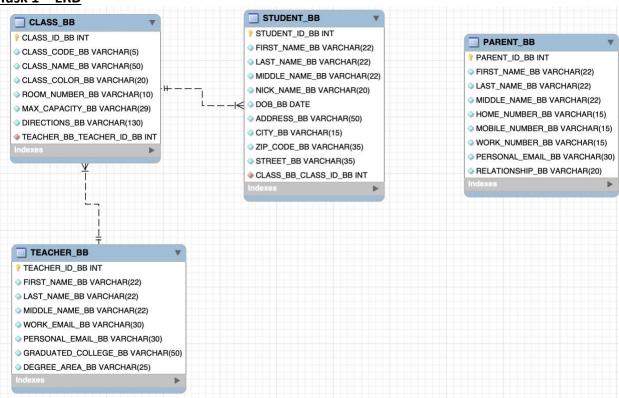
Assignment: P3

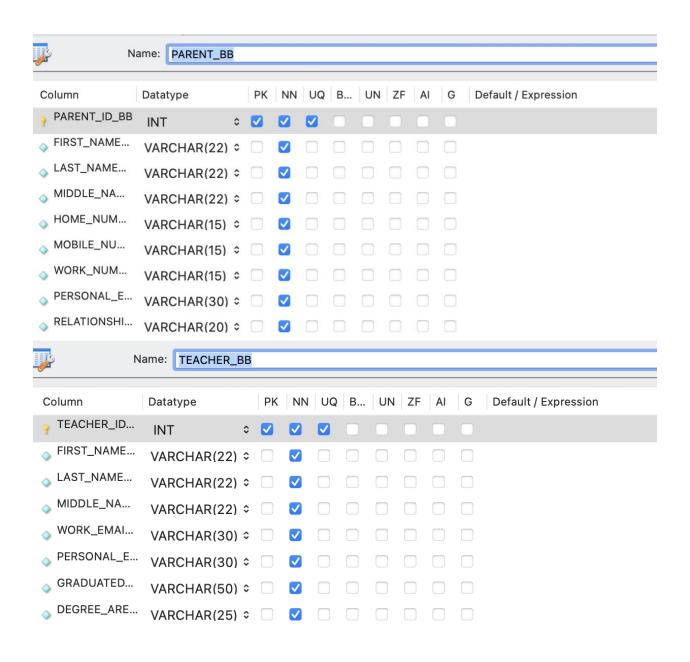
Name: Bethlehem Belay

Section: IT 214 - DL4

Task 1 - ERD



N	ame: CLASS_BB										
Column	Datatype		PK	NN	UQ	В	UN	ZF	AI	G	Default / Exp
CLASS_ID_BB	INT	\$	~	~	~						
CLASS_COD	VARCHAR(5)	\$		✓							
CLASS_NAM	VARCHAR(50)	\$		✓							
CLASS_COL	VARCHAR(20)	\$		✓							
ROOM_NUM	VARCHAR(10)	\$		✓							
MAX_CAPACI	VARCHAR(29)	\$		✓							
DIRECTIONS	VARCHAR(130	\$		✓							
TEACHER_BB	INT	\$		✓							
THE N	ame: STUDENT_E	20									
1	STODENT_	38									
		38	PK	NN	UQ	В	UN	7F	ΔΙ	G	Default / Expres
Column STUDENT_ID	Datatype		PK	NN		В	UN	ZF	Al	G	Default / Expre:
Column STUDENT_ID	Datatype INT	\$	PK	~	UQ V	B	UN	ZF	AI	G	Default / Expres
Column STUDENT_ID	Datatype INT VARCHAR(22)	 	_			B	UN	ZF	Al		Default / Expre
Column STUDENT_ID FIRST_NAME	Datatype INT		_	✓		B	UN	ZF	AI		Default / Expre:
Column STUDENT_ID FIRST_NAME LAST_NAME	Datatype INT VARCHAR(22) VARCHAR(22)		_	✓✓		B	UN	ZF	Al		Default / Expres
Column STUDENT_ID FIRST_NAME LAST_NAME MIDDLE_NA	Datatype INT VARCHAR(22) VARCHAR(22) VARCHAR(22)		_	<!--</th--><th></th><th>B</th><th>UN</th><th>ZF </th><th>AI</th><th></th><th>Default / Expre</th>		B	UN	ZF	AI		Default / Expre
Column STUDENT_ID FIRST_NAME LAST_NAME MIDDLE_NA NICK_NAME	Datatype INT VARCHAR(22) VARCHAR(22) VARCHAR(22) VARCHAR(20)	0 0 0 0 0	_	<!--</th--><th></th><th>B</th><th>UN</th><th>ZF </th><th>AI</th><th></th><th>Default / Expre:</th>		B	UN	ZF	AI		Default / Expre:
Column STUDENT_ID FIRST_NAME LAST_NAME MIDDLE_NA NICK_NAME DOB_BB	Datatype INT VARCHAR(22) VARCHAR(22) VARCHAR(22) VARCHAR(20) DATE	0 0 0 0 0 0 0 0 0	_	<!--</th--><th></th><th>B</th><th>UN</th><th>ZF </th><th>AI</th><th></th><th>Default / Expre</th>		B	UN	ZF	AI		Default / Expre
Column STUDENT_ID FIRST_NAME LAST_NAME MIDDLE_NA NICK_NAME DOB_BB ADDRESS_BB	Datatype INT VARCHAR(22) VARCHAR(22) VARCHAR(22) VARCHAR(20) DATE VARCHAR(50)	0 0 0 0 0 0 0				B	UN	ZF	AI		Default / Expre



#Task 2 - create database

3 • 4 5 •	<pre>2 • DROP DATABASE IF EXISTS P3_DB; 3 • CREATE DATABASE P3_DB;</pre>							
Res	ult Grid II Filter	Rows: Q Search	Export:					
	Database							
	HR HR_BB							
	information_schema							
	mysql P3_DB							
	performance_schema							
	S2_A1_IT214_TOPIC S3_DB							
	S4_DB							
	sys							

#Task 3 – Create table

```
# Task 3 - Create tables by Bethlehem Belay
SHOW TABLES:
• 

CREATE TABLE TEACHER_BB (
   TEACHER_ID_BB INT PRIMARY KEY,
   FIRST_NAME_BB VARCHAR(22),
   LAST_NAME_BB VARCHAR(22),
   MIDDLE_NAME_BB VARCHAR(22),
   WORK_EMAIL_BB VARCHAR(30),
   PERSONAL_EMAIL_BB VARCHAR(30),
   GRADUATED_COLLEGE_BB VARCHAR(50),
   DEGREE_AREA_BB VARCHAR(25)
  -);
• 

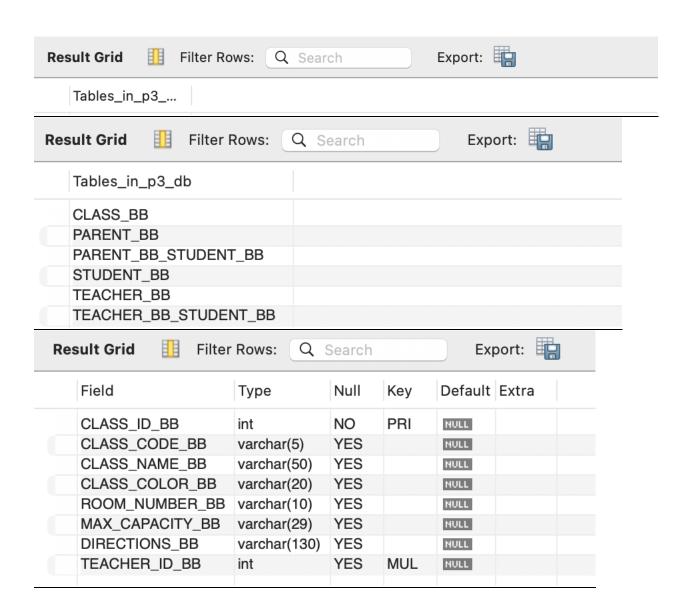
CREATE TABLE CLASS_BB (
   CLASS_ID_BB INT PRIMARY KEY,
   CLASS_CODE_BB VARCHAR(5),
   CLASS_NAME_BB VARCHAR(50),
   CLASS_COLOR_BB VARCHAR(20),
   ROOM_NUMBER_BB VARCHAR(10),
   MAX_CAPACITY_BB VARCHAR(29),
   DIRECTIONS_BB VARCHAR(130),
   TEACHER_ID_BB INT,
   FOREIGN KEY (TEACHER_ID_BB) REFERENCES TEACHER_BB(TEACHER_ID_BB)
   );
• 

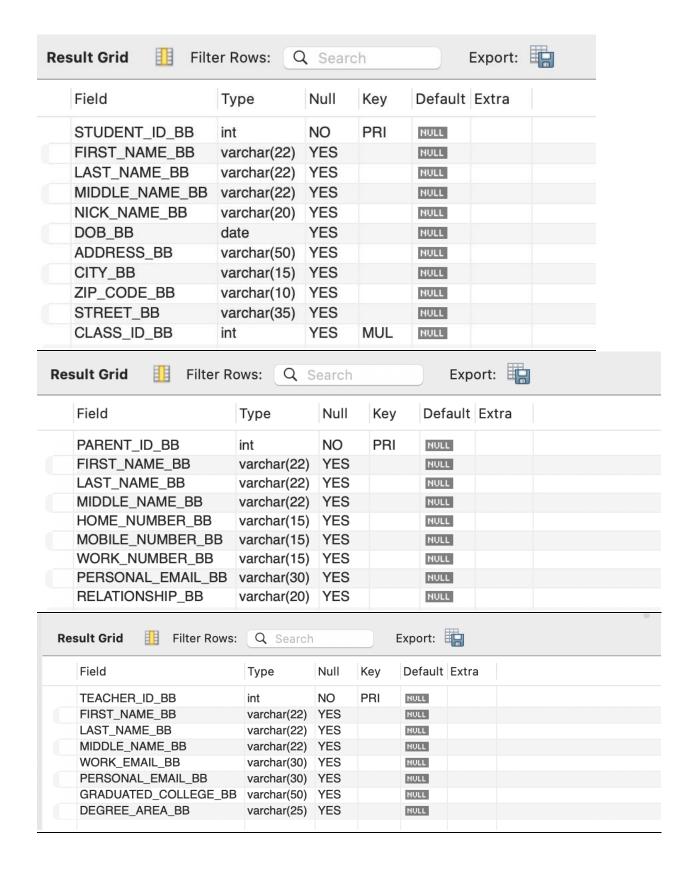
CREATE TABLE STUDENT_BB (
   STUDENT_ID_BB INT PRIMARY KEY,
   FIRST_NAME_BB VARCHAR(22),
   LAST_NAME_BB VARCHAR(22),
   MIDDLE_NAME_BB VARCHAR(22),
   NICK_NAME_BB VARCHAR(20),
   DOB_BB DATE,
   ADDRESS_BB VARCHAR(50),
```

```
CITY_BB VARCHAR(15),
   ZIP_CODE_BB VARCHAR(10),
   STREET_BB VARCHAR(35),
   CLASS_ID_BB INT,
   FOREIGN KEY (CLASS_ID_BB) REFERENCES CLASS_BB(CLASS_ID_BB)
   );
PARENT_ID_BB INT PRIMARY KEY,
   FIRST_NAME_BB VARCHAR(22),
   LAST_NAME_BB VARCHAR(22),
   MIDDLE_NAME_BB VARCHAR(22),
   HOME_NUMBER_BB VARCHAR(15),
   MOBILE NUMBER BB VARCHAR(15),
   WORK_NUMBER_BB VARCHAR(15),
   PERSONAL_EMAIL_BB VARCHAR(30),
   RELATIONSHIP_BB VARCHAR(20)

■ CREATE TABLE PARENT_BB_STUDENT_BB (
   PARENT_ID_BB INT,
   STUDENT_ID_BB INT,
   PRIMARY KEY (PARENT_ID_BB, STUDENT_ID_BB),
   FOREIGN KEY (PARENT_ID_BB) REFERENCES PARENT_BB(PARENT_ID_BB),
   FOREIGN KEY (STUDENT_ID_BB) REFERENCES STUDENT_BB(STUDENT_ID_BB)
   );
• 

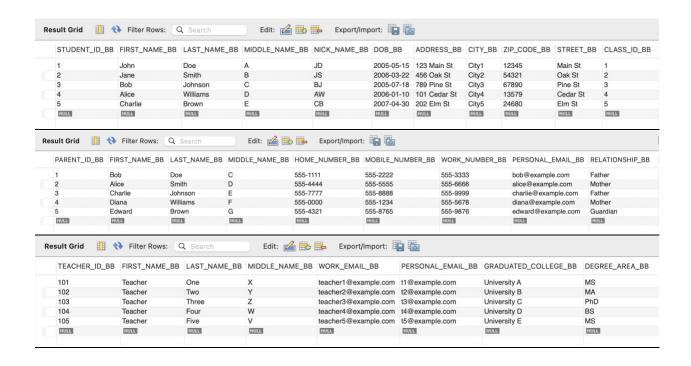
CREATE TABLE TEACHER_BB_STUDENT_BB (
   TEACHER_ID_BB INT,
   STUDENT_ID_BB INT,
   PRIMARY KEY (TEACHER_ID_BB, STUDENT_ID_BB),
   FOREIGN KEY (TEACHER_ID_BB) REFERENCES TEACHER_BB(TEACHER_ID_BB),
   FOREIGN KEY (STUDENT_ID_BB) REFERENCES STUDENT_BB(STUDENT_ID_BB)
    SHOW TABLES;
    DESCRIBE CLASS_BB;
    DESCRIBE STUDENT_BB;
    DESCRIBE PARENT_BB;
    DESCRIBE TEACHER_BB;
```





#Task 4 - Add data

```
-- Task 4 - Add data by Bethlehem Belay
• INSERT INTO TEACHER_BB VALUES
     (101, 'Teacher', 'One', 'X', 'teacher1@example.com', 't1@example.com', 'University A', 'MS'),
     (102, 'Teacher', 'Two', 'Y', 'teacher2@example.com', 't2@example.com', 'University B', 'MA'),
     (103, 'Teacher', 'Three', 'Z', 'teacher3@example.com', 't3@example.com', 'University C', 'PhD'),
     (104, 'Teacher', 'Four', 'W', 'teacher4@example.com', 't4@example.com', 'University D', 'BS'),
     (105, 'Teacher', 'Five', 'V', 'teacher5@example.com', 't5@example.com', 'University E', 'MS');
     INSERT INTO CLASS_BB VALUES
     (1, 'ABC01', 'Math Class', 'Blue', 'Room 101', 28, 'Next to the library', 101),
     (2, 'DEF02', 'English Class', 'Green', 'Room 202', 27, 'Second floor, west wing', 102),
     (3, 'GHI03', 'Science Class', 'Red', 'Room 303', 26, 'Third floor, east wing', 103),
     (4, 'JKL04', 'History Class', 'Yellow', 'Room 404', 25, 'Fourth floor, north wing', 104),
     (5, 'MN005', 'Art Class', 'Purple', 'Room 505', 29, 'Fifth floor, south wing', 105);
    INSERT INTO STUDENT BB VALUES
     (1, 'John', 'Doe', 'A', 'JD', '2005-05-15', '123 Main St', 'City1', '12345', 'Main St', 1),
     (2, 'Jane', 'Smith', 'B', 'JS', '2006-03-22', '456 Oak St', 'City2', '54321', 'Oak St', 2),
     (3, 'Bob', 'Johnson', 'C', 'BJ', '2005-07-18', '789 Pine St', 'City3', '67890', 'Pine St', 3),
     (4, 'Alice', 'Williams', 'D', 'AW', '2006-01-10', '101 Cedar St', 'City4', '13579', 'Cedar St', 4),
     (5, 'Charlie', 'Brown', 'E', 'CB', '2007-04-30', '202 Elm St', 'City5', '24680', 'Elm St', 5);
• INSERT INTO PARENT_BB VALUES
     (1, 'Bob', 'Doe', 'C', '555-1111', '555-2222', '555-3333', 'bob@example.com', 'Father'),
     (2, 'Alice', 'Smith', 'D', '555-4444', '555-5555', '555-6666', 'alice@example.com', 'Mother'),
     (3, 'Charlie', 'Johnson', 'E', '555-7777', '555-8888', '555-9999', 'charlie@example.com', 'Father'),
     (4, 'Diana', 'Williams', 'F', '555-0000', '555-1234', '555-5678', 'diana@example.com', 'Mother'),
     (5, 'Edward', 'Brown', 'G', '555-4321', '555-8765', '555-9876', 'edward@example.com', 'Guardian');
   SELECT * FROM CLASS_BB;
SELECT * FROM STUDENT BB;
     SELECT * FROM PARENT_BB;
    SELECT * FROM TEACHER BR:
                                                Edit: 🚄 📆 🖶 Export/Import: 🏣 👸
 CLASS_ID_BB CLASS_CODE_BB CLASS_NAME_BB CLASS_COLOR_BB ROOM_NUMBER_BB MAX_CAPACITY_BB DIRECTIONS_BB TEACHER_ID_BB
                 NULL
                                               NULL
                                                                NULL
                                                                                 NULL
                                                                                                  NULL
  Result Grid III 💎 Filter Rows: Q Search
                                              Edit: 🚄 🖶 🖶 Export/Import: 📳 🖔
    STUDENT_ID_BB FIRST_NAME_BB LAST_NAME_BB MIDDLE_NAME_BB NICK_NAME_BB DOB_BB ADDRESS_BB CITY_BB ZIP_CODE_BB STREET_BB CLASS_ID_BB
     NULL
                  NULL
                                NULL
                                             NULL
                                                            NULL
                                                                         NULL
                                                                                NULL
                                                                                           NULL
                                                                                                   NULL
                                                                                                              NULL
                                                                                                                        NULL
                                           Edit: 🚄 🖶 🖶 Export/Import: 🏣 🐻
 Result Grid III 💎 Filter Rows: Q Search
    PARENT_ID_BB | FIRST_NAME_BB | LAST_NAME_BB | MIDDLE_NAME_BB | HOME_NUMBER_BB | MOBILE_NUMBER_BB | WORK_NUMBER_BB | PERSONAL_EMAIL_BB | RELATIONSHIP_BB
                NULL
                                          NULL
                                                        NULL
                                                                        NULL
 Edit: 🚄 🖶 🖶 Export/Import: 🙀 📸
   TEACHER_ID_BB FIRST_NAME_BB LAST_NAME_BB MIDDLE_NAME_BB WORK_EMAIL_BB PERSONAL_EMAIL_BB GRADUATED_COLLEGE_BB DEGREE_AREA_BB
                                            NULL
    NULL
                 NULL
                               NULL
                                                           NULL
                                                                          NULL
                                                                                            NULL
 Edit: 🚄 🖶 🖶 Export/Import: 🏭 🐻
    CLASS_ID_BB CLASS_CODE_BB CLASS_NAME_BB CLASS_COLOR_BB ROOM_NUMBER_BB MAX_CAPACITY_BB DIRECTIONS_BB
                                                                                                                     TEACHER_ID_BB
                 ABC01
                                Math Class
                                               Blue
                                                                Room 101
                                                                                 28
                                                                                                  Next to the library
    2
                 DFF02
                                English Class
                                               Green
                                                                Room 202
                                                                                 27
                                                                                                  Second floor, west wing
                                                                                                                    102
                 GHI03
                                Science Class
                                               Red
                                                                Room 303
                                                                                 26
                                                                                                  Third floor, east wing
                                                                                                                     103
    4
                 JKL04
                                History Class
                                               Yellow
                                                                Room 404
                                                                                 25
                                                                                                  Fourth floor, north wing
                                                                                                                     104
                                                                                                  Fifth floor, south wing
                 MNO05
                                Art Class
                                               Purple
                                                                Room 505
                                                                                                                     105
                                                                                 29
    NULL
                 NULL
                                NULL
                                               NULL
                                                                NULL
                                                                                 HULL
                                                                                                  NULL
                                                                                                                     HULL
```



Task - 5 Query data

```
#Task 5 - Query the data by Bethlehem Belay
     SELECT CONCAT(S.FIRST_NAME_BB, ' ', S.LAST_NAME_BB) AS Student,
3 .
            C.CLASS_NAME_BB AS Level,
            C.CLASS_COLOR_BB AS Color,
            C.ROOM_NUMBER_BB AS Room,
            CONCAT(T.FIRST_NAME_BB, ' ', T.LAST_NAME_BB) AS Teacher
    FROM STUDENT_BB S
    JOIN CLASS_BB C ON S.CLASS_ID_BB = C.CLASS_ID_BB
    JOIN TEACHER_BB T ON C.TEACHER_ID_BB = T.TEACHER_ID_BB
    ORDER BY S.LAST_NAME_BB, S.FIRST_NAME_BB;
SELECT C.CLASS_COLOR_BB AS Color,
            C.CLASS_NAME_BB AS Level,
            S.FIRST_NAME_BB AS Student_Name,
            S.NICK_NAME_BB AS Nickname
    FROM CLASS_BB C
    JOIN STUDENT_BB S ON C.CLASS_ID_BB = S.CLASS_ID_BB
    ORDER BY C.CLASS_COLOR_BB, C.CLASS_NAME_BB, S.LAST_NAME_BB, S.FIRST_NAME_BB;
• SELECT P.FIRST_NAME_BB AS Parent_Name,
            P.LAST_NAME_BB AS Parent_Last_Name,
            P.PERSONAL_EMAIL_BB AS Parent_Email,
            S.FIRST_NAME_BB AS Student_Name,
            C.CLASS_NAME_BB AS Level,
            C.CLASS_COLOR_BB AS Color
   FROM PARENT_BB P
    JOIN PARENT_BB_STUDENT_BB PS ON P.PARENT_ID_BB = PS.PARENT_ID_BB
    JOIN STUDENT_BB S ON PS.STUDENT_ID_BB = S.STUDENT_ID_BB
    JOIN CLASS_BB C ON S.CLASS_ID_BB = C.CLASS_ID_BB
    ORDER BY P.LAST_NAME_BB, P.FIRST_NAME_BB, S.LAST_NAME_BB, S.FIRST_NAME_BB;
SELECT T.FIRST_NAME_BB AS Teacher_Name,
         T.LAST_NAME_BB AS Teacher_Last_Name,
          S.FIRST_NAME_BB AS Student_Name,
          S.LAST_NAME_BB AS Student_Last_Name,
          P.FIRST_NAME_BB AS Parent_Name,
          P.LAST_NAME_BB AS Parent_Last_Name
   FROM TEACHER_BB T
   JOIN CLASS_BB C ON T.TEACHER_ID_BB = C.TEACHER_ID_BB
   JOIN TEACHER_BB_STUDENT_BB TS ON T.TEACHER_ID_BB = TS.TEACHER_ID_BB
   JOIN STUDENT_BB S ON TS.STUDENT_ID_BB = S.STUDENT_ID_BB
   JOIN PARENT_BB_STUDENT_BB PS ON S.STUDENT_ID_BB = PS.STUDENT_ID_BB
   JOIN PARENT_BB P ON PS.PARENT_ID_BB = P.PARENT_ID_BB
   ORDER BY T.LAST_NAME_BB, T.FIRST_NAME_BB, S.LAST_NAME_BB, S.FIRST_NAME_BB, P.LAST_NAME_BB, P.FIRST_NAME_BB;
```

