# *Ali Masuth*
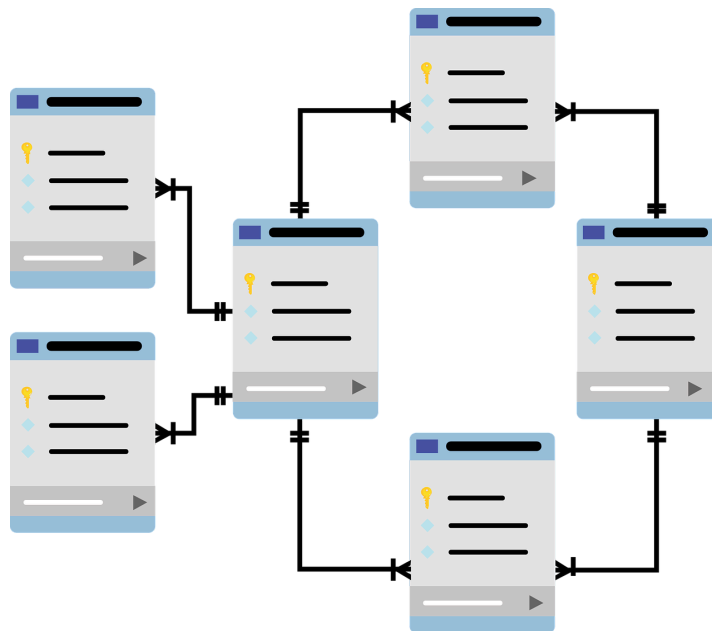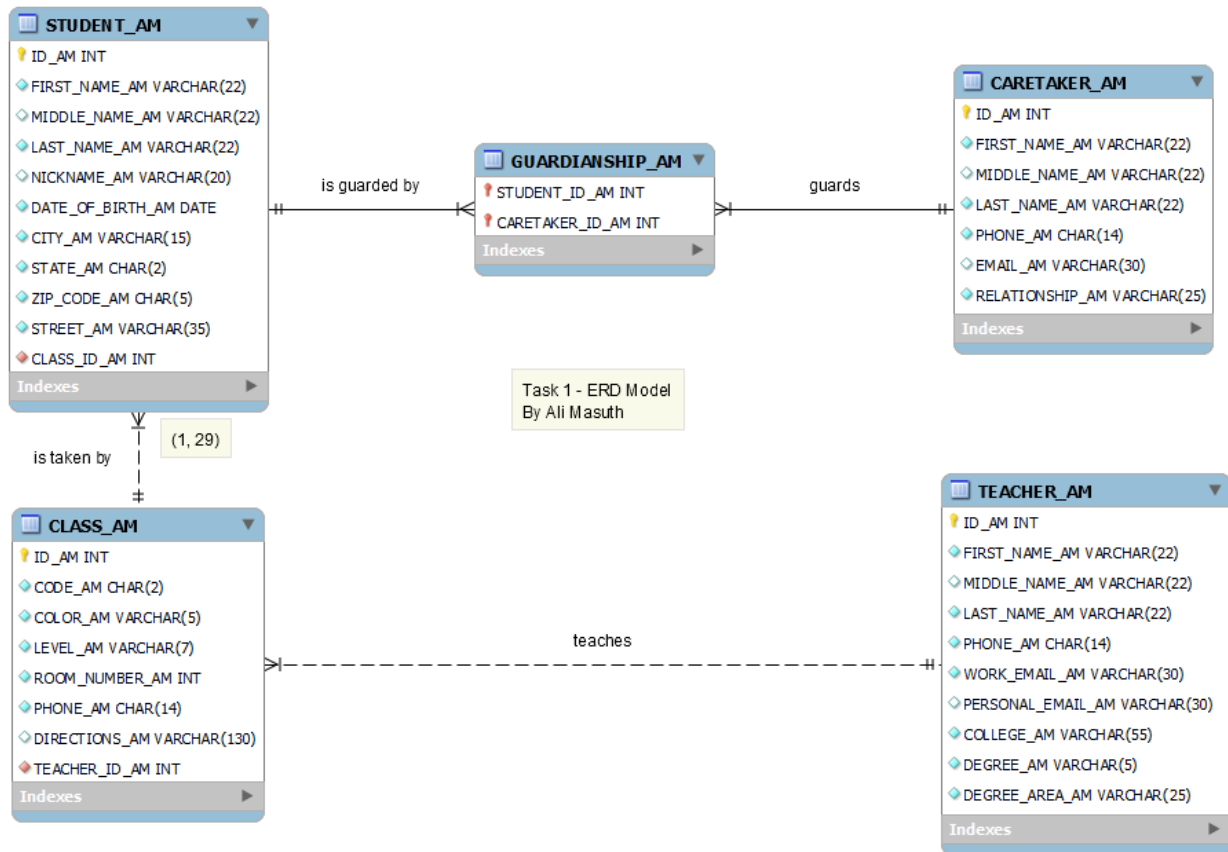# *IT-214-005*

# Happy Learning Database Implementation
## Database Design Report 3

For this report, we will officially create our database by implementing the design based on Project 1. We will not be including Project 2's design in this database. Since we are only implementing Project 1's design, the following entities included will be STUDENT, CARETAKER, GUARDIANSHIP, CLASS, and TEACHER. Any entities involving student lunch will not be included.

## Task 1 - ERD Model



Task 1 - ERD Model
By Ali Masuth

---

## Task 2 - Create Database

*Task 2 Source Code Screenshot:*

```
1      /* Task 2 - Create Database by Ali Masuth */
2
3 •    DROP DATABASE IF EXISTS HAPPY_LEARNING;
4 •    CREATE DATABASE HAPPY_LEARNING;
5 •    USE HAPPY_LEARNING;
6 •    SHOW DATABASES;
```

*Task 2 Result Screenshot:*



_____

## Task 3 - Create Tables

*Task 3 Source Code Screenshots:*

```
9      /* Task 3 - Create Tables by Ali Masuth */
10
11  •   SHOW TABLES;
12  • ⊖ CREATE TABLE CARETAKER_AM (
13          ID_AM INT PRIMARY KEY,
14          FIRST_NAME_AM VARCHAR(22) NOT NULL,
15          MIDDLE_NAME_AM VARCHAR(22),
16          LAST_NAME_AM VARCHAR(22) NOT NULL,
17          PHONE_AM CHAR(14) NOT NULL,
18          EMAIL_AM VARCHAR(30),
19          RELATIONSHIP_AM VARCHAR(25) NOT NULL
20      );
21
22  • ⊖ CREATE TABLE TEACHER_AM (
23          ID_AM INT PRIMARY KEY,
24          FIRST_NAME_AM VARCHAR(22) NOT NULL,
25          MIDDLE_NAME_AM VARCHAR(22),
26          LAST_NAME_AM VARCHAR(22) NOT NULL,
27          PHONE_AM CHAR(14) NOT NULL,
28          WORK_EMAIL_AM VARCHAR(30) NOT NULL,
29          PERSONAL_EMAIL_AM VARCHAR(30),
30          COLLEGE_AM VARCHAR(55) NOT NULL,
31          DEGREE_AM VARCHAR(5) NOT NULL,
32          DEGREE_AREA_AM VARCHAR(25) NOT NULL
33      );
```

```sql
35  ⊖  CREATE TABLE CLASS_AM (
36          ID_AM INT PRIMARY KEY,
37          CODE_AM CHAR(2) NOT NULL UNIQUE,
38          COLOR_AM VARCHAR(5) NOT NULL,
39          LEVEL_AM VARCHAR(7) NOT NULL,
40          ROOM_NUMBER_AM INT NOT NULL UNIQUE,
41          PHONE_AM CHAR(14) NOT NULL UNIQUE,
42          DIRECTIONS_AM VARCHAR(130),
43          TEACHER_ID_AM INT NOT NULL,
44          FOREIGN KEY (TEACHER_ID_AM) REFERENCES TEACHER_AM(ID_AM)
45      );

47  ⊖  CREATE TABLE STUDENT_AM (
48          ID_AM INT PRIMARY KEY,
49          FIRST_NAME_AM VARCHAR(22) NOT NULL,
50          MIDDLE_NAME_AM VARCHAR(22),
51          LAST_NAME_AM VARCHAR(22) NOT NULL,
52          NICKNAME_AM VARCHAR(20),
53          DATE_OF_BIRTH_AM DATE NOT NULL,
54          CITY_AM VARCHAR(15) NOT NULL,
55          STATE_AM CHAR(2) NOT NULL,
56          ZIP_CODE_AM CHAR(5) NOT NULL,
57          STREET_AM VARCHAR(35) NOT NULL,
58          CLASS_ID_AM INT NOT NULL,
59          FOREIGN KEY (CLASS_ID_AM) REFERENCES CLASS_AM(ID_AM)
60      );
61
62  ⊖  CREATE TABLE GUARDIANSHIP_AM (
63          STUDENT_ID_AM INT NOT NULL,
64          FOREIGN KEY (STUDENT_ID_AM) REFERENCES STUDENT_AM(ID_AM),
65          CARETAKER_ID_AM INT NOT NULL,
66          FOREIGN KEY (CARETAKER_ID_AM) REFERENCES CARETAKER_AM(ID_AM)
67      );

69      SHOW TABLES;
70      DESCRIBE CARETAKER_AM;
71      DESCRIBE TEACHER_AM;
72      DESCRIBE CLASS_AM;
73      DESCRIBE STUDENT_AM;
74      DESCRIBE GUARDIANSHIP_AM;
--
```

*Task 3 Result Screenshots:*

| Result Grid | Filter Rows: |
|---|---|
| Tables_in_happy_learning |

## Result Grid — Filter Rows:

| Tables_in_happy_learning |
|---|
| ▶ caretaker_am |
| class_am |
| guardianship_am |
| student_am |
| teacher_am |

## Result Grid — Filter Rows: | Export: | Wrap Cell C

| Field | Type | Null | Key | Default | Extra |
|---|---|---|---|---|---|
| ▶ ID_AM | int(11) | NO | PRI | NULL | |
| FIRST_NAME_AM | varchar(22) | NO | | NULL | |
| MIDDLE_NAME_AM | varchar(22) | YES | | NULL | |
| LAST_NAME_AM | varchar(22) | NO | | NULL | |
| PHONE_AM | char(14) | NO | | NULL | |
| EMAIL_AM | varchar(30) | YES | | NULL | |
| RELATIONSHIP_AM | varchar(25) | NO | | NULL | |

## Result Grid — Filter Rows: | Export: | Wrap Cell Con

| Field | Type | Null | Key | Default | Extra |
|---|---|---|---|---|---|
| ▶ ID_AM | int(11) | NO | PRI | NULL | |
| FIRST_NAME_AM | varchar(22) | NO | | NULL | |
| MIDDLE_NAME_AM | varchar(22) | YES | | NULL | |
| LAST_NAME_AM | varchar(22) | NO | | NULL | |
| PHONE_AM | char(14) | NO | | NULL | |
| WORK_EMAIL_AM | varchar(30) | NO | | NULL | |
| PERSONAL_EMAIL_AM | varchar(30) | YES | | NULL | |
| COLLEGE_AM | varchar(55) | NO | | NULL | |
| DEGREE_AM | varchar(5) | NO | | NULL | |
| DEGREE_AREA_AM | varchar(25) | NO | | NULL | |

## Result Grid — Filter Rows: | Export: | Wrap Cell Co

| Field | Type | Null | Key | Default | Extra |
|---|---|---|---|---|---|
| ▶ ID_AM | int(11) | NO | PRI | NULL | |
| CODE_AM | char(2) | NO | UNI | NULL | |
| COLOR_AM | varchar(5) | NO | | NULL | |
| LEVEL_AM | varchar(7) | NO | | NULL | |
| ROOM_NUMBER_AM | int(11) | NO | UNI | NULL | |
| PHONE_AM | char(14) | NO | UNI | NULL | |
| DIRECTIONS_AM | varchar(130) | YES | | NULL | |
| TEACHER_ID_AM | int(11) | NO | MUL | NULL | |

## Result Grid — Filter Rows: | Export: | Wrap Cell Co

| Field | Type | Null | Key | Default | Extra |
|---|---|---|---|---|---|
| ▶ ID_AM | int(11) | NO | PRI | NULL | |
| FIRST_NAME_AM | varchar(22) | NO | | NULL | |
| MIDDLE_NAME_AM | varchar(22) | YES | | NULL | |
| LAST_NAME_AM | varchar(22) | NO | | NULL | |
| NICKNAME_AM | varchar(20) | YES | | NULL | |
| DATE_OF_BIRTH_AM | date | NO | | NULL | |
| CITY_AM | varchar(15) | NO | | NULL | |
| STATE_AM | char(2) | NO | | NULL | |
| ZIP_CODE_AM | char(5) | NO | | NULL | |
| STREET_AM | varchar(35) | NO | | NULL | |
| CLASS_ID_AM | int(11) | NO | MUL | NULL | |

## Result Grid — Filter Rows: | Export: | Wrap

| Field | Type | Null | Key | Default | Extra |
|---|---|---|---|---|---|
| ▶ STUDENT_ID_AM | int(11) | NO | MUL | NULL | |
| CARETAKER_ID_AM | int(11) | NO | MUL | NULL | |

## Task 4 - Add Data

*Task 4 Source Code Screenshots:*

```
77      /* Task 4 - Add Data by Ali Masuth */
78
79 •    SELECT * FROM CARETAKER_AM;
80 •    SELECT * FROM TEACHER_AM;
81 •    SELECT * FROM CLASS_AM;
82 •    SELECT * FROM STUDENT_AM;
83 •    SELECT * FROM GUARDIANSHIP_AM;
84
85 •    INSERT INTO CARETAKER_AM VALUES
86          (1, 'Rachel', 'Amanda', 'Harvey', '(703) 123-1234', NULL, 'Mother'),
87          (2, 'Amanda', NULL, 'Morin', '(703) 987-6543', 'amandamorin@gmail.com', 'Mother'),
88          (3, 'Samuel', 'James', 'Hansen', '(571) 123-5432', NULL, 'Father'),
89          (4, 'Joshua', 'Adam', 'Hudson', '(571) 458-2852', 'joshuahudson32@gmail.com', 'Brother'),
90          (5, 'Samantha', 'Jamie', 'Sanders', '(172) 751-2541', 'samjsanders41@gmail.com', 'Aunt');
91
92 •    INSERT INTO TEACHER_AM VALUES
93          (11, 'John', 'Robert', 'Gamby', '(703) 749-1727', 'johngamby23@happylearning.com', NULL, 'University of Colorado', 'BA', 'Elementary Education'),
94          (12, 'Veronica', 'Noelle', 'Adams', '(703) 273-2841', 'noellea81@happylearning.com', 'noellea81@gmail.com', 'Virginia Commonwealth University', 'BS', 'Mathematics'),
95          (13, 'Wilson', NULL, 'Jacobs', '(703) 182-5812', 'willjacobs38@happylearning.com', 'willjacobs38@gmail.com', 'George Mason University', 'MS', 'Science'),
96          (14, 'Douglas', 'Timothy', 'Rogers', '(571) 499-9889', 'dougrogers@happylearning.com', NULL, 'University of North Texas', 'BA', 'Elementary Education'),
97          (15, 'Emily', NULL, 'Christopher', '(571) 123-9999', 'emilychris@happylearning.com', 'emilychris@gmail.com', 'Virginia Tech', 'MA', 'English');
98
99 •    INSERT INTO CLASS_AM VALUES
100         (21, 'RT', 'Red', 'Turtles', 101, '(703) 111-1111', 'Northwest Wing, Room 101', 11),
101         (22, 'RF', 'Red', 'Foxes', 102, '(703) 222-2222', 'East Wing, Room 102', 11),
102         (23, 'RM', 'Red', 'Monkeys', 103, '(703) 333-3333', NULL, 12),
103         (24, 'BT', 'Blue', 'Turtles', 104, '(703) 444-4444', NULL, 12),
104         (25, 'BF', 'Blue', 'Foxes', 105, '(703) 555-5555', 'South Wing, Room 105', 13),
105         (26, 'BM', 'Blue', 'Monkeys', 106, '(703) 666-6666', 'Annex Building, Room 106', 13),
106         (27, 'GT', 'Green', 'Turtles', 107, '(703) 777-7777', 'Upper Floor, Room 107', 14),
107         (28, 'GF', 'Green', 'Foxes', 108, '(703) 888-8888', NULL, 14),
108         (29, 'GM', 'Green', 'Monkeys', 109, '(703) 999-9999', NULL, 15);
109
110 •   INSERT INTO STUDENT_AM VALUES
111         (31, 'Emma', 'Grace', 'Harvey', NULL, '2005-03-15', 'Citytown', 'ST', '12345', 'First Street', 21),
112         (32, 'Liam', 'Alexander', 'Morin', NULL, '2004-08-22', 'Alexandria', 'VA', '23456', 'Second Avenue', 22),
113         (33, 'Olivia', 'Sophia', 'Hansen', NULL, '2006-02-10', 'Sunnydale', 'MD', '34567', 'Third Boulevard', 23),
114         (34, 'Noah', 'James', 'Hudson', NULL, '2005-11-30', 'Harbor City', 'DC', '45678', 'Fourth Lane', 24),
115         (35, 'Ava', 'Elizabeth', 'Sanders', NULL, '2006-07-05', 'Rainbow Falls', 'NY', '56789', 'Fifth Street', 25),
116         (36, 'Mia', 'Charlotte', 'Morin', NULL, '2004-05-20', 'Starlight City', 'CA', '67890', 'Sixth Avenue', 26),
117         (37, 'Lucas', 'William', 'Hansen', 'Luke', '2005-09-18', 'Pleasantville', 'FL', '78901', 'Seventh Boulevard', 27),
118         (38, 'Isabella', NULL, 'Hudson', 'Bella', '2006-04-12', 'Maplewood', 'TX', '89012', 'Eighth Lane', 28),
119         (39, 'Jackson', 'Michael', 'Hudson', 'Jack', '2004-12-25', 'Winchester', 'GA', '90123', 'Ninth Street', 29),
120         (40, 'Sophia', 'Grace', 'Harvey', NULL, '2005-02-28', 'Riverside', 'CA', '11223', 'Tenth Avenue', 21),
121         (41, 'Ethan', 'Alexander', 'Morin', NULL, '2004-11-15', 'Springfield', 'IL', '33445', 'Eleventh Boulevard', 22),
122         (42, 'Amelia', 'Lily', 'Hansen', NULL, '2006-01-10', 'Woodland', 'OH', '55667', 'Twelfth Lane', 23),
123         (43, 'Daniel', 'Joseph', 'Hudson', 'Dan', '2005-10-30', 'Highland', 'MI', '77889', 'Thirteenth Street', 24),
124         (44, 'Chloe', 'Sophia', 'Hudson', NULL, '2006-06-05', 'Meadowview', 'VA', '99011', 'Fourteenth Avenue', 25),
125         (45, 'Oliver', 'Benjamin', 'Morin', NULL, '2004-04-20', 'Sunset', 'AZ', '11223', 'Fifteenth Boulevard', 26),
126         (46, 'Aria', 'Grace', 'Harvey', NULL, '2005-08-18', 'Greenfield', 'KS', '33445', 'Sixteenth Lane', 27),
127         (47, 'Carter', 'Thomas', 'Morin', NULL, '2006-03-12', 'Bayside', 'FL', '55667', 'Seventeenth Street', 28),
128         (48, 'Scarlett', 'Rose', 'Sanders', NULL, '2004-12-25', 'Roseville', 'CA', '77889', 'Eighteenth Avenue', 29);
129
```

```
131 •    INSERT INTO GUARDIANSHIP_AM VALUES
132          (31, 1),
133          (32, 2),
134          (33, 3),
135          (34, 4),
136          (35, 5),
137          (36, 2),
138          (37, 3),
139          (38, 4),
140          (39, 4),
141          (40, 1),
142          (41, 2),
143          (42, 3),
144          (43, 4),
145          (44, 4),
146          (45, 2),
147          (46, 1),
148          (47, 2),
149          (48, 5);

151 •    SELECT * FROM CARETAKER_AM;
152 •    SELECT * FROM TEACHER_AM;
153 •    SELECT * FROM CLASS_AM;
154 •    SELECT * FROM STUDENT_AM;
155 •    SELECT * FROM GUARDIANSHIP_AM;
```

*Task 4 Result Screenshots:*

| ID_AM | FIRST_NAME_AM | MIDDLE_NAME_AM | LAST_NAME_AM | PHONE_AM | EMAIL_AM | RELATIONSHIP_AM |
|---|---|---|---|---|---|---|
| NULL | NULL | NULL | NULL | NULL | NULL | NULL |

| ID_AM | FIRST_NAME_AM | MIDDLE_NAME_AM | LAST_NAME_AM | PHONE_AM | WORK_EMAIL_AM | PERSONAL_EMAIL_AM | COLLEGE_AM | DEGREE_AM | DEGREE_AREA_AM |
|---|---|---|---|---|---|---|---|---|---|
| NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

| ID_AM | CODE_AM | COLOR_AM | LEVEL_AM | ROOM_NUMBER_AM | PHONE_AM | DIRECTIONS_AM | TEACHER_ID_AM |
|---|---|---|---|---|---|---|---|
| NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

,

| ID_AM | FIRST_NAME_AM | MIDDLE_NAME_AM | LAST_NAME_AM | NICKNAME_AM | DATE_OF_BIRTH_AM | CITY_AM | STATE_AM | ZIP_CODE_AM | STREET_AM | CLASS_ID_AM |
|---|---|---|---|---|---|---|---|---|---|---|
| NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

| STUDENT_ID_AM | CARETAKER_ID_AM |
|---|---|

| | ID_AM | FIRST_NAME_AM | MIDDLE_NAME_AM | LAST_NAME_AM | PHONE_AM | EMAIL_AM | RELATIONSHIP_AM |
|---|---|---|---|---|---|---|---|
| ▶ | 1 | Rachel | Amanda | Harvey | (703) 123-1234 | NULL | Mother |
| | 2 | Amanda | NULL | Morin | (703) 987-6543 | amandamorin@gmail.com | Mother |
| | 3 | Samuel | James | Hansen | (571) 123-5432 | NULL | Father |
| | 4 | Joshua | Adam | Hudson | (571) 458-2852 | joshuahudson32@gmail.com | Brother |
| | 5 | Samantha | Jamie | Sanders | (172) 751-2541 | samjsanders41@gmail.com | Aunt |
| * | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

| | ID_AM | FIRST_NAME_AM | MIDDLE_NAME_AM | LAST_NAME_AM | PHONE_AM | WORK_EMAIL_AM | PERSONAL_EMAIL_AM | COLLEGE_AM | DEGREE_AM |
|---|---|---|---|---|---|---|---|---|---|
| ▶ | 11 | John | Robert | Gamby | (703) 749-1727 | johngamby23@happylearning.com | NULL | University of Colorado | BA |
| | 12 | Veronica | Noelle | Adams | (703) 273-2841 | noellea81@happylearning.com | noellea81@gmail.com | Virginia Commonwealth University | BS |
| | 13 | Wilson | NULL | Jacobs | (703) 182-5812 | willjacobs38@happylearning.com | willjacobs38@gmail.com | George Mason University | MS |
| | 14 | Douglas | Timothy | Rogers | (571) 499-9889 | dougrogers@happylearning.com | NULL | University of North Texas | BA |
| | 15 | Emily | NULL | Christopher | (571) 123-9999 | emilychris@happylearning.com | emilychris@gmail.com | Virginia Tech | MA |
| * | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

| DEGREE_AM | DEGREE_AREA_AM |
|---|---|
| BA | Elementary Education |
| BS | Mathematics |
| MS | Science |
| BA | Elementary Education |
| MA | English |
| NULL | NULL |

| | ID_AM | CODE_AM | COLOR_AM | LEVEL_AM | ROOM_NUMBER_AM | PHONE_AM | DIRECTIONS_AM | TEACHER_ID_AM |
|---|---|---|---|---|---|---|---|---|
| ▶ | 21 | RT | Red | Turtles | 101 | (703) 111-1111 | Northwest Wing, Room 101 | 11 |
| | 22 | RF | Red | Foxes | 102 | (703) 222-2222 | East Wing, Room 102 | 11 |
| | 23 | RM | Red | Monkeys | 103 | (703) 333-3333 | NULL | 12 |
| | 24 | BT | Blue | Turtles | 104 | (703) 444-4444 | NULL | 12 |
| | 25 | BF | Blue | Foxes | 105 | (703) 555-5555 | South Wing, Room 105 | 13 |
| | 26 | BM | Blue | Monkeys | 106 | (703) 666-6666 | Annex Building, Room 106 | 13 |
| | 27 | GT | Green | Turtles | 107 | (703) 777-7777 | Upper Floor, Room 107 | 14 |
| | 28 | GF | Green | Foxes | 108 | (703) 888-8888 | NULL | 14 |
| | 29 | GM | Green | Monkeys | 109 | (703) 999-9999 | NULL | 15 |
| * | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

| | ID_AM | FIRST_NAME_AM | MIDDLE_NAME_AM | LAST_NAME_AM | NICKNAME_AM | DATE_OF_BIRTH_AM | CITY_AM | STATE_AM | ZIP_CODE_AM | STREET_AM | CLASS_ID_AM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ▶ | 31 | Emma | Grace | Harvey | NULL | 2005-03-15 | Citytown | ST | 12345 | First Street | 21 |
| | 32 | Liam | Alexander | Morin | NULL | 2004-08-22 | Alexandria | VA | 23456 | Second Avenue | 22 |
| | 33 | Olivia | Sophia | Hansen | NULL | 2006-02-10 | Sunnydale | MD | 34567 | Third Boulevard | 23 |
| | 34 | Noah | James | Hudson | NULL | 2005-11-30 | Harbor City | DC | 45678 | Fourth Lane | 24 |
| | 35 | Ava | Elizabeth | Sanders | NULL | 2006-07-05 | Rainbow Falls | NY | 56789 | Fifth Street | 25 |
| | 36 | Mia | Charlotte | Morin | NULL | 2004-05-20 | Starlight City | CA | 67890 | Sixth Avenue | 26 |
| | 37 | Lucas | William | Hansen | Luke | 2005-09-18 | Pleasantville | FL | 78901 | Seventh Boulevard | 27 |
| | 38 | Isabella | NULL | Hudson | Bella | 2006-04-12 | Maplewood | TX | 89012 | Eighth Lane | 28 |
| | 39 | Jackson | Michael | Hudson | Jack | 2004-12-25 | Winchester | GA | 90123 | Ninth Street | 29 |
| | 40 | Sophia | Grace | Harvey | NULL | 2005-02-28 | Riverside | CA | 11223 | Tenth Avenue | 21 |
| | 41 | Ethan | Alexander | Morin | NULL | 2004-11-15 | Springfield | IL | 33445 | Eleventh Boulevard | 22 |
| | 42 | Amelia | Lily | Hansen | NULL | 2006-01-10 | Woodland | OH | 55667 | Twelfth Lane | 23 |
| | 43 | Daniel | Joseph | Hudson | Dan | 2005-10-30 | Highland | MI | 77889 | Thirteenth Street | 24 |
| | 44 | Chloe | Sophia | Hudson | NULL | 2006-06-05 | Meadowview | VA | 99011 | Fourteenth Avenue | 25 |
| | 45 | Oliver | Benjamin | Morin | NULL | 2004-04-20 | Sunset | AZ | 11223 | Fifteenth Boulevard | 26 |
| | 46 | Aria | Grace | Harvey | NULL | 2005-08-18 | Greenfield | KS | 33445 | Sixteenth Lane | 27 |
| | 47 | Carter | Thomas | Morin | NULL | 2006-03-12 | Bayside | FL | 55667 | Seventeenth Street | 28 |
| | 48 | Scarlett | Rose | Sanders | NULL | 2004-12-25 | Roseville | CA | 77889 | Eighteenth Avenue | 29 |
| * | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

| | STUDENT_ID_AM | CARETAKER_ID_AM |
|---|---|---|
| ▶ | 31 | 1 |
| | 32 | 2 |
| | 33 | 3 |
| | 34 | 4 |
| | 35 | 5 |
| | 36 | 2 |
| | 37 | 3 |
| | 38 | 4 |
| | 39 | 4 |
| | 40 | 1 |
| | 41 | 2 |
| | 42 | 3 |
| | 43 | 4 |
| | 44 | 4 |
| | 45 | 2 |
| | 46 | 1 |
| | 47 | 2 |
| | 48 | 5 |

## Task 5 - Query the Data

*Task 5 Source Code Screenshots:*

```
157     /* Task 5 - Query the Data by Ali Masuth */
158
159 •   SELECT
160         CONCAT(STUDENT_AM.FIRST_NAME_AM, ' ', STUDENT_AM.LAST_NAME_AM) AS 'Student',
161         LEVEL_AM AS 'Level',
162         COLOR_AM AS 'Color',
163         ROOM_NUMBER_AM AS 'Room',
164         CONCAT(TEACHER_AM.FIRST_NAME_AM, ' ', TEACHER_AM.LAST_NAME_AM) AS 'Teacher'
165     FROM
166         STUDENT_AM, CLASS_AM, TEACHER_AM
167     WHERE
168         STUDENT_AM.CLASS_ID_AM=CLASS_AM.ID_AM AND CLASS_AM.TEACHER_ID_AM=TEACHER_AM.ID_AM
169     ORDER BY
170         STUDENT_AM.FIRST_NAME_AM ASC;


173 •   SELECT
174         COLOR_AM AS 'Color',
175         LEVEL_AM AS 'Level',
176         CONCAT(STUDENT_AM.FIRST_NAME_AM, ' ', STUDENT_AM.LAST_NAME_AM) AS 'Student Name',
177         STUDENT_AM.NICKNAME_AM AS 'Nickname'
178     FROM
179         CLASS_AM, STUDENT_AM
180     WHERE
181         STUDENT_AM.CLASS_ID_AM=CLASS_AM.ID_AM
182     ORDER BY
183         LEVEL_AM ASC, COLOR_AM ASC, STUDENT_AM.FIRST_NAME_AM ASC;
```

```
186 •   SELECT
187         CONCAT(CARETAKER_AM.FIRST_NAME_AM, ' ', CARETAKER_AM.LAST_NAME_AM) AS 'Caretaker Name',
188         CARETAKER_AM.EMAIL_AM AS 'Email',
189         CONCAT(STUDENT_AM.FIRST_NAME_AM, ' ', STUDENT_AM.LAST_NAME_AM) AS 'Student Name',
190         CLASS_AM.LEVEL_AM AS 'Class Level',
191         CLASS_AM.COLOR_AM AS 'Color'
192     FROM
193         CARETAKER_AM,
194         GUARDIANSHIP_AM,
195         STUDENT_AM,
196         CLASS_AM
197     WHERE
198         CARETAKER_AM.ID_AM = GUARDIANSHIP_AM.CARETAKER_ID_AM
199         AND GUARDIANSHIP_AM.STUDENT_ID_AM = STUDENT_AM.ID_AM
200         AND STUDENT_AM.CLASS_ID_AM = CLASS_AM.ID_AM
201     ORDER BY
202         CARETAKER_AM.FIRST_NAME_AM ASC, STUDENT_AM.FIRST_NAME_AM ASC;
---
205     /* Each student only contains one caretaker. */
206 •   SELECT
207         CONCAT(TEACHER_AM.FIRST_NAME_AM, ' ', TEACHER_AM.LAST_NAME_AM) AS 'Teacher',
208         CONCAT(STUDENT_AM.FIRST_NAME_AM, ' ', STUDENT_AM.LAST_NAME_AM) AS 'Student',
209         CONCAT(CARETAKER_AM.FIRST_NAME_AM, ' ', CARETAKER_AM.LAST_NAME_AM) AS 'Parent'
210     FROM
211         TEACHER_AM, CLASS_AM, STUDENT_AM, GUARDIANSHIP_AM, CARETAKER_AM
212     WHERE
213         CLASS_AM.TEACHER_ID_AM = TEACHER_AM.ID_AM
214         AND STUDENT_AM.CLASS_ID_AM = CLASS_AM.ID_AM
215         AND GUARDIANSHIP_AM.STUDENT_ID_AM = STUDENT_AM.ID_AM
216         AND GUARDIANSHIP_AM.CARETAKER_ID_AM = CARETAKER_AM.ID_AM
217     ORDER BY
218         TEACHER_AM.FIRST_NAME_AM ASC, STUDENT_AM.FIRST_NAME_AM ASC, CARETAKER_AM.FIRST_NAME_AM ASC;
```

*Task 5 Result Screenshots:*

| Student | Level | Color | Room | Teacher |
|---|---|---|---|---|
| Amelia Hansen | Monkeys | Red | 103 | Veronica Adams |
| Aria Harvey | Turtles | Green | 107 | Douglas Rogers |
| Ava Sanders | Foxes | Blue | 105 | Wilson Jacobs |
| Carter Morin | Foxes | Green | 108 | Douglas Rogers |
| Chloe Hudson | Foxes | Blue | 105 | Wilson Jacobs |
| Daniel Hudson | Turtles | Blue | 104 | Veronica Adams |
| Emma Harvey | Turtles | Red | 101 | John Gamby |
| Ethan Morin | Foxes | Red | 102 | John Gamby |
| Isabella Hudson | Foxes | Green | 108 | Douglas Rogers |
| Jackson Hudson | Monkeys | Green | 109 | Emily Christopher |
| Liam Morin | Foxes | Red | 102 | John Gamby |
| Lucas Hansen | Turtles | Green | 107 | Douglas Rogers |
| Mia Morin | Monkeys | Blue | 106 | Wilson Jacobs |
| Noah Hudson | Turtles | Blue | 104 | Veronica Adams |
| Oliver Morin | Monkeys | Blue | 106 | Wilson Jacobs |
| Olivia Hansen | Monkeys | Red | 103 | Veronica Adams |
| Scarlett Sanders | Monkeys | Green | 109 | Emily Christopher |
| Sophia Harvey | Turtles | Red | 101 | John Gamby |

**Result Grid** | Filter Rows:

| Color | Level | Student Name | Nickname |
|-------|-------|--------------|----------|
| Blue | Foxes | Ava Sanders | NULL |
| Blue | Foxes | Chloe Hudson | NULL |
| Green | Foxes | Carter Morin | NULL |
| Green | Foxes | Isabella Hudson | Bella |
| Red | Foxes | Ethan Morin | NULL |
| Red | Foxes | Liam Morin | NULL |
| Blue | Monkeys | Mia Morin | NULL |
| Blue | Monkeys | Oliver Morin | NULL |
| Green | Monkeys | Jackson Hudson | Jack |
| Green | Monkeys | Scarlett Sanders | NULL |
| Red | Monkeys | Amelia Hansen | NULL |
| Red | Monkeys | Olivia Hansen | NULL |
| Blue | Turtles | Daniel Hudson | Dan |
| Blue | Turtles | Noah Hudson | NULL |
| Green | Turtles | Aria Harvey | NULL |
| Green | Turtles | Lucas Hansen | Luke |
| Red | Turtles | Emma Harvey | NULL |
| Red | Turtles | Sophia Harvey | NULL |

**Result Grid** | Filter Rows: | Export: | Wrap Cell Content:

| Caretaker Name | Email | Student Name | Class Level | Color |
|----------------|-------|--------------|-------------|-------|
| Amanda Morin | amandamorin@gmail.com | Carter Morin | Foxes | Green |
| Amanda Morin | amandamorin@gmail.com | Ethan Morin | Foxes | Red |
| Amanda Morin | amandamorin@gmail.com | Liam Morin | Foxes | Red |
| Amanda Morin | amandamorin@gmail.com | Mia Morin | Monkeys | Blue |
| Amanda Morin | amandamorin@gmail.com | Oliver Morin | Monkeys | Blue |
| Joshua Hudson | joshuahudson32@gmail.com | Chloe Hudson | Foxes | Blue |
| Joshua Hudson | joshuahudson32@gmail.com | Daniel Hudson | Turtles | Blue |
| Joshua Hudson | joshuahudson32@gmail.com | Isabella Hudson | Foxes | Green |
| Joshua Hudson | joshuahudson32@gmail.com | Jackson Hudson | Monkeys | Green |
| Joshua Hudson | joshuahudson32@gmail.com | Noah Hudson | Turtles | Blue |
| Rachel Harvey | NULL | Aria Harvey | Turtles | Green |
| Rachel Harvey | NULL | Emma Harvey | Turtles | Red |
| Rachel Harvey | NULL | Sophia Harvey | Turtles | Red |
| Samantha Sand... | samjsanders41@gmail.com | Ava Sanders | Foxes | Blue |
| Samantha Sand... | samjsanders41@gmail.com | Scarlett Sanders | Monkeys | Green |
| Samuel Hansen | NULL | Amelia Hansen | Monkeys | Red |
| Samuel Hansen | NULL | Lucas Hansen | Turtles | Green |
| Samuel Hansen | NULL | Olivia Hansen | Monkeys | Red |

*(Each student contains only one caretaker. Therefore, the arrangement of the list of parents cannot be in alphabetical order.)*

| Teacher | Student | Parent |
|---|---|---|
| Douglas Rogers | Aria Harvey | Rachel Harvey |
| Douglas Rogers | Carter Morin | Amanda Morin |
| Douglas Rogers | Isabella Hudson | Joshua Hudson |
| Douglas Rogers | Lucas Hansen | Samuel Hansen |
| Emily Christopher | Jackson Hudson | Joshua Hudson |
| Emily Christopher | Scarlett Sanders | Samantha Sanders |
| John Gamby | Emma Harvey | Rachel Harvey |
| John Gamby | Ethan Morin | Amanda Morin |
| John Gamby | Liam Morin | Amanda Morin |
| John Gamby | Sophia Harvey | Rachel Harvey |
| Veronica Adams | Amelia Hansen | Samuel Hansen |
| Veronica Adams | Daniel Hudson | Joshua Hudson |
| Veronica Adams | Noah Hudson | Joshua Hudson |
| Veronica Adams | Olivia Hansen | Samuel Hansen |
| Wilson Jacobs | Ava Sanders | Samantha Sanders |
| Wilson Jacobs | Chloe Hudson | Joshua Hudson |
| Wilson Jacobs | Mia Morin | Amanda Morin |
| Wilson Jacobs | Oliver Morin | Amanda Morin |

Result Grid | Filter Rows: | Export: