University of Central Florida

CGS 2545 Database Concepts

Assignment 2
Airline Database Project
Due, Friday, September 22, 2023 for maximum 100%
Saturday, September 23, 2023 for maximum 90%
Sunday, September 24, 2023 for maximum 80%
Monday, September 25, 2023 for maximum 70%

Project Description
We are UCF Regional Airlines!

Regional airlines are the smallest airline type. As the name indicates, they primarily focus their efforts on providing regional services or serving routes not offered by the major companies. These airlines operate with smaller fleets, employ far fewer people and use smaller aircraft. Often, they will partner with major airlines to provide services from smaller airports toward some of the major hubs.

We need to create a database to manage our regional airline data. We will simulate the data required to support a regional airport. We will develop the project with recurring assignments to build a relational database using the relational database management MySQL.

Deliverables
To complete this assignment, submit the following **three** files to Webcourses:
1. An SQL file (i.e. save the file with file extension **.sql**) containing the SQL written to perform the tasks. Example: Assignment2Code.sql
2. An exported SQL file using MySQL Workbench Data Export option. The file name should be the following format: **FirstnameLastnameAssignment#.sql**. Example: KarinMarkleAssignment2.sql
3. An ER Diagram generated by MySQL Workbench. The file name should be the following format: **FirstnameLastnameAssignment#ERDiagram.mwb**. Example: KarinMarkleAssignment2ERDiagram.mwb

Assignment Scope
1. Create database **airline**.
2. Create tables in the database.
3. Insert data into tables.
4. Generate an ER diagram.

References
1. 8_SQL Create Database.pptx
2. 10_SQL Select Database.pptx
3. 11_SQL Create Table.pptx
4. 13_SQL Insert Query.pptx

To access the DBMS
1. Launch the MySQL Command Line Client executable or MySQL Workbench
2. Login in using the password set during installation "cgs2545" or your chosen password.

Tasks

Query Description
1. Create a new database named **airline**
2. Change to use the database **airline**
3. Create a table named **employee** with the following attributes, data types, and constraints: a. ID, integer, not null, auto increment b. firstName, variable character, 50 characters, not null c. lastName, variable character, 50 characters, not null d. address, variable character, 90 characters, not null e. city, variable character, 50 characters, not null f. state, character, 2 characters, not null g. zipCode, character, 5 characters, not null h. phone, character, 10 characters, not null, unique i. email, variable character, 90 characters, not null, unique j. primary key is the ID field
4. Create a table named **passenger** with the following attributes, data types, and constraints: a. ID, integer, not null, auto increment b. firstName, variable character, 50 characters, not null c. lastName, variable character, 50 characters, not null d. address, variable character, 90 characters, not null e. city, variable character, 50 characters, not null f. state, character, 2 characters, not null g. zipCode, character, 5 characters, not null h. phone, character, 10 characters, not null, unique i. email, variable character, 90 characters, not null, unique j. primary key is the ID field

5.	Create a table named **position** with the following attributes, data types, and constraints:
	   a. ID, integer, not null, auto increment
	   b. description, variable character, 50 characters, not null, unique
	   c. hourly, decimal, 5 numbers total, 2 numbers to the right of the decimal point, not null, default value 11.00
	   d. primary key is the ID field

6.	Insert data in file **passenger.sql** into table **passenger**
7.	Insert data in file **employee.sql** into table **employee**
8.	Insert data in file **position.sql** into table **position**
9.	Generate an ER Diagram using MySQL Workbench, save as a .mwb file
10.	Export database Airline using MySQL Workbench, save as a .sql file
11.	Provide written source code in a .sql file

Test Cases	
Test Case 1	select * from **employee** should look like Figure 1
Test Case 2	select * from **passenger** should look like Figure 2
Test Case 3	select * from **position** should look like Figure 3
Test Case 4	ER Diagram should look like Figure 4

```
mysql> select * from employee;
+----+-----------+----------+-------------------------+------------+-------+---------+------------+------------------------+
| ID | firstname | lastname | address                 | city       | state | zipCode | phone      | email                  |
+----+-----------+----------+-------------------------+------------+-------+---------+------------+------------------------+
|  1 | Paris     | Lindsey  | 763 West Mulberry St     | Clover     | SC    | 29710   | 2025550132 | plindsey@isp.com       |
|  2 | Umaiza    | Melia    | 545 Ohio Ave             | Clover     | SC    | 29710   | 2025550135 | umelia@isp.com         |
|  3 | Nico      | Prince   | 20 Middle River Street   | Willoughby | OH    | 44094   | 2025550137 | nprince@isp.com        |
|  4 | Javan     | Rennie   | 8112 North Country St    | Willoughby | OH    | 44094   | 2025550139 | jrennie@isp.com        |
|  5 | Ali       | Waters   | 83 Rockland Lane         | Willoughby | OH    | 44094   | 2025550144 | awaters@isp.com        |
|  6 | JohnPaul  | Clarke   | 1 Riverside Lane         | Willoughby | OH    | 44094   | 2025550153 | jpcClarke@isp.com      |
|  7 | Dane      | Kaiser   | 694 Wall Road            | Willoughby | OH    | 44094   | 2025550155 | kdaiser@isp.com        |
|  8 | Hammad    | Newman   | 9970 State Court         | Duluth     | GA    | 30096   | 2025550157 | hnewman@isp.com        |
|  9 | Maha      | Guthrie  | 54 Woodsman Drive        | Duluth     | GA    | 30096   | 2025550161 | mguthrie@isp.com       |
| 10 | Tulisa    | Roberts  | 7174 Studebaker Street   | Duluth     | GA    | 30096   | 2025550163 | troberts@isp.com       |
+----+-----------+----------+-------------------------+------------+-------+---------+------------+------------------------+
10 rows in set (0.00 sec)
```

Figure 1 Table employee

```
mysql> select * from passenger;
+-----+-----------+-----------+--------------------------------+------------------+-------+---------+------------+-----------------------+
| ID  | firstName | lastName  | address                        | city             | state | zipCode | phone      | email                 |
+-----+-----------+-----------+--------------------------------+------------------+-------+---------+------------+-----------------------+
| 141 | Igor      | Prince    | 12 Creekside St                | Huntington Beach | CA    | 92647   | 2025550199 | iprince@isp.com       |
| 142 | Dante     | Rennie    | 137 Wall St                    | Memphis          | TN    | 38117   | 2225550112 | drennie@isp.com       |
| 143 | Thomas    | Waters    | 411 Shirley St                 | Abingdon         | VA    | 24210   | 2225550115 | twaters@isp.com       |
| 144 | Avaya     | Clarke    | 7771 Border Court              | San Marcos       | CA    | 92078   | 2225550119 | aclarke@isp.com       |
| 145 | Haniya    | Kaiser    | 6 South Sulphur Springs Street | Jefferson        | LA    | 70121   | 2225550121 | hkaiser@isp.com       |
| 146 | Victor    | Newman    | 942 New Saddle Drive           | Covington        | LA    | 70433   | 2225550122 | vnewman@isp.com       |
| 147 | Douglas   | Guthrie   | 9 Wrangler Ave                 | Ontario          | CA    | 91764   | 2225550124 | dguthrie@isp.com      |
| 148 | Brian     | Roberts   | 7319 S. Greenview Drive        | Cuyahoga Falls   | OH    | 44223   | 2225550125 | broberts@isp.com      |
| 149 | Paris     | Solis     | 763 West Mulberry St           | Battle Creek     | MI    | 49016   | 2025550132 | psolis@isp.com        |
| 150 | Umaiza    | Heath     | 545 Ohio Ave                   | Scottsdale       | AZ    | 85260   | 2025550135 | uheath@isp.com        |
| 151 | Yvonne    | Goodman   | 12 Creekside St                | Nashville        | TN    | 37205   | 2025550109 | ygoodman@isp.com      |
| 152 | Dante     | Mackenzie | 137 Wall St                    | Nashville        | TN    | 37205   | 2025550112 | dmackenzie@isp.com    |
| 153 | Alysha    | Rollins   | 411 Shirley St                 | Nashville        | TN    | 37205   | 2025550115 | arollins@isp.com      |
| 154 | Avaya     | Gonzalez  | 7771 Border Court              | Nashville        | TN    | 37205   | 2025550119 | agonzalez@isp.com     |
| 155 | Haniya    | Kelly     | 6 South Sulphur Springs Street | Nashville        | TN    | 37205   | 2025550121 | hkelly@isp.com        |
| 156 | Nathalie  | Chambers  | 942 New Saddle Drive           | Clover           | SC    | 29710   | 2025550122 | nchambers@isp.com     |
| 157 | Dante     | Rollins   | 9 Wrangler Ave                 | Clover           | SC    | 29710   | 2025550124 | drollins@isp.com      |
| 158 | Beverley  | Mckee     | 7319 S. Greenview Drive        | Clover           | SC    | 29710   | 2025550125 | bmckee@isp.com        |
| 159 | Robin     | Solis     | 8474 Wentworth Street          | Duluth           | GA    | 30096   | 2025550164 | rsolis@isp.com        |
| 160 | Kavita    | Heath     | 796 Hartford St                | Duluth           | GA    | 30096   | 2025550165 | kheath@isp.com        |
| 161 | Meera     | White     | 484 Bridge St                  | Piscataway       | NJ    | 08854   | 2025550166 | mwhite@isp.com        |
| 162 | Bradlee   | Esparza   | 7031 Gainsway St               | Piscataway       | NJ    | 08854   | 2025550173 | besparza@isp.com      |
| 163 | Leilani   | Leonard   | 37 Monroe Street               | Piscataway       | NJ    | 08854   | 2025550175 | lleonard@isp.com      |
| 164 | Stefanie  | Brook     | 7990 West Surrey St            | Piscataway       | NJ    | 08854   | 2025550179 | sbrook@isp.com        |
| 165 | Grover    | Squires   | 7618 Madison Court             | Piscataway       | NJ    | 08854   | 2025550180 | gsquires@isp.com      |
| 166 | Jonathan  | Kumar     | 25 Annadale Court              | Jupiter          | FL    | 33458   | 2025550182 | jkumar@isp.com        |
| 167 | Angus     | Neville   | 9841 Smith Drive               | Jupiter          | FL    | 33458   | 2025550187 | aneville@isp.com      |
| 168 | Uzair     | Sparrow   | 7999 Hall Street               | Jupiter          | FL    | 33458   | 2025550188 | usparrow@isp.com      |
| 169 | Amari     | Currie    | 8411 Pleasant St               | Jupiter          | FL    | 33458   | 2025550194 | acurrie@isp.com       |
| 170 | Imaani    | Wallace   | 33 Pierce Rd                   | Jupiter          | FL    | 33458   | 2025550195 | iwallace@isp.com      |
| 171 | Efe       | House     | 97 High Point Street           | Glenarden        | MD    | 20706   | 2025550196 | ehouse@isp.com        |
| 172 | Atticus   | Atkinson  | 66 Harrison Dr                 | Glenarden        | MD    | 20706   | 2025550197 | aatkinson@isp.com     |
| 173 | Michelle  | Ramirez   | 370 Hill Field Ave             | Glenarden        | MD    | 20706   | 2025550198 | mramirez@isp.com      |
| 174 | Remy      | Hassan    | 249 Devon Lane                 | Glenarden        | MD    | 20706   | 2225550199 | rhassan@isp.com       |
| 175 | Jordana   | Beck      | 7911 Carson Lane               | Glenarden        | MD    | 20706   | 2025550200 | jbeck@isp.com         |
+-----+-----------+-----------+--------------------------------+------------------+-------+---------+------------+-----------------------+
35 rows in set (0.00 sec)
```
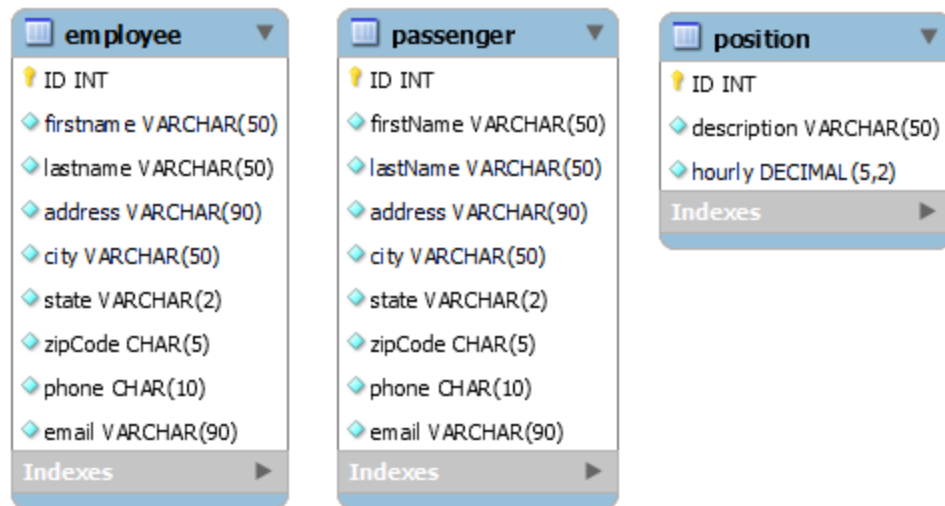
Figure 2 Table passenger

```
mysql> select * from position;
+----+-------------------------------+--------+
| ID | description                   | hourly |
+----+-------------------------------+--------+
|  1 | Pilot                         |  58.00 |
|  2 | Co-pilot                      |  40.00 |
|  3 | Flight Attendant              |  48.00 |
|  4 | Cabin Attendant               |  38.00 |
|  5 | Aeronautical Engineer         |  42.00 |
|  6 | Aircraft Mechanic             |  33.00 |
|  7 | Airport Police                |  20.00 |
|  8 | Security                      |  14.00 |
|  9 | Airport Planner               |  46.00 |
| 10 | Airfield Operations Specialists |  22.00 |
| 11 | Airline Ticket Agent          |  13.00 |
| 12 | Reservation Service Agent     |  15.00 |
| 13 | Passenger Service Agent       |  11.00 |
| 14 | Meteorologist                 |  37.00 |
| 15 | Baggage Handler               |  13.00 |
| 16 | Administrative Jobs           |  17.00 |
| 17 | Cleaning Jobs                 |  13.00 |
+----+-------------------------------+--------+
17 rows in set (0.00 sec)
```

Figure 3 Table position

Figure 4 ER Diagram