

The University of Texas at Arlington

DATABASE SYSTEM

(CSE 5330)

PROJECT 2

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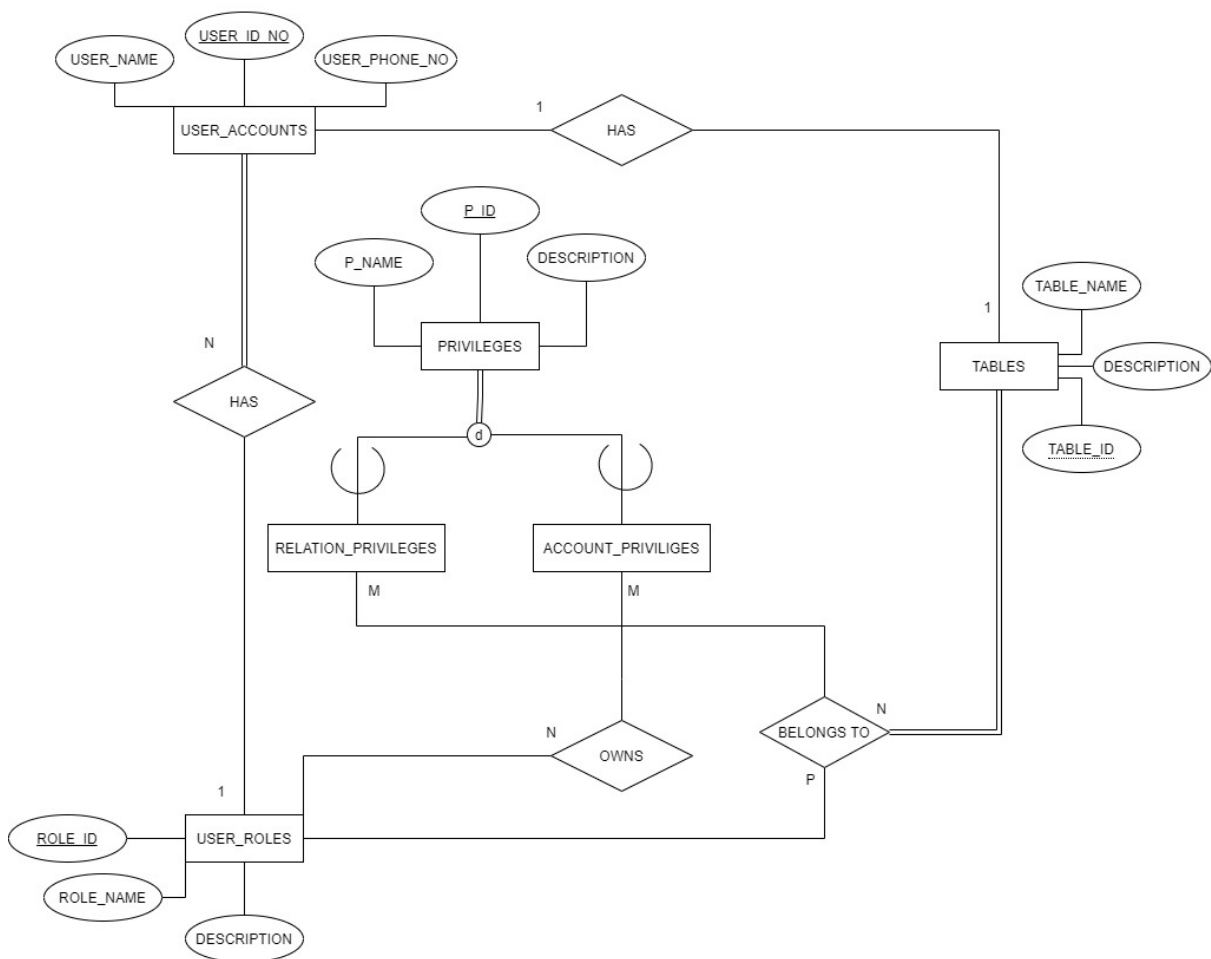
UTA ID :- 1001990785

PART 1

Total No of Entities

- 1)USER_ACCOUNTS
- 2)PRIVILEGES
- 3)TABLES
- 4)USER_ROLES
- 5)ACCOUNT_PRIVILEGES
- 6)RELATION_PRIVILEGES

PART 1 - EER DIAGRAM



In above EER diagram:

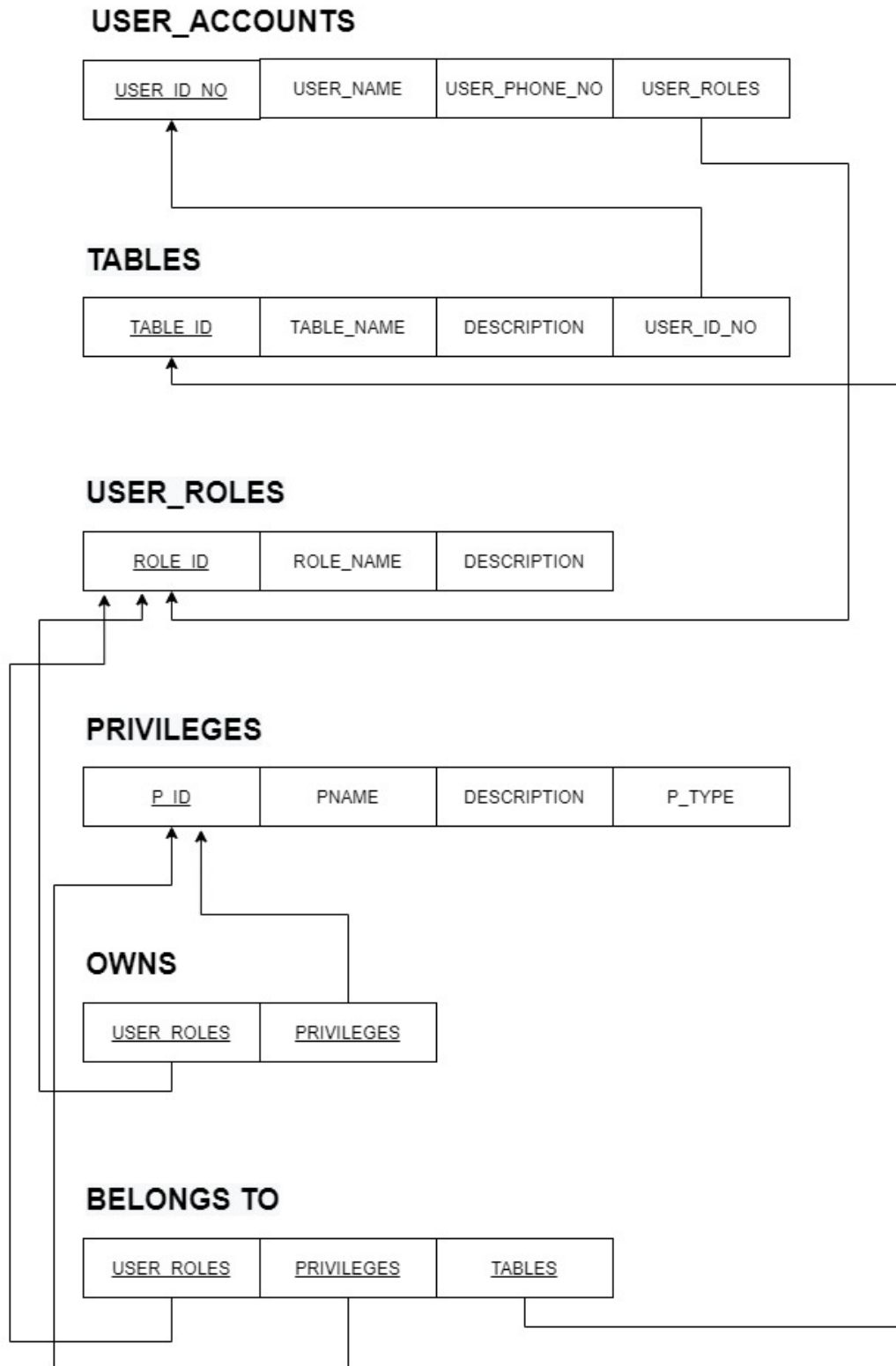
- Total participation of privileges and its attributes are defined with the disjoint of ACCOUNT_PRIVILEGES and RELATION_PRIVILEGES.
- Total participation relationship is shown between USER_ROLES and USER_ACCOUNTS and TABLES and USER_ROLES.
- Primary key represented by underline.
- All the given relationships are fulfilled as per the given requirements.

RELATIONSHIPS IN DIAGRAMS:

- Ternary relationship between USER_ROLES, RELATION_PRIVILEGES, and TABLES.
- Binary relationship between USER_ACCOUNTS and USER_ROLES.
- Binary relationship between USER_ACCOUNTS and TABLES.
- Binary relationship between USER_ROLES, ACCOUNT_PRIVILEGES.
- Binary relationship between USER_ACCOUNTS and PRIVILEGES.

PART 2

PART 2 - EER TO RELATIONAL DATABASE SCHEMA



CREATE STATEMENTS

```
CREATE TABLE USER_ACCOUNTS
(USER_ID_NO CHAR(10) NOT NULL PRIMARY KEY,
USER_NAME VARCHAR(15),
USER_PHONE_NO VARCHAR(20),
USER_ROLES VARCHAR(15)
);
```

```
CREATE TABLE TABLES
(TABLE_ID VARCHAR(10) NOT NULL,
TABLE_NAME VARCHAR(15),
DESCRIPTION VARCHAR(15),
USER_ID_NO VARCHAR(10),
PRIMARY KEY(TABLE_ID),
FOREIGN KEY(USER_ID_NO) REFERENCES USER_ACCOUNTS(USER_ID_NO)
);
```

```
CREATE TABLE USER_ROLES
(ROLE_ID VARCHAR(10) NOT NULL,
ROLE_NAME VARCHAR(15),
DESCRIPTION VARCHAR(15),
PRIMARY KEY(ROLE_ID)
);
```

```
CREATE TABLE PRIVILEGES
(P_ID INT NOT NULL,
PNAME VARCHAR(20),
DESCRIPTION VARCHAR(15),
P_TYPE VARCHAR(20),
PRIMARY KEY(P_ID)
);
```

```
CREATE TABLE OWNS
(USER_ROLES VARCHAR(15),
PRIVILEGES VARCHAR(15),
PRIMARY KEY(USER_ROLES,PRIVILEGES),
FOREIGN KEY(USER_ROLES) REFERENCES PRIVILEGES(P_ID)
);
```

```
CREATE TABLE BELONGSTO
(USER_ROLES VARCHAR(15),
PRIVILEGES VARCHAR(15),
TABLES VARCHAR(15),
PRIMARY KEY(USER_ROLES,PRIVILEGES,TABLES),
FOREIGN KEY(USER_ROLES) REFERENCES USER_ROLES(ROLE_ID),
FOREIGN KEY(TABLES) REFERENCES TABLES(TABLE_ID),
FOREIGN KEY(PRIVILEGES) REFERENCES PRIVILEGES(P_ID)
);
```

