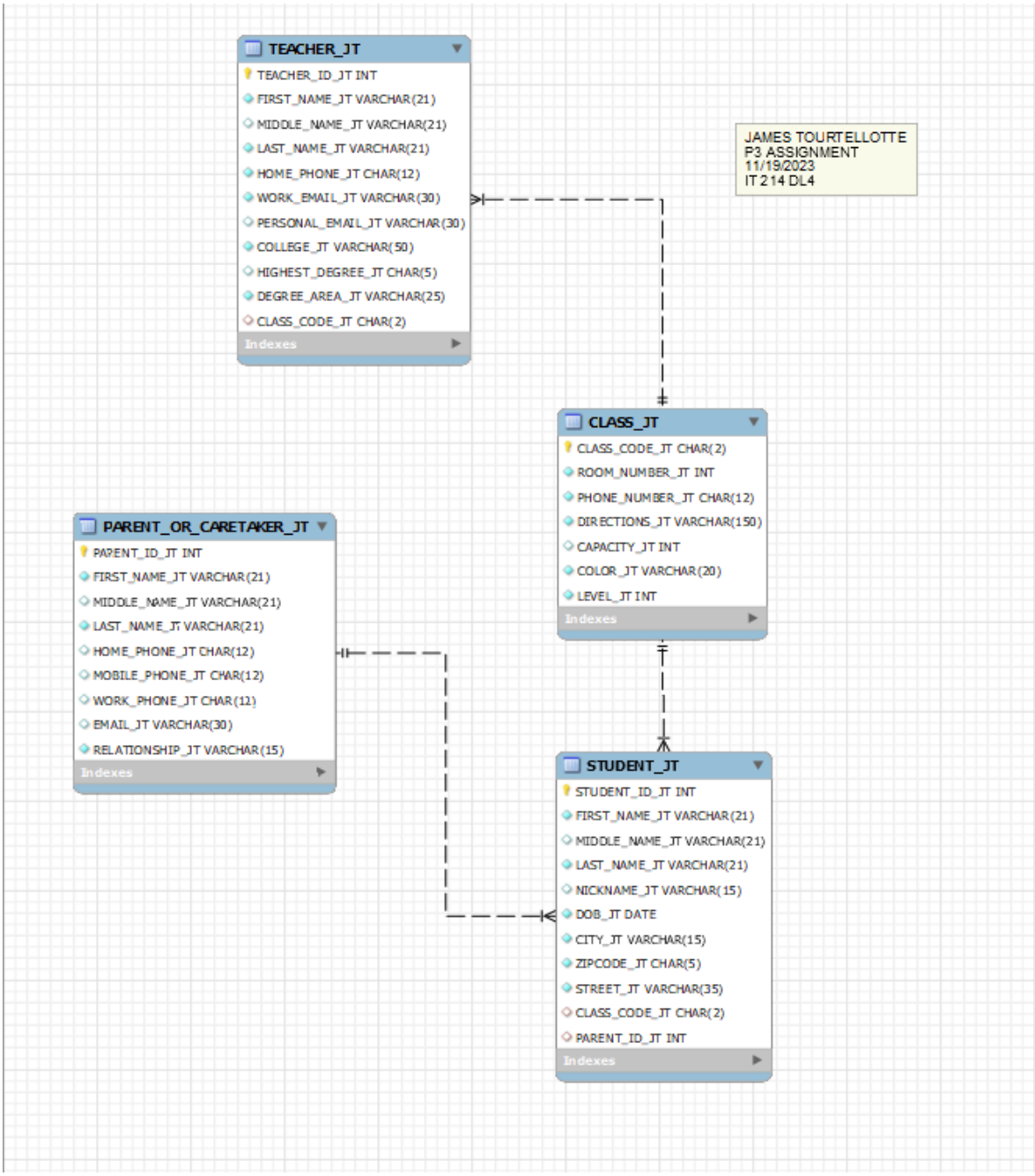
James Everett Tourtellotte IV
IT 214-DL4
11/19/2023
P3 Project Assignment

FULL ERD - TASK 1

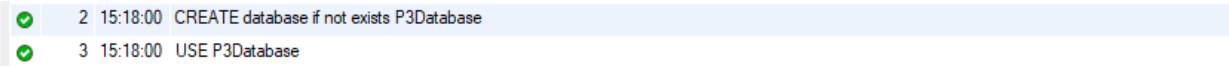


Task 2 - Create Database

Input:

```
1    -- task 2 create database by James Tourtellotte
2
3
4    CREATE database if not exists P3Database;
5
6
7    USE P3Database;
8
```

Output:



Task 3 - Create Tables

Input 1:

```sql
-- task 3 create tables by James Tourtellotte

CREATE TABLE CLASS (
    CLASS_CODE_JT CHAR(2) PRIMARY KEY,
    ROOM_NUMBER_JT INT NOT NULL,
    PHONE_NUMBER_JT CHAR(12) NOT NULL,
    DIRECTIONS_JT VARCHAR(150) NOT NULL,
    CAPACITY_JT INT CHECK (CAPACITY_JT BETWEEN 25 AND 30),
    COLOR_JT VARCHAR(20) NOT NULL,
    LEVEL_JT INT NOT NULL
);

CREATE TABLE PARENT_OR_CARETAKER (
    PARENT_ID_JT INT AUTO_INCREMENT PRIMARY KEY,
    FIRST_NAME_JT VARCHAR(21) NOT NULL,
    MIDDLE_NAME_JT VARCHAR(21),
    LAST_NAME_JT VARCHAR(21) NOT NULL,
    HOME_PHONE_JT CHAR(12),
    MOBILE_PHONE_JT CHAR(12),
    WORK_PHONE_JT CHAR(12),
    EMAIL_JT VARCHAR(30),
    RELATIONSHIP_JT VARCHAR(15) NOT NULL
);
```

Input 2:

```sql
CREATE TABLE STUDENT (
    STUDENT_ID_JT INT AUTO_INCREMENT PRIMARY KEY,
    FIRST_NAME_JT VARCHAR(21) NOT NULL,
    MIDDLE_NAME_JT VARCHAR(21),
    LAST_NAME_JT VARCHAR(21) NOT NULL,
    NICKNAME_JT VARCHAR(15),
    DOB_JT DATE NOT NULL,
    CITY_JT VARCHAR(15) NOT NULL,
    ZIPCODE_JT CHAR(5) NOT NULL,
    STREET_JT VARCHAR(35) NOT NULL,
    CLASS_CODE_JT CHAR(2),
    PARENT_ID_JT INT,
    FOREIGN KEY (PARENT_ID_JT) REFERENCES PARENT_OR_CARETAKER(PARENT_ID_JT),
    FOREIGN KEY (CLASS_CODE_JT) REFERENCES CLASS(CLASS_CODE_JT)
);
```

Input 3:

```
51  CREATE TABLE TEACHER (
52      TEACHER_ID_JT INT AUTO_INCREMENT PRIMARY KEY,
53      FIRST_NAME_JT VARCHAR(21) NOT NULL,
54      MIDDLE_NAME_JT VARCHAR(21),
55      LAST_NAME_JT VARCHAR(21) NOT NULL,
56      HOME_PHONE_JT CHAR(12) NOT NULL,
57      WORK_EMAIL_JT VARCHAR(30) NOT NULL,
58      PERSONAL_EMAIL_JT VARCHAR(30),
59      COLLEGE_JT VARCHAR(50) NOT NULL,
60      HIGHEST_DEGREE_JT CHAR(5) CHECK (HIGHEST_DEGREE_JT IN ('BS', 'MS', 'MA')),
61      DEGREE_AREA_JT VARCHAR(25) NOT NULL,
62      CLASS_CODE_JT CHAR(2),
63      FOREIGN KEY (CLASS_CODE_JT) REFERENCES CLASS(CLASS_CODE_JT)
64  );
```

Output:

✓	4	15:18:00	CREATE TABLE CLASS (CLASS_CODE_JT CHAR(2) PRIMARY KEY, ROOM_NUMBER_JT INT NOT NULL, PHONE_NUMBER_JT CHA...	0 row(s) affected
✓	5	15:18:00	CREATE TABLE PARENT_OR_CARETAKER (PARENT_ID_JT INT AUTO_INCREMENT PRIMARY KEY, FIRST_NAME_JT VARCHAR(21) ...	0 row(s) affected
✓	6	15:18:00	CREATE TABLE STUDENT (STUDENT_ID_JT INT AUTO_INCREMENT PRIMARY KEY, FIRST_NAME_JT VARCHAR(21) NOT NULL, M...	0 row(s) affected
✓	7	15:18:00	CREATE TABLE TEACHER (TEACHER_ID_JT INT AUTO_INCREMENT PRIMARY KEY, FIRST_NAME_JT VARCHAR(21) NOT NULL, MI...	0 row(s) affected

Task 4 – Add Data

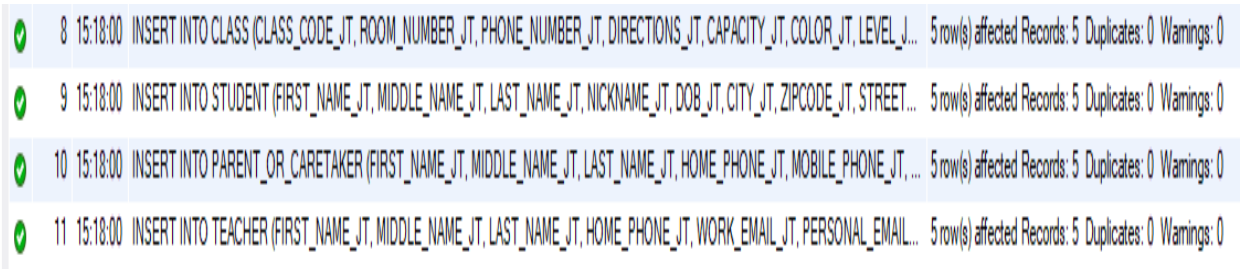
Input 1:

```
-- task 4 by James Tourtellotte insert data

INSERT INTO CLASS (CLASS_CODE_JT, ROOM_NUMBER_JT, PHONE_NUMBER_JT, DIRECTIONS_JT, CAPACITY_JT, COLOR_JT, LEVEL_JT) VALUES
('A1', 101, '123-456-7890', 'First floor, near the library', 30, 'Red', 1),
('B2', 102, '123-456-7891', 'Second floor, beside the science lab', 28, 'Blue', 2),
('C3', 103, '123-456-7892', 'Third floor, adjacent to the computer lab', 25, 'Green', 3),
('D4', 104, '123-456-7893', 'First floor, next to the auditorium', 27, 'Yellow', 4),
('E5', 105, '123-456-7894', 'Second floor, opposite the gym', 29, 'Purple', 5);

INSERT INTO STUDENT (FIRST_NAME_JT, MIDDLE_NAME_JT, LAST_NAME_JT, NICKNAME_JT, DOB_JT, CITY_JT, ZIPCODE_JT, STREET_JT, CLASS_CODE_JT) VALUES
('John', 'Edward', 'Doe', 'Johnny', '2005-06-15', 'Springfield', '12345', '123 Elm Street', 'A1'),
('Emily', 'Anne', 'Smith', null, '2006-04-22', 'Rivertown', '54321', '456 Oak Road', 'B2'),
('Liam', 'James', 'Brown', 'Lee', '2005-12-30', 'Greenfield', '13579', '789 Pine Lane', 'C3'),
('Sophia', 'Marie', 'Johnson', 'Sophie', '2006-02-11', 'Hilltop', '97531', '321 Birch Blvd', 'D4'),
('Oliver', 'George', 'Williams', null, '2005-08-19', 'Laketown', '24680', '654 Maple Avenue', 'E5');
```

Input 2:

```
INSERT INTO PARENT_OR_CARETAKER (FIRST_NAME_JT, MIDDLE_NAME_JT, LAST_NAME_JT, HOME_PHONE_JT, MOBILE_PHONE_JT, WORK_PHONE_JT, EMAIL_JT, RELATIONSHIP_JT) VALUES
('Sarah', 'Jane', 'Taylor', '321-654-0987', '321-654-0988', '321-654-0986', 'sarah.taylor@email.com', 'Mother'),
('Michael', 'Ray', 'Jones', null, '432-765-0192', '432-765-0191', 'michael.jones@email.com', 'Father'),
('Laura', 'Beth', 'Davis', '213-546-7890', '213-546-7891', null, 'laura.davis@email.com', 'Guardian'),
('David', 'Lee', 'Wilson', '324-678-9012', null, '324-678-9013', 'david.wilson@email.com', 'Father'),
('Emma', 'Grace', 'Moore', '435-789-0123', '435-789-0124', '435-789-0122', 'emma.moore@email.com', 'Mother');


INSERT INTO TEACHER (FIRST_NAME_JT, MIDDLE_NAME_JT, LAST_NAME_JT, HOME_PHONE_JT, WORK_EMAIL_JT, PERSONAL_EMAIL_JT, COLLEGE_JT, HIGHEST_DEGREE_JT, DEGREE_AREA_JT, CLASS_CODE_JT) VALUES
('Alice', 'Marie', 'Robinson', '123-987-6543', 'alice.robinson@school.com', 'alice.robinson@email.com', 'State University', 'MS', 'Biology', 'A1'),
('Brian', 'Scott', 'Clark', '234-876-5432', 'brian.clark@school.com', null, 'Tech College', 'MA', 'Mathematics', 'B2'),
('Julia', 'Rose', 'Lewis', '345-765-4321', 'julia.lewis@school.com', 'julia.lewis@email.com', 'Liberal Arts College', 'BS', 'English', 'C3'),
('Mark', 'Andrew', 'Walker', '456-654-3210', 'mark.walker@school.com', null, 'National University', 'MS', 'Physics', 'D4'),
('Nora', 'Elaine', 'Harris', '567-543-2109', 'nora.harris@school.com', 'nora.harris@email.com', 'City College', 'MA', 'History', 'E5');
```

Output:



Task 5: Query the data

Input 1:

```
101 •   SELECT
102         CONCAT(s.FIRST_NAME_JT, ' ', s.LAST_NAME_JT) AS 'Student',
103         c.LEVEL_JT AS 'Level',
104         c.COLOR_JT AS 'Color',
105         c.PHONE_NUMBER_JT AS 'Class Phone',
106         CONCAT(t.FIRST_NAME_JT, ' ', t.LAST_NAME_JT) AS 'Teacher'
107     FROM STUDENT s
108     JOIN CLASS c ON s.CLASS_CODE_JT = c.CLASS_CODE_JT
109     JOIN TEACHER t ON c.CLASS_CODE_JT = t.CLASS_CODE_JT
110     ORDER BY s.FIRST_NAME_JT, s.LAST_NAME_JT;
111
112
113 •   SELECT
114         c.COLOR_JT AS 'Color',
115         c.LEVEL_JT AS 'Level',
116         CONCAT(s.FIRST_NAME_JT, ' ', s.LAST_NAME_JT) AS 'Student Name',
117         s.DOB_JT AS 'DOB'
118     FROM STUDENT s
119     JOIN CLASS c ON s.CLASS_CODE_JT = c.CLASS_CODE_JT
120     ORDER BY c.LEVEL_JT, c.COLOR_JT, s.FIRST_NAME_JT, s.LAST_NAME_JT;
121
122
123 •   SELECT
124         CONCAT(p.FIRST_NAME_JT, ' ', p.LAST_NAME_JT) AS 'Parent Name',
125         p.HOME_PHONE_JT AS 'Home Phone',
126         CONCAT(s.FIRST_NAME_JT, ' ', s.LAST_NAME_JT) AS 'Student Name',
127         c.LEVEL_JT AS 'Level',
128         c.COLOR_JT AS 'Color'
129     FROM PARENT_OR_CARETAKER p
130     JOIN STUDENT s ON p.PARENT_ID_JT = s.PARENT_ID_JT
131     JOIN CLASS c ON s.CLASS_CODE_JT = c.CLASS_CODE_JT
132     ORDER BY p.FIRST_NAME_JT, p.LAST_NAME_JT, s.FIRST_NAME_JT, s.LAST_NAME_JT;
133
```

Input 2:

```
135 •  SELECT
136        CONCAT(t.FIRST_NAME_JT, ' ', t.LAST_NAME_JT) AS 'Teacher',
137        CONCAT(p.FIRST_NAME_JT, ' ', p.LAST_NAME_JT) AS 'Parent',
138        CONCAT(s.FIRST_NAME_JT, ' ', s.LAST_NAME_JT) AS 'Student'
139    FROM TEACHER t
140    JOIN CLASS c ON t.CLASS_CODE_JT = c.CLASS_CODE_JT
141    JOIN STUDENT s ON c.CLASS_CODE_JT = s.CLASS_CODE_JT
142    JOIN PARENT_OR_CARETAKER p ON s.PARENT_ID_JT
143    ORDER BY t.FIRST_NAME_JT, t.LAST_NAME_JT, p.FIRST_NAME_JT, p.LAST_NAME_JT, s.FIRST_NAME_JT, s.LAST_NAME_JT;
144
```

Output 1:

Student	Level	Color	Class Phone	Teacher
Emily Smith	2	Blue	123-456-7891	Brian Clark
John Doe	1	Red	123-456-7890	Alice Robinson
Liam Brown	3	Green	123-456-7892	Julia Lewis
Oliver Williams	5	Purple	123-456-7894	Nora Harris
Sophia Johnson	4	Yellow	123-456-7893	Mark Walker

Output 2:

Color	Level	Student Name	DOB
Red	1	John Doe	2005-06-15
Blue	2	Emily Smith	2006-04-22
Green	3	Liam Brown	2005-12-30
Yellow	4	Sophia Johnson	2006-02-11
Purple	5	Oliver Williams	2005-08-19