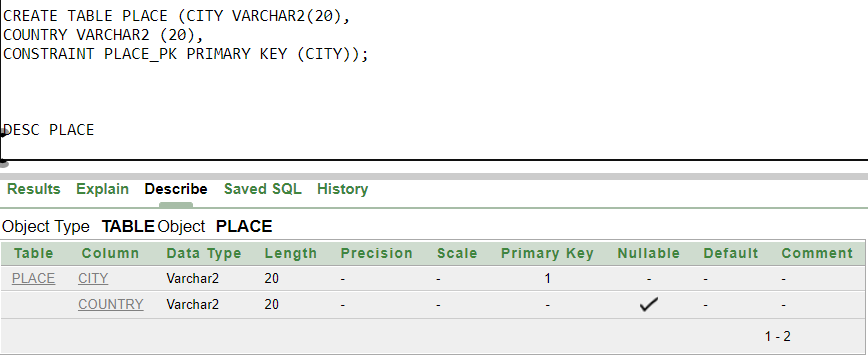
2. CREATE TABLE GAME\_COMPANY (GC\_NAME VARCHAR2 (50), LICENSE NUMERIC NOT NULL, TOTAL\_EMPLOYEE NUMERIC, TOTAL\_GAME NUMERIC, CITY VARCHAR2 (50), CONSTRAINT GC\_PK PRIMARY KEY (LICENSE));



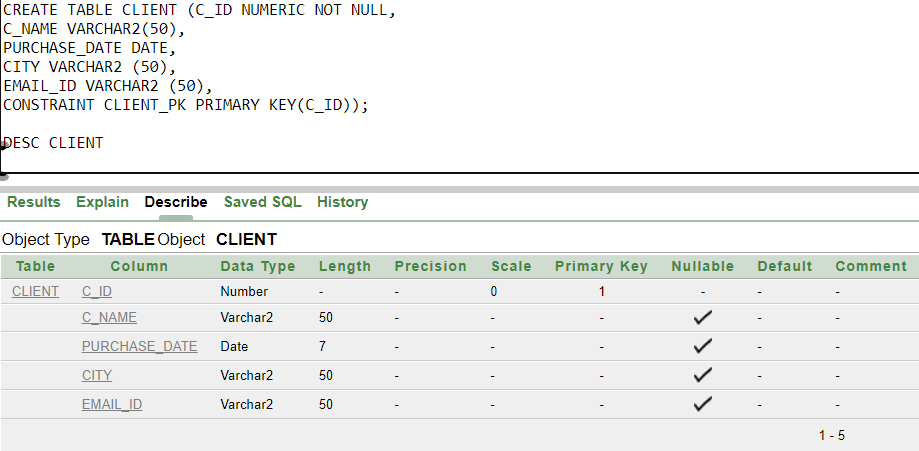
3. CREATE TABLE GAME\_LAUNCH (GLOBAL DATE, BETA DATE, CONSTRAINT GL\_PK PRIMARY KEY (GLOBAL));



4. CREATE TABLE PLACE (CITY VARCHAR2(20), COUNTRY VARCHAR2 (20), CONSTRAINT PLACE\_PK PRIMARY KEY (CITY));



5. CREATE TABLE CLIENT (C\_ID NUMERIC NOT NULL, C\_NAME VARCHAR2(50), PURCHASE\_DATE DATE, CITY VARCHAR2 (50), EMAIL\_ID VARCHAR2 (50), CONSTRAINT CLIENT\_PK PRIMARY KEY(C\_ID));



6.CREATE TABLE GAME\_CLIENT (G\_ID NUMERIC NOT NULL, C\_ID NUMERIC NOT NULL, CONSTRAINT GAME\_CLIENT\_PK PRIMARY KEY (G\_ID), CONSTRAINT GAME\_CLIENT\_FK FOREIGN KEY (C\_ID) REFERENCES CLIENT (C\_ID));

Graphical user interface, text, application, email

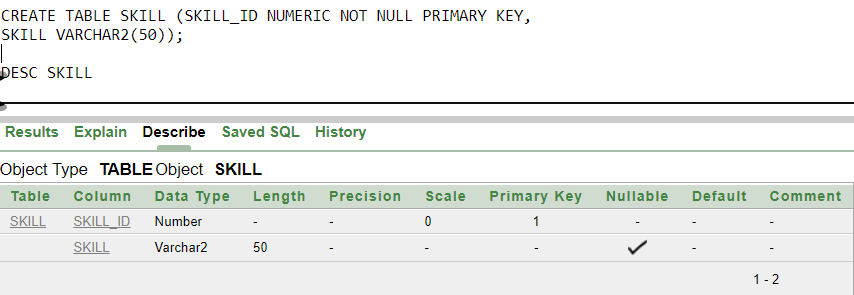
Description automatically generated

7.CREATE TABLE SERV\_MANAGE (G\_ID NUMERIC NOT NULL PRIMARY KEY, S\_ID NUMERIC (10,10) NOT NULL, FOREIGN KEY (S\_ID) REFERENCES SERVER(S\_ID));

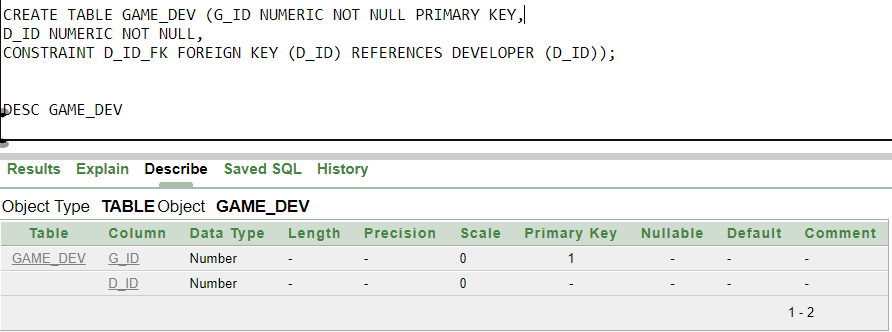
Graphical user interface, application, table

Description automatically generated

8.CREATE TABLE SKILL (SKILL\_ID NUMERIC NOT NULL PRIMARY KEY, SKILL VARCHAR2(50));



9.CREATE TABLE GAME\_DEV (G\_ID NUMERIC NOT NULL PRIMARY KEY, D\_ID NUMERIC NOT NULL, CONSTRAINT D\_ID\_FK FOREIGN KEY (D\_ID) REFERENCES DEVELOPER (D\_ID));

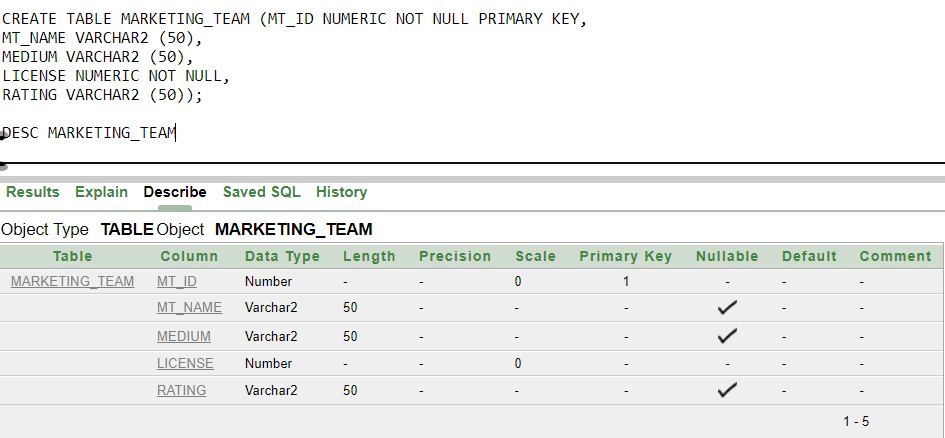


10. CREATE TABLE GAME\_COMPANY\_MT (GC\_NAME VARCHAR2 (50), LICENSE NUMERIC NOT NULL PRIMARY KEY, TOTAL\_EMPLOYEE NUMERIC, CITY VARCHAR2(50), MT\_ID NUMERIC NOT NULL, CONSTRAINT MT\_ID\_FK FOREIGN KEY (MT\_ID) REFERENCES MARKETING\_TEAM (MT\_ID));

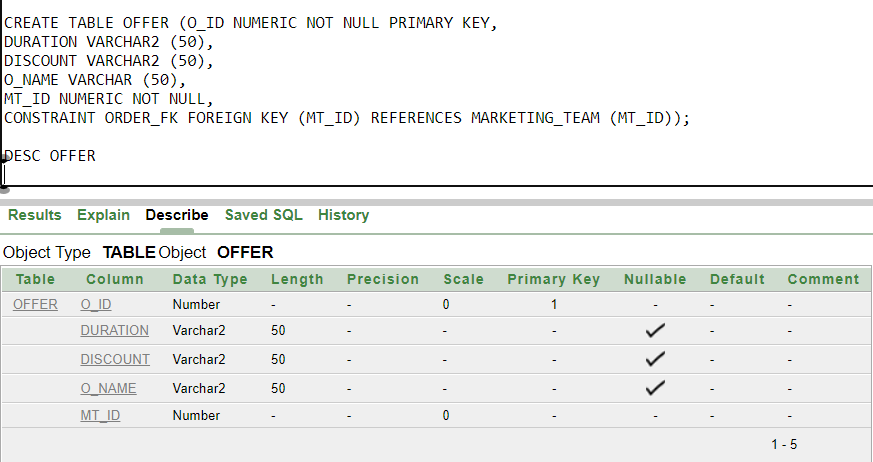
Table

Description automatically generated with medium confidence

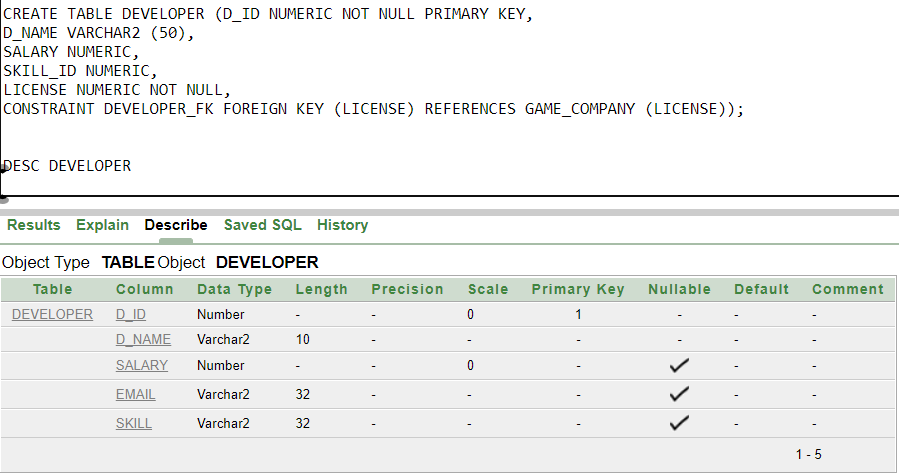
11.CREATE TABLE MARKETING\_TEAM (MT\_ID NUMERIC NOT NULL PRIMARY KEY, MT\_NAME VARCHAR2 (50), MEDIUM VARCHAR2 (50), LICENSE NUMERIC NOT NULL, RATING VARCHAR2 (50));



12. CREATE TABLE OFFER (O\_ID NUMERIC NOT NULL PRIMARY KEY, DURATION VARCHAR2 (50), DISCOUNT VARCHAR2 (50), O\_NAME VARCHAR (50), MT\_ID NUMERIC NOT NULL, CONSTRAINT ORDER\_FK FOREIGN KEY (MT\_ID) REFERENCES MARKETING\_TEAM (MT\_ID));



13. CREATE TABLE DEVELOPER (D\_ID NUMERIC NOT NULL PRIMARY KEY, D\_NAME VARCHAR2 (50), SALARY NUMERIC, SKILL\_ID NUMERIC, LICENSE NUMERIC NOT NULL, CONSTRAINT DEVELOPER\_FK FOREIGN KEY (LICENSE) REFERENCES GAME\_COMPANY (LICENSE));

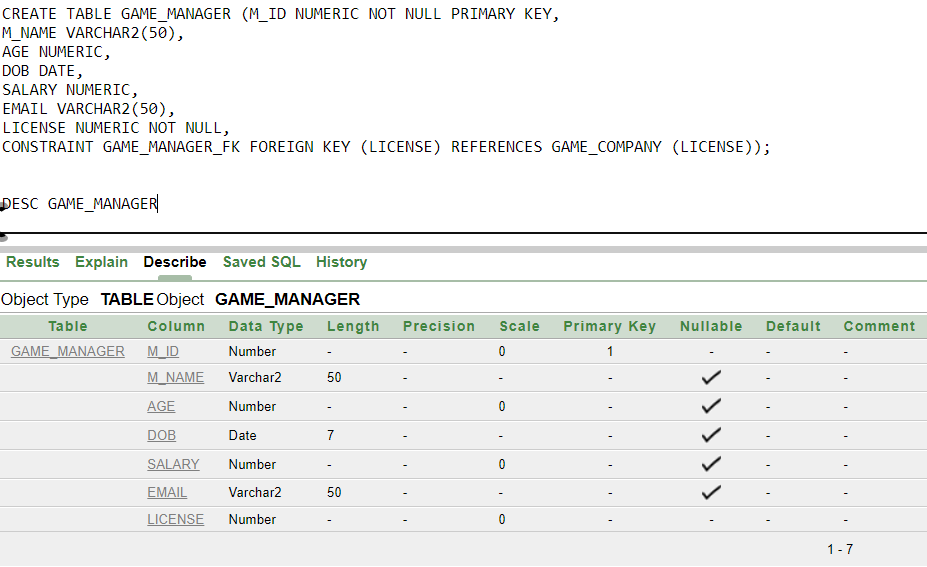


14. CREATE TABLE EMPLOYEE (E\_ID NUMERIC NOT NULL PRIMARY KEY, E\_NAME VARCHAR2 (50), SALARY NUMERIC, AGE NUMERIC, DOB DATE, PHONE VARCHAR2 (50), CITY VARCHAR2 (50), LICENSE NUMERIC NOT NULL, CONSTRAINT EMPLOYEE\_FK FOREIGN KEY (LICENSE) REFERENCES GAME\_COMPANY (LICENSE));

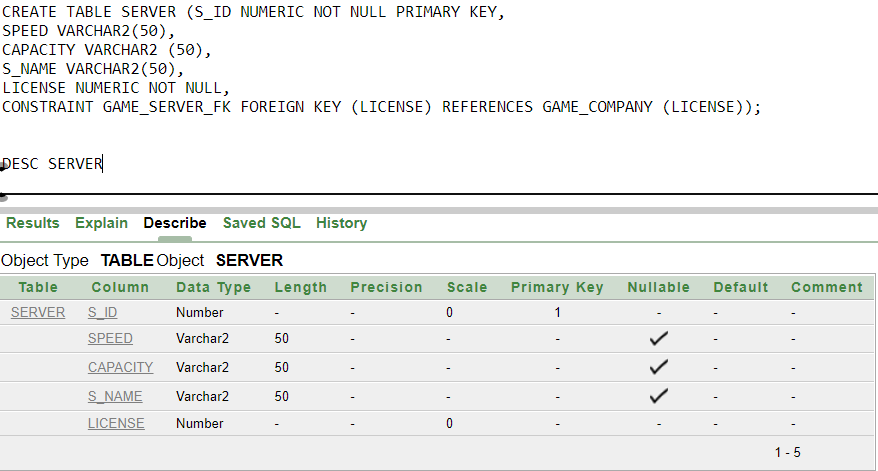
Table

Description automatically generated with medium confidence

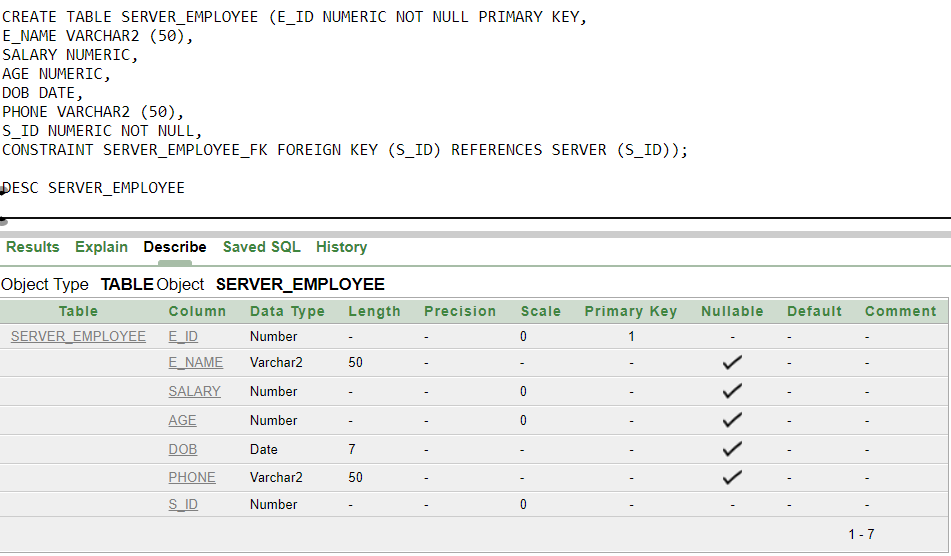
15. CREATE TABLE GAME\_MANAGER (M\_ID NUMERIC NOT NULL PRIMARY KEY ,M\_NAME VARCHAR2(50), AGE NUMERIC, DOB DATE, SALARY NUMERIC, EMAIL VARCHAR2(50), LICENSE NUMERIC NOT NULL, CONSTRAINT GAME\_MANAGER\_FK FOREIGN KEY (LICENSE) REFERENCES GAME\_COMPANY (LICENSE));



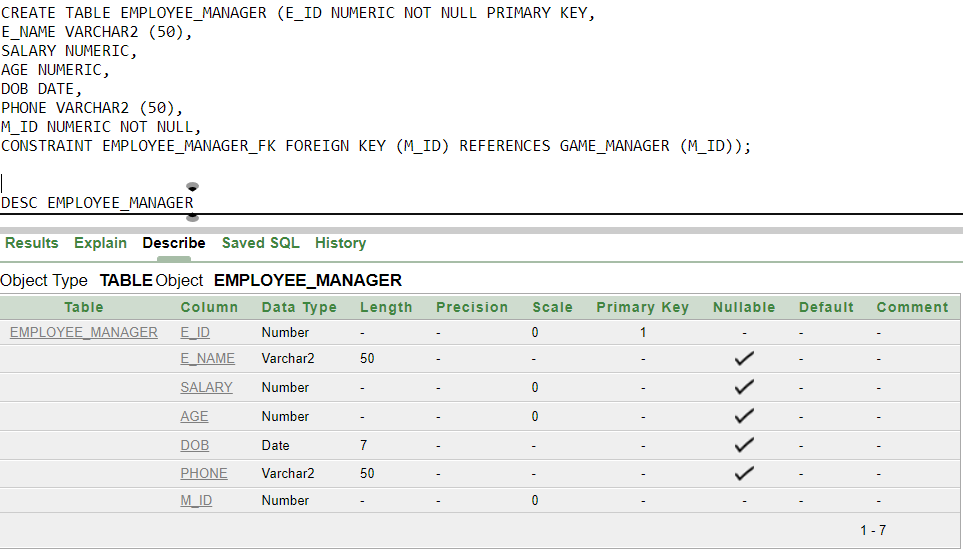
16. CREATE TABLE SERVER (S\_ID NUMERIC NOT NULL PRIMARY KEY, SPEED VARCHAR2(50), CAPACITY VARCHAR2 (50), S\_NAME VARCHAR2(50), LICENSE NUMERIC NOT NULL, CONSTRAINT GAME\_SERVER\_FK FOREIGN KEY (LICENSE) REFERENCES GAME\_COMPANY (LICENSE));



17. CREATE TABLE SERVER\_EMPLOYEE (E\_ID NUMERIC NOT NULL PRIMARY KEY, E\_NAME VARCHAR2 (50), SALARY NUMERIC, AGE NUMERIC, DOB DATE, PHONE VARCHAR2 (50), S\_ID NUMERIC NOT NULL, CONSTRAINT SERVER\_EMPLOYEE\_FK FOREIGN KEY (S\_ID) REFERENCES SERVER (S\_ID));



18. CREATE TABLE EMPLOYEE\_MANAGER (E\_ID NUMERIC NOT NULL PRIMARY KEY, E\_NAME VARCHAR2 (50), SALARY NUMERIC, AGE NUMERIC, PHONE VARCHAR2 (50), M\_ID NUMERIC NOT NULL, CONSTRAINT EMPLOYEE\_MANAGER\_FK FOREIGN KEY (M\_ID) REFERENCES GAME\_MANAGER (M\_ID));



**Value Insertion**

1. GAME

INSERT INTO GAME VALUES (223,'PUBG','2.6 GB',21,1000000,'23-March-2017',002349);

INSERT INTO GAME VALUES (270,'COD','3.5 GB',29,1000000,'29-October-2003',778000);

INSERT INTO GAME VALUES (12,'VALORANT','130 GB',41,10000000,'2-June-2020',100800);

INSERT INTO GAME VALUES (010,'Mobile Legends','320 GB',12,90000000,'9-November-2016',990900);

INSERT INTO GAME VALUES (025,'DOTA 2','36 GB',45,124500000,'8-January-2014',320720);

SELECT \* FROM GAME

A picture containing text

Description automatically generated

1. GAME\_COMPANY

INSERT INTO GAME\_COMPANY VALUES('KRAFTON',002349,10000,12,'Bercelona')

INSERT INTO GAME\_COMPANY VALUES ('ACTIVISION',778000,70560,18,'Santa Monica') ;

INSERT INTO GAME\_COMPANY VALUES ('Riot Games',100800,80000,21,' Los Angeles') ;

INSERT INTO GAME\_COMPANY VALUES ('MOBA',990900,1000250,209,' Shanghai') ;

INSERT INTO GAME\_COMPANY VALUES ('Ubisoft',320720,1046751,4533,' Auckland') ;

SELECT \* FROM GAME\_COMPANY

**A picture containing table

Description automatically generated**

1. GAME\_LAUNCH

INSERT INTO GAME\_LAUNCH VALUES('23-March-2017','3-January-2017');

INSERT INTO GAME\_LAUNCH VALUES('29-October-2003','29-October-2003');

INSERT INTO GAME\_LAUNCH VALUES('2-June-2020','21-December-2019');

INSERT INTO GAME\_LAUNCH VALUES('9-November-2016','14-February-2016');

INSERT INTO GAME\_LAUNCH VALUES('16-October-2016','03-February-2013');

SELECT \* FROM GAME\_LAUNCH

Text

Description automatically generated

1. CLIENT

INSERT INTO CLIENT VALUES (2199,'SAYEM','21-January-2021','DHAKA’, ‘sayem@gmail.com');

INSERT INTO CLIENT VALUES (1908,'RASSEL','12-January-2020','KHULNA’, ‘rassel21@gmail.com');

INSERT INTO CLIENT VALUES (1955,'TAMIM','01-DECEMBER-2019','DHAKA’, ‘tamimahmed@gmail.com');

INSERT INTO CLIENT VALUES (1795,'SEUM','01-DECEMBER-2022','DHAKA’, ‘seum23@gmail.com');

INSERT INTO CLIENT VALUES (3521,'KABIR','07-NOVEMBER-2019','DINAJPUR’, ‘kabir013@gmail.com');

SELECT \* FROM CLIENT

Text

Description automatically generated

1. GAME\_CLIENT

INSERT INTO GAME\_CLIENT VALUES (12,2199);

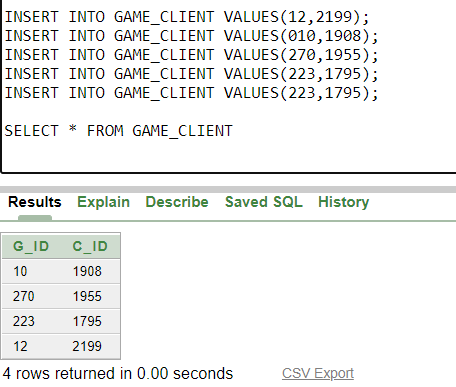
INSERT INTO GAME\_CLIENT VALUES (010,1908);

INSERT INTO GAME\_CLIENT VALUES (270,1955);

INSERT INTO GAME\_CLIENT VALUES (223,1795);

INSERT INTO GAME\_CLIENT VALUES (223,1795);

SELECT \* FROM GAME\_CLIENT



1. SERV\_MANAGE

INSERT INTO SERV\_MANAGE VALUES (12,12099);

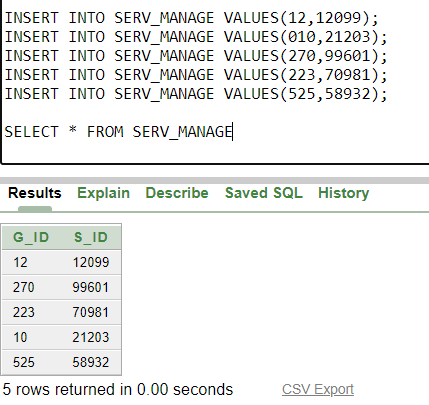
INSERT INTO SERV\_MANAGE VALUES (010,21203);

INSERT INTO SERV\_MANAGE VALUES (270,99601);

INSERT INTO SERV\_MANAGE VALUES (223,70981);

INSERT INTO SERV\_MANAGE VALUES (525,58932);

SELECT \* FROM SERV\_MANAGE



1. SERVER

INSERT INTO SERVER VALUES (12099,'2 GB/S',900000000,'ASIA',990900);

INSERT INTO SERVER VALUES (21203,'21 GB/S',600000000,'MIDDLE EAST',002349);

INSERT INTO SERVER VALUES (99601,'1 GB/S',20000000,'AFRICA',002349);

INSERT INTO SERVER VALUES (70981,'200 GB/S',600007500,'USA',100800);

INSERT INTO SERVER VALUES (58932,'200 GB/S',600007500,'USA',320720);

SELECT \* FROM SERVER

Text

Description automatically generated with medium confidence

1. SKILL

INSERT INTO SKILL VALUES (34506,'GRAPHIC');

INSERT INTO SKILL VALUES(45775,'ALGORITHM');

INSERT INTO SKILL VALUES (87952,'PROBLEM SOLVING');

INSERT INTO SKILL VALUES (98563,'GAME DESIGN');

INSERT INTO SKILL VALUES (32891,'AUDIO & VFX');

SELECT \* FROM SKILL

Text

Description automatically generated with medium confidence

1. DEVELOPER

INSERT INTO DEVELOPER VALUES (00034,'JONES',2100,34506,002349);

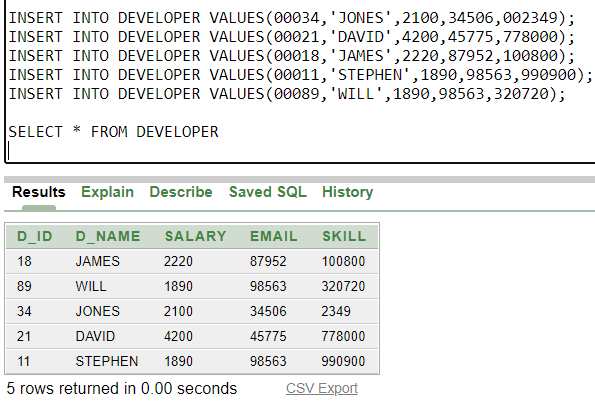
INSERT INTO DEVELOPER VALUES (00021,'DAVID',4200,45775,778000);

INSERT INTO DEVELOPER VALUES (00018,'JAMES',2220,87952,100800);

INSERT INTO DEVELOPER VALUES (00011,'STEPHEN',1890,98563,990900);

INSERT INTO DEVELOPER VALUES(00089,'WILL',1890,98563,320720);

SELECT \* FROM DEVELOPER



1. PLACE

INSERT INTO PLACE VALUES ('BERCELONA', 'SPAIN');

INSERT INTO PLACE VALUES ('SANTA MONICA', 'USA');

INSERT INTO PLACE VALUES ('LOS ANGELES', 'USA');

INSERT INTO PLACE VALUES ('SHANGHAI', 'CHINA');

INSERT INTO PLACE VALUES ('AUCKLAND', 'NEWZEALAND');

INSERT INTO PLACE VALUES ('DHAKA', 'BANGLADESH');

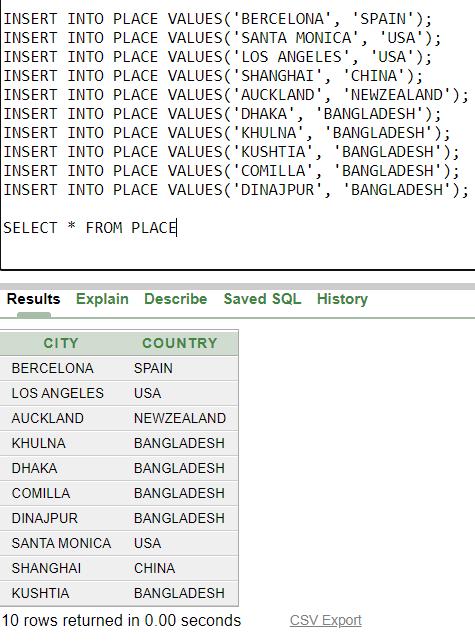
INSERT INTO PLACE VALUES ('KHULNA', 'BANGLADESH');

INSERT INTO PLACE VALUES ('KUSHTIA', 'BANGLADESH');

INSERT INTO PLACE VALUES ('COMILLA', 'BANGLADESH');

INSERT INTO PLACE VALUES ('DINAJPUR', 'BANGLADESH');

SELECT \* FROM PLACE



1. GAME\_DEV

INSERT INTO GAME\_DEV VALUES(223,00034);

INSERT INTO GAME\_DEV VALUES (270,00021);

INSERT INTO GAME\_DEV VALUES (12,00018);

INSERT INTO GAME\_DEV VALUES (010,00011);

INSERT INTO GAME\_DEV VALUES (525,00089);

SELECT \* FROM GAME\_DEV

Text

Description automatically generated with medium confidence

1. GAME\_COMPANY\_MT

INSERT INTO GAME\_COMPANY\_MT VALUES('KRAFTON',002349,1700,'BERCELONA',0501);

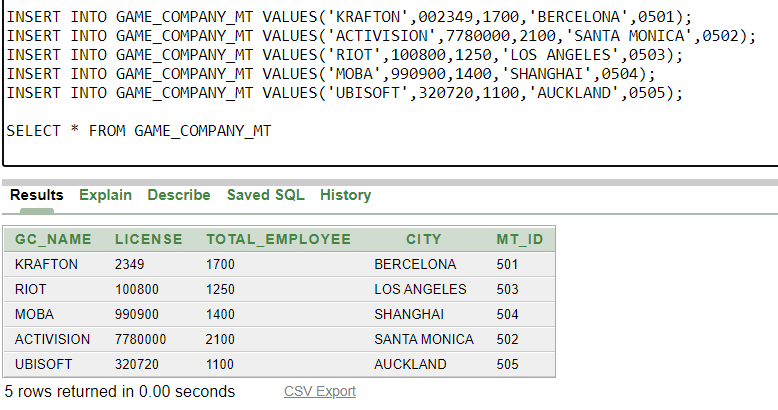
INSERT INTO GAME\_COMPANY\_MT VALUES ('ACTIVISION',7780000,2100,'SANTA MONICA',0502);

INSERT INTO GAME\_COMPANY\_MT VALUES ('RIOT',100800,1250,'LOS ANGELES',0503);

INSERT INTO GAME\_COMPANY\_MT VALUES('MOBA',990900,1400,'SHANGHAI',0504);

INSERT INTO GAME\_COMPANY\_MT VALUES('UBISOFT',320720,1100,'AUCKLAND',0505);

SELECT \* FROM GAME\_COMPANY\_MT



1. MARKETING\_TEAM

INSERT INTO MARKETING\_TEAM VALUES (0501,'RIDERS','FACEBOOK',1111,8.5);

INSERT INTO MARKETING\_TEAM VALUES (0502,'KONG','YOUTUBE',2222,9.5);

INSERT INTO MARKETING\_TEAM VALUES (0503,'FLUID','LINKED\_IN',3333,7.0);

INSERT INTO MARKETING\_TEAM VALUES (0504,'KNIGHT','TWITTER',4444,5.3);

INSERT INTO MARKETING\_TEAM VALUES (0505,'PRINCE','INSTAGRAM',5555,6.5);

SELECT \* FROM MARKETING\_TEAM

A picture containing table

Description automatically generated

1. OFFER

INSERT INTO OFFER VALUES (15,'7 DAYS','15%','CHEAP BUY',0501);

INSERT INTO OFFER VALUES (25,'5 DAYS','25%','EXCLUSIVE SALE',0502);

INSERT INTO OFFER VALUES (35,'15 DAYS','35%','SAVE YOUR PENNY',0503);

INSERT INTO OFFER VALUES (45,'5 DAYS','45%','BIG OFFER',0504);

INSERT INTO OFFER VALUES (55,'3 DAYS','55%','WINTER SALE',0505);

SELECT \* FROM OFFER

Table

Description automatically generated with medium confidence

1. EMPLOYEE

INSERT INTO EMPLOYEE VALUES (0011,'LORD',12000,28,'28-JAN-89',052211883,002349);

INSERT INTO EMPLOYEE VALUES (0022,'SMITH',15000,23,'14-MAR-03',052142546,320720);

INSERT INTO EMPLOYEE VALUES (0033,'BLAKE',9000,43,'31-DEC-76',052324643,100800);

INSERT INTO EMPLOYEE VALUES (0044,'WILLIUM',6700,25,'25-MAY-99',052231364,990900);

SELECT \* FROM EMPLOYEE

A picture containing text

Description automatically generated

1. GAME\_MANAGER

INSERT INTO GAME\_MANAGER VALUES (101,'BLAKE',40,'21-MAR-97',102000,'BLAKE@GMAIL.COM',002349);

INSERT INTO GAME\_MANAGER VALUES (102,'SMITH',43,'23-APR-89',75000,'SMITH@GMAIL.COM',002349);

INSERT INTO GAME\_MANAGER VALUES (103,'RICHARD',46,'12-JUN-95',81000,'RICHARD@GMAIL.COM',002349);

INSERT INTO GAME\_MANAGER VALUES (104,'KANE',41,'27-DEC-92',99000, ‘KANE@GMAIL.COM',002349);

INSERT INTO GAME\_MANAGER VALUES (105,'SHAWN',37,'16-MAY-99',100000,'SHAWN@GMAIL.COM',002349);

SELECT \* FROM GAME\_MANAGER

A picture containing text

Description automatically generated

1. SERVER\_EMPLOYEE

INSERT INTO SERVER\_EMPLOYEE VALUES(0011,'RAFU',25000,35,'21-MAR-99',0171111111,12099);

INSERT INTO SERVER\_EMPLOYEE VALUES(0022,'PIKO',75000,54,'23-JUL-88',0172222222,21203);

INSERT INTO SERVER\_EMPLOYEE VALUES(0033,'SAFEEN',150000,39,'21-MAR-96',017333333,99601);

INSERT INTO SERVER\_EMPLOYEE VALUES(0044,'RAILY',54000,48,'15-APR-97',0174444444,70981);

INSERT INTO SERVER\_EMPLOYEE VALUES(0055,'GOMEZ',88000,61,'22-FEB-81',01755555555,58932);

SELECT \* FROM SERVER\_EMPLOYEE

Text

Description automatically generated

1. SERVER\_EMPLOYEE

INSERT INTO EMPLOYEE\_MANAGER VALUES(0011,'KAFU',66000,52,'17-DEC-89',0800110022,101);

INSERT INTO EMPLOYEE\_MANAGER VALUES(0022,'SAFI',35000,35,'13-NOV-03',0800330055,102);

INSERT INTO EMPLOYEE\_MANAGER VALUES(0033,'SAYEF',61000,45,'31-MAY-95',0800660077,103);

INSERT INTO EMPLOYEE\_MANAGER VALUES(0044,'NOMAN',57000,33,'29-JUN-97',0800880099,104);

INSERT INTO EMPLOYEE\_MANAGER VALUES(0055,'LAFIZ',72000,53,'21-AUG-99',0800210012,105);

SELECT \* FROM EMPLOYEE\_MANAGER

Text

Description automatically generated

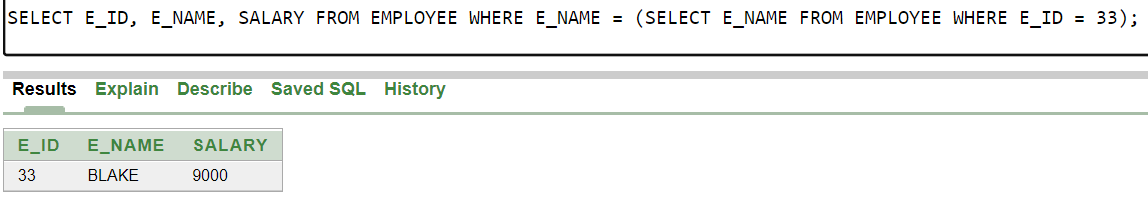
**QUERY**

1. **SINGLE ROW SUBQUERY**

**QUESTION: Write a query to display e\_id, e\_name, phone from EMPLOYEE whose e\_id is 33.**

SELECT E\_ID, E\_NAME, SALARY FROM EMPLOYEE WHERE E\_NAME = (SELECT E\_NAME FROM EMPLOYEE

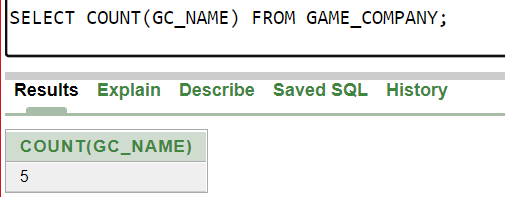
WHERE E\_ID = 33);



1. **AGGREGATE FUNCTON**

**QUESTION: Write a query to display how many rows are there in game company table?**

SELECT COUNT(GC\_NAME) FROM GAME\_COMPANY;



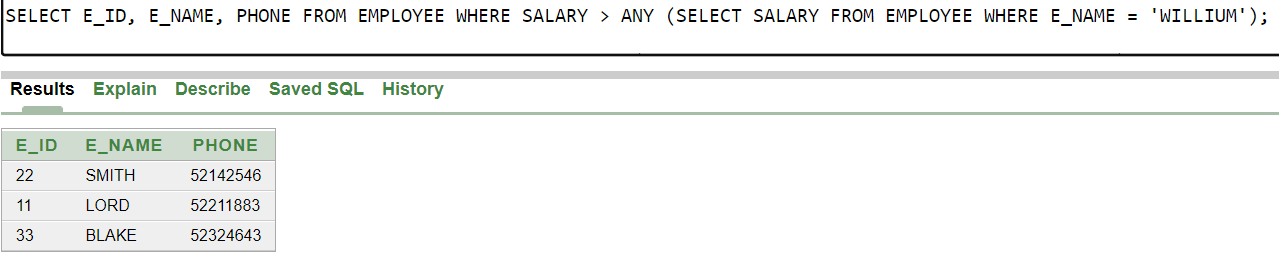
1. **MULTIPLE ROW SUBQUERY**

**QUESTION: Write a query to display e\_id, e\_name, phone from EMPLOYEE whose salary is greater**

**than that of WILLIUM.**

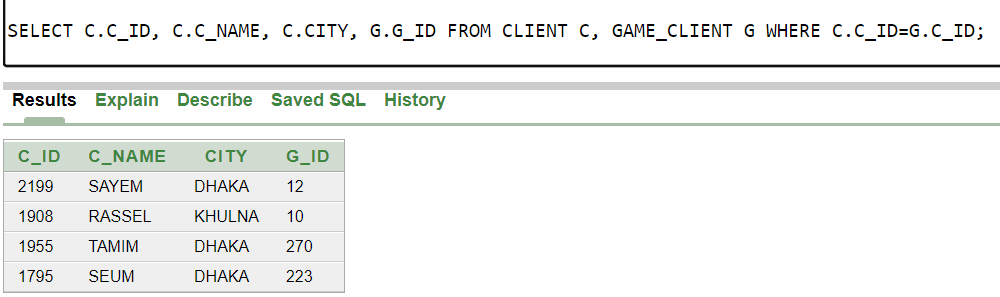
SELECT E\_ID, E\_NAME, PHONE FROM EMPLOYEE WHERE SALARY > ANY (SELECT SALARY FROM

EMPLOYEE WHERE E\_NAME = 'WILLIUM');



1. **EQUIJOIN FOR CLIENT & GAME\_CLIENT TABLE**

**QUESTION: Create a join in CLIENT table and GAME\_CLIENT table.**

SELECT C.C\_ID, C.C\_NAME, C.CITY, G.G\_ID FROM CLIENT C, GAME\_CLIENT G WHERE C.C\_ID=G.C\_ID;

1. **OUTERJOIN FOR GAME\_COMPANY & EMPLOYEE**

**QUESTION:** **Write a query that will join the columns of GAME\_COMPANY and EMPLOYEE. No rows of the stay table will be missed.**

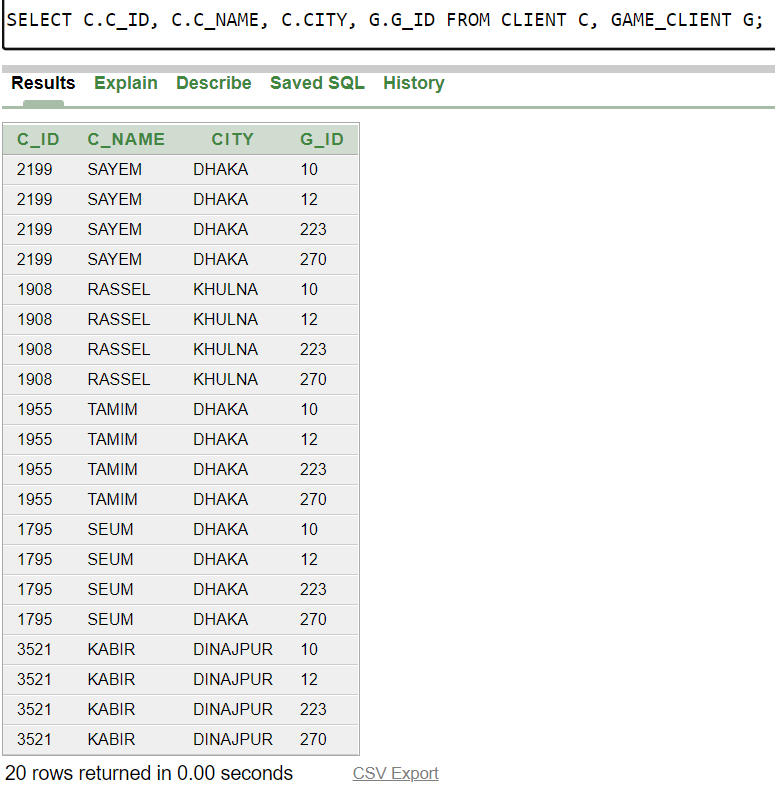
SELECT E.E\_NAME, E.SALARY, E.PHONE, G.GC\_NAME, G.CITY FROM EMPLOYEE E, GAME\_COMPANY G WHERE E.LICENSE(+)=G.LICENSE;



1. **CARTETIAN COMPLEXITY**

**QUESTION: Show Cartesian complexity between client & game client.**

SELECT C.C\_ID, C.C\_NAME, C.CITY, G.G\_ID FROM CLIENT C, GAME\_CLIENT G;

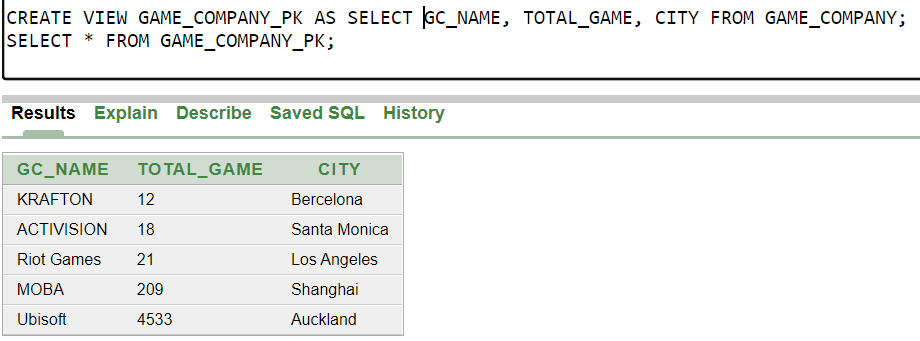


**VIEW**

**QUESTION: Create a view of table game company.**

CREATE VIEW GAME\_COMPANY\_PK AS SELECT GC\_NAME, TOTAL\_GAME, CITY FROM GAME\_COMPANY;

SELECT \* FROM GAME\_COMPANY\_PK;



**SEQUENCE**

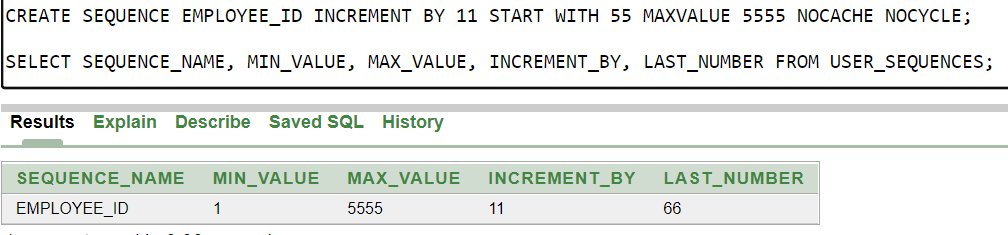
**QUESTION: Create and display a sequence start with 55, increase by 11.**

CREATE SEQUENCE EMPLOYEE\_ID INCREMENT BY 11 START WITH 55 MAXVALUE 5555 NOCACHE

NOCYCLE;

SELECT SEQUENCE\_NAME, MIN\_VALUE, MAX\_VALUE, INCREMENT\_BY, LAST\_NUMBER FROM

USER\_SEQUENCES;



**Conclusion**

The term game company describes an establishment that develops and sells games. Employees of the company are managed by a manager. Marketing teams for the company make various offers to attract new clients and the company also owns a server to store their operational data in. To maintain all these games company-related work easily we have made this game company management system. This game company management system tries to cover all the aspects of running a company, but we can improve it for much more extensive models easily.

Entity: Game, Employee, Developers, Manager, Publisher, Server, Client, Offer, Game Company

Attributes

1. Game -> G\_id (pk), Gname, Size, Copyright, Pric, Total\_Sell, [Release Date]
2. Employee -> E\_id(pk), Ename, Age, Date of Birth, Address (city, country), Phone, Salary, Skill
3. Developers -> D\_id, Dname, Skill, Email, Salary (weak entity -> Yearly salary)
4. Manager -> M\_id, Mname, Salary, {address, phone}
5. Marketing\_Team ->MT\_id, Rating, Medium, MTname, License, Total\_Member
6. Server -> S\_id, Capacity, Speed, Sname
7. Client -> C\_id, Cname, Address, Purchase\_History, Email
8. Game\_Company -> GC\_Name, License(PK), Address (City, Country), Total\_Game, Total\_Employee, Email
9. Offer -> Duration, O\_Name, Discount, O\_id

Relations

1. GC release Game
2. EMP works\_on GC
3. GC hire DEvelopers
4. Dev develop games
5. Employee maintain Server
6. Client Purchase Games
7. GC owns Server
8. Manager Manage Emp
9. GC Appoints Manager
10. GC has Marketing\_team
11. Marketing\_team offered Offers