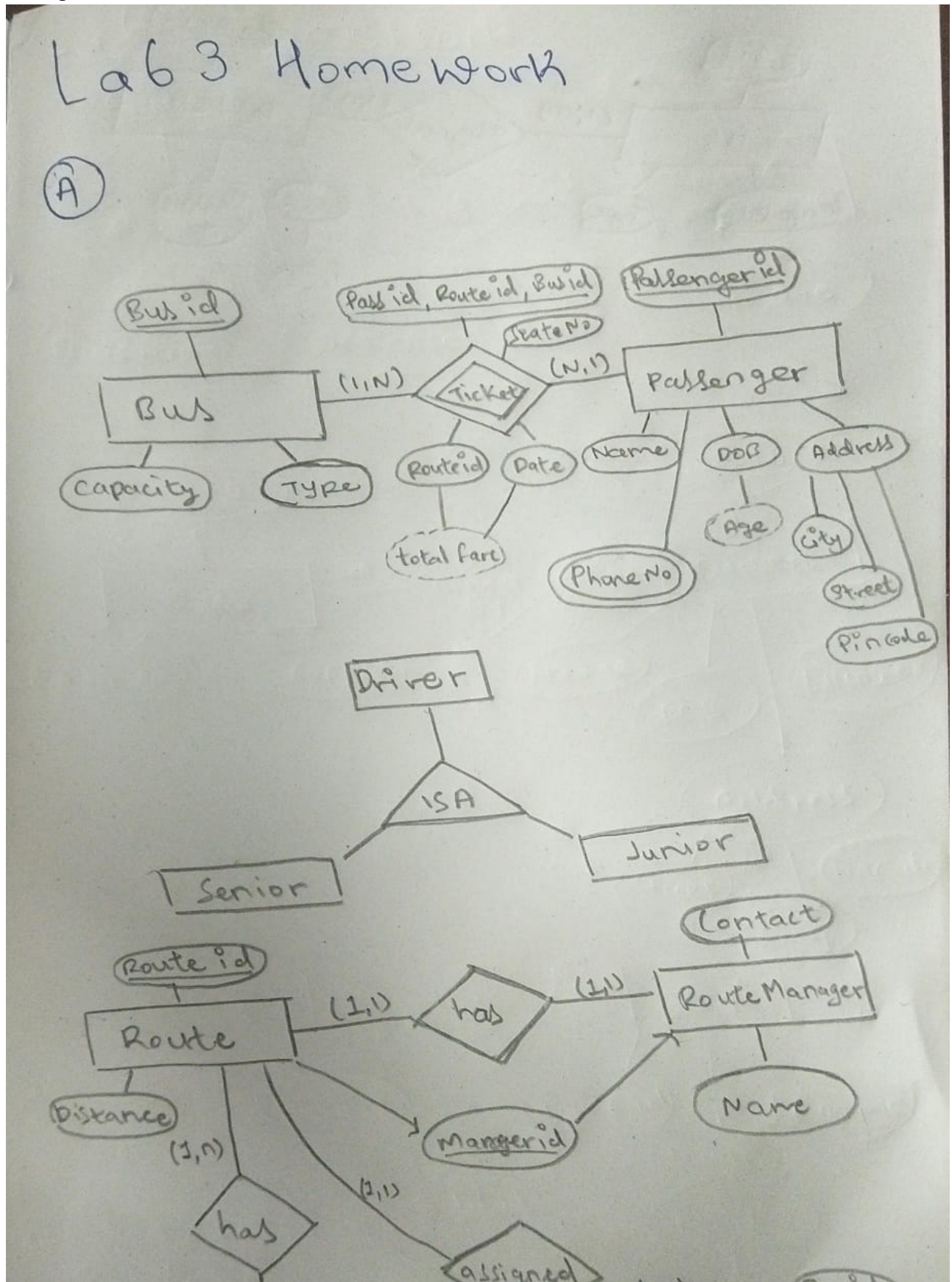
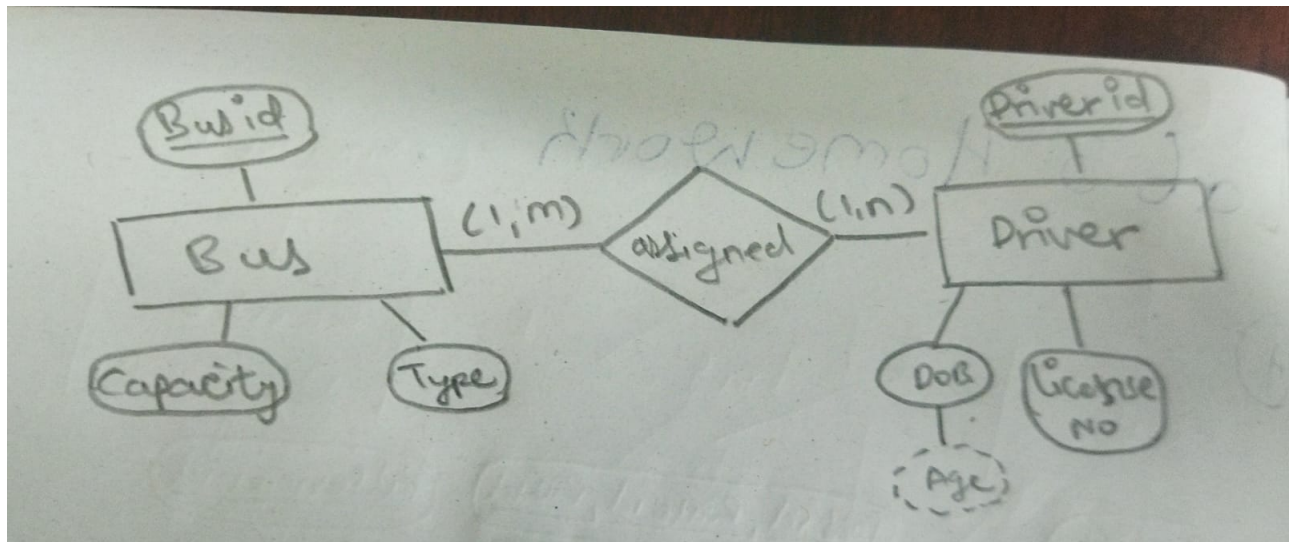
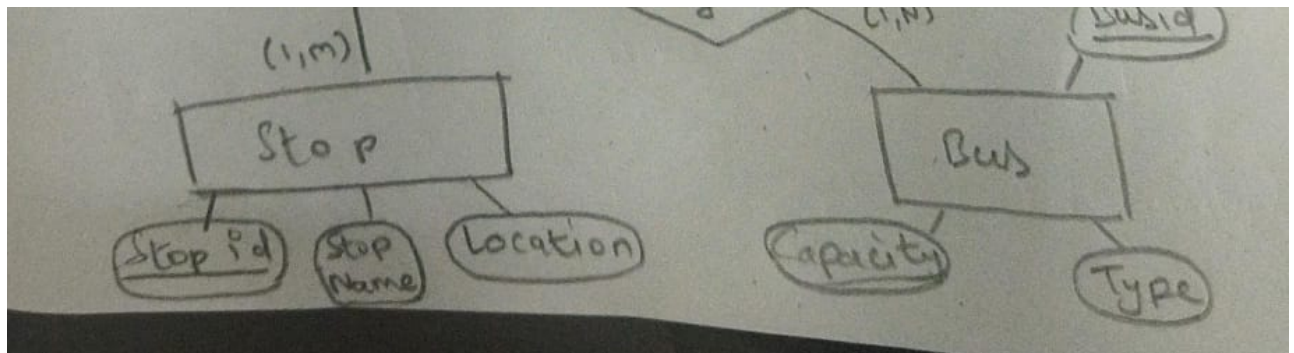


Smart City Transportation Management System

Siddharth Karmokar, 123cs0061

1. er diagram





```

CREATE TABLE ROUTE_MANAGER (
  Manager_ID    NUMBER PRIMARY KEY,
  Name          VARCHAR2(100),
  Contact       VARCHAR2(50)
);

SELECT * FROM ROUTE_MANAGER;

CREATE TABLE ROUTE (
  Route_ID      NUMBER PRIMARY KEY,
  Route_Name    VARCHAR2(100),
  Distance      NUMBER,
  Manager_ID    NUMBER UNIQUE,    -- 1:1
  FOREIGN KEY (Manager_ID) REFERENCES ROUTE_MANAGER (Manager_ID)
);

SELECT * FROM ROUTE;

```

Script Output x Query Result x

SQL | All Rows Fetched: 0 in 0.029 seconds

MANAGER_ID	NAME	CONTACT
------------	------	---------

2. relational schema

```

CREATE TABLE ROUTE (
  Route_ID      NUMBER PRIMARY KEY,
  Route_Name    VARCHAR2(100),
  Distance      NUMBER,
  Manager_ID    NUMBER UNIQUE,    -- 1:1
  FOREIGN KEY (Manager_ID) REFERENCES ROUTE_MANAGER (Manager_ID)
);

SELECT * FROM ROUTE;

```

Script Output x Query Result x Query Result 1 x

SQL | All Rows Fetched: 0 in 0.006 seconds

ROUTE_ID	ROUTE_NAME	DISTANCE	MANAGER_ID
----------	------------	----------	------------

```

CREATE TABLE STOPP (
  Stop_ID       NUMBER PRIMARY KEY,
  Stop_Name     VARCHAR2(100),
  Location      VARCHAR2(100)
);

SELECT * FROM STOPP;

CREATE TABLE ROUTE_STOP (
  Route_ID      NUMBER,
  Stop_ID       NUMBER,
  Stop_Name     VARCHAR2(100),
  Location      VARCHAR2(100)
);

SELECT * FROM ROUTE_STOP;

```

Script Output x Query Result x Query Result 1 x Query Result 2 x

SQL | All Rows Fetched: 0 in 0.006 seconds

STOP_ID	STOP_NAME	LOCATION
---------	-----------	----------

```

CREATE TABLE ROUTE_STOP (
  Route_ID      NUMBER,
  Stop_ID       NUMBER,
  Sequence_No   NUMBER,
  PRIMARY KEY (Route_ID, Stop_ID),
  FOREIGN KEY (Route_ID) REFERENCES ROUTE (Route_ID),
  FOREIGN KEY (Stop_ID) REFERENCES STOPP (Stop_ID)
);
SELECT * FROM ROUTE_STOP;

```

CREATE TABLE BUS (

Script Output x | Query Result x | Query Result 1 x | Query

SQL | All Rows Fetched: 0 in 0.005 seconds

ROUTE_ID	STOP_ID	SEQUENC...
----------	---------	------------

```

CREATE TABLE BUS (
  Bus_ID        NUMBER PRIMARY KEY,
  Bus_Number     VARCHAR2(20) UNIQUE,
  Capacity       NUMBER,
  Type           VARCHAR2(50),
  Route_ID       NUMBER,
  FOREIGN KEY (Route_ID) REFERENCES ROUTE (Route_ID)
);
SELECT * FROM BUS;

```

```

CREATE TABLE DRIVER (
  Driver_ID     NUMBER PRIMARY KEY,
  Name          VARCHAR2(100),

```

Script Output x | Query Result x | Query Result 1 x | Query Result 2 x |

SQL | All Rows Fetched: 0 in 0.006 seconds

BUS_ID	BUS_NUM...	CAPACITY	TYPE	ROUTE_ID
--------	------------	----------	------	----------

```

CREATE TABLE DRIVER (
  Driver_ID     NUMBER PRIMARY KEY,
  Name          VARCHAR2(100),
  DOB           DATE,
  License_No    VARCHAR2(50) UNIQUE,
  Experience    NUMBER
);
SELECT * FROM DRIVER;

```

```

CREATE TABLE SENIOR_DRIVER (
  Driver_ID     NUMBER PRIMARY KEY,
  Specialization_Area VARCHAR2(100),

```

Script Output x | Query Result x | Query Result 1 x | Query Result 2 x |

SQL | All Rows Fetched: 0 in 0.012 seconds

DRIVER_ID	NAME	DOB	LICENSE_...	EXPERIENCE
-----------	------	-----	-------------	------------

```

CREATE TABLE JUNIOR_DRIVER (
    Driver_ID      NUMBER PRIMARY KEY,
    Training_Status VARCHAR2(50),
    FOREIGN KEY (Driver_ID) REFERENCES DRIVER(Driver_ID)
);
SELECT * FROM JUNIOR_DRIVER;

```

Script Output x | Query Result x | Query Result 1 x | Query Result 2 x

SQL | All Rows Fetched: 0 in 0.004 seconds

DRIVER_ID TRAINING...

```

CREATE TABLE SENIOR_DRIVER (
    Driver_ID      NUMBER PRIMARY KEY,
    Specialization_Area VARCHAR2(100),
    Seniority_Level NUMBER,
    FOREIGN KEY (Driver_ID) REFERENCES DRIVER(Driver_ID)
);
SELECT * FROM SENIOR_DRIVER;

```

```

CREATE TABLE JUNIOR_DRIVER (
    Driver_ID      NUMBER PRIMARY KEY,
    Training_Status VARCHAR2(50),

```

Script Output x | Query Result x | Query Result 1 x | Query Result 2 x

SQL | All Rows Fetched: 0 in 0.006 seconds

DRIVER_ID SPECIALI... SENIORIT...

```

CREATE TABLE BUS_DRIVER (
    Bus_ID      NUMBER,
    Driver_ID    NUMBER,
    Assignment_Type VARCHAR2(20),
    PRIMARY KEY (Bus_ID, Driver_ID),
    FOREIGN KEY (Bus_ID) REFERENCES BUS(Bus_ID),
    FOREIGN KEY (Driver_ID) REFERENCES DRIVER(Driver_ID)
);
SELECT * FROM BUS_DRIVER;

```

```

CREATE TABLE PASSENGER (

```

Script Output x | Query Result x | Query Result 1 x | Query Result 2 x

SQL | All Rows Fetched: 0 in 0.006 seconds

BUS_ID DRIVER_ID ASSIGNM...


```

CREATE TABLE PASSENGER (
    Passenger_ID NUMBER PRIMARY KEY,
    Name VARCHAR2(100),
    DOB DATE,
    Email VARCHAR2(100),
    Street VARCHAR2(100),
    City VARCHAR2(100),
    Pincode VARCHAR2(10)
);
SELECT * FROM PASSENGER;

```

Script Output x | Query Result x | Query Result 1 x | Query Result 2 x | Query Result 3 x | Query Result 4 x

SQL | All Rows Fetched: 0 in 0.01 seconds

PASSENG...	NAME	DOB	EMAIL	STREET	CITY	PINCODE
------------	------	-----	-------	--------	------	---------

```

CREATE TABLE PASSENGER_PHONE (
    Passenger_ID NUMBER,
    Phone_Number VARCHAR2(20),
    PRIMARY KEY (Passenger_ID, Phone_Number),
    FOREIGN KEY (Passenger_ID) REFERENCES PASSENGER(Passenger_ID)
);
SELECT * FROM PASSENGER_PHONE;

```

Script Output x | Query Result x | Query Result 1 x | Query Result 2 x | Query Result 3 x | Query Result 4 x

SQL | All Rows Fetched: 0 in 0.006 seconds

PASSENG...	PHONE_N...
------------	------------

```

CREATE TABLE TICKET (
    Ticket_ID NUMBER,
    Passenger_ID NUMBER,
    Bus_ID NUMBER,
    Travel_Date DATE,
    Seat_Number VARCHAR2(10),
    Fare NUMBER,
    PRIMARY KEY (Passenger_ID, Bus_ID, Ticket_ID),
    FOREIGN KEY (Passenger_ID) REFERENCES PASSENGER(Passenger_ID),
    FOREIGN KEY (Bus_ID) REFERENCES BUS(Bus_ID)
);
SELECT * FROM TICKET;

```

Script Output x | Query Result x | Query Result 1 x | Query Result 2 x | Query Result 3 x | Query Result 4 x

SQL | All Rows Fetched: 0 in 0.008 seconds

TICKET_ID	PASSENG...	BUS_ID	TRAVEL_...	SEAT_NU...	FARE
-----------	------------	--------	------------	------------	------