

University of Central Florida

DEPARTMENT OF ELECTRICAL ENGINEERING & COMPUTER SCIENCE

COMPUTER SCIENCE DIVISION

CGS 2545 Database Concepts

Assignment 10

Airline Database Project

Due, Friday, December 1, 2023 for maximum 100%

Saturday, December 2, 2023 for maximum 90%

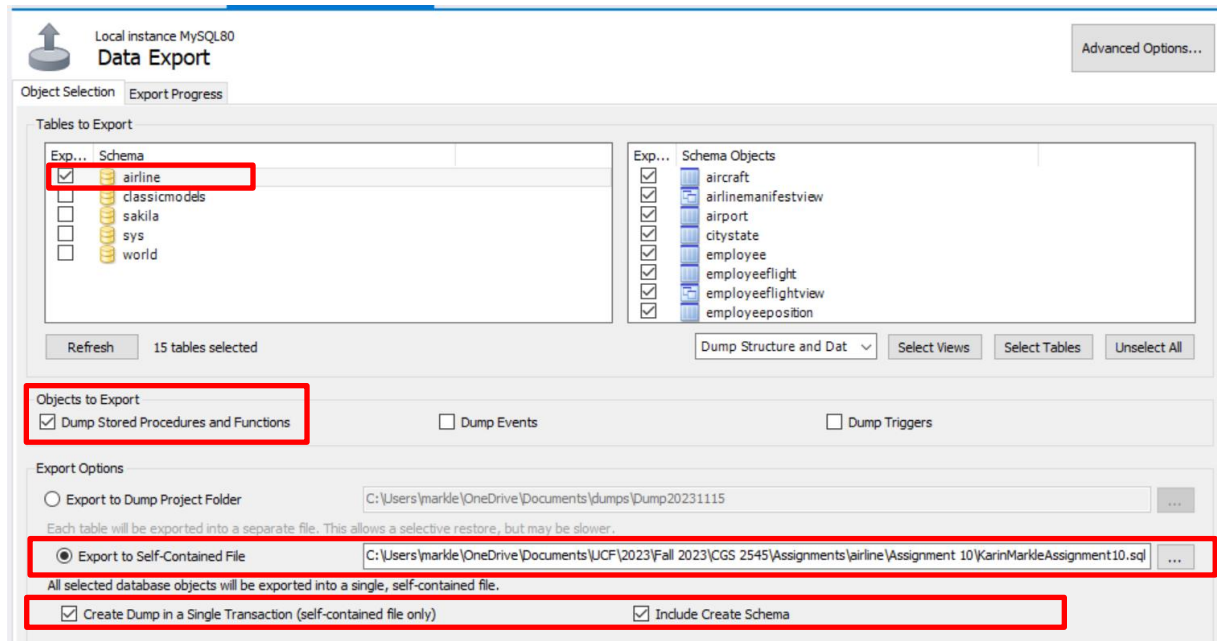
Sunday, December 3, 2023 for maximum 80%

Monday, December 4, 2023 for maximum 70%

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.
2. An ER Diagram generated by MySQL Workbench. The file name should be the following format: **FirstnameLastnameAssignment#ERDiagram.mwb**. Example: KarinMarkleAssignment2ERDiagram.mwb
3. An exported SQL file using MySQL Workbench Data Export option. The file name should be the following format: **FirstnameLastnameAssignment#.sql**. Example: KarinMarkleAssignment2.sql
 - a. On the Data Export UI do the following
 - i. Select the database to export
 - ii. Select Export to Self-Contained File
 - iii. Click on the ellipsis to select the directory to save the file to
 - iv. **IMPORTANT! Be sure to check option “Dump Stored Procedures and Functions”**
 - v. Click the checkbox for Create Dump in a Single Transaction
 - vi. Click the checkbox for Include Create Schema
 - vii. Click the Start Export button



Assignment Scope

1. Use database **airline**.
2. Write a stored procedure.
3. Generate an ER diagram.

Resources

1. payDepositTemplate.sql

References

1. 49_AdvancedSQL Stored Procedures Overview.pptx
2. 50_AdvancedSQL Stored Procedures Definition.pptx
3. 51_AdvancedSQL Stored Procedures Parameters.pptx
4. 52_AdvancedSQL Stored Procedures Variables.pptx
5. 54_AdvancedSQL Listing Stored Procedures.pptx
6. 55_AdvancedSQL Stored Procedures IF.pptx
7. 57_AdvancedSQL Stored Procedures Looping.pptx
8. 58_AdvancedSQL Stored Procedures Cursor.pptx

To access the DBMS

1. Launch the MySQL Command Line Employee executable or MySQL Workbench
2. Login in using the password set during installation “cgs2545” or your chosen password.

Tasks

Query Description
1. Change to use the database airline
1. Create stored procedure payDeposit to do the following <ol style="list-style-type: none"> a. Set the delimiter to \$\$ b. Parameter list includes

- i. IN **employeeNum** INT
 - ii. INOUT **deposit** VARCHAR(4000)
- c. Declare the following variables
 - i. **v_finished** integer DEFAULT 0
 - ii. **v_lines** varchar(100) DEFAULT " -----
----- "
 - iii. **v_empFirst** varchar(100) DEFAULT ""
 - iv. **v_empLast** varchar(100) DEFAULT ""
 - v. **v_empAddress** varchar(100) DEFAULT ""
 - vi. **v_empCity** varchar(100) DEFAULT "";
 - vii. **v_empState** varchar(100) DEFAULT ""
 - viii. **v_empZip** varchar(100) DEFAULT ""
 - ix. **v_tHours** int DEFAULT 0
 - x. **v_pHourly** decimal(5,2) DEFAULT 0.0
 - xi. **v_overtime** INT DEFAULT 0
 - xii. **v_count** integer DEFAULT 0
 - xiii. **v_deposit** decimal(8,2) DEFAULT 0.0
- d. Declare cursor **employee_cursor** for the following join query
 - i. Select
 - 1. **firstName** from table **employee**
 - 2. **lastName** from table **employee**
 - 3. **address** from table **employee**
 - 4. **city** from table **cityState**
 - 5. **state** from table **cityState**
 - 6. **zipCode** from table **cityState**
 - 7. Sum columns **sun**, **mon**, **tues**, **wed**, **thurs**, **fri**, and **sat** from table **timesheet** as **hours**
 - 8. **hourly** from table **position**
 - ii. Where column **employeeId** in table **timesheet** equals the value in parameter **employeeNum**
- e. Declare continue exception handler for not found set variable **v_finished** equal to 1
- f. Open cursor **employee_cursor**
- g. Loop through the **employee_cursor**, using loop label **get_employee**
 - i. Fetch **employee_cursor** into variables
 - 1. **v_empFirst**
 - 2. **v_empLast**
 - 3. **v_empAddress**
 - 4. **v_empCity**
 - 5. **v_empState**
 - 6. **v_empZip**
 - 7. **v_tHours**
 - 8. **v_pHourly**
 - ii. Check if variable **v_finished** equals 1; if true, leave the loop using the loop label **get_employee**
 - iii. Set **v_count** equal to **v_count** plus 1 (one)

- iv. If the variable **v_count** is equal to 1 (one)
 - 1. Calculate the employee's deposit check using an **IF/ELSEIF** decision-making construct based on the following business logic
 - a. If the employee's hours (i.e., **v_tHours**) are less than or equal to **40** then
 - i. set **v_deposit** equal to the **hours** multiplied by the **hourly** rate
 - b. Else If the employee's hours (i.e., **v_tHours**) are greater than **40** then
 - i. set **v_overtime** equal to (**v_tHours** minus **40**) multiplied by (**v_pHourly** * **1.5**)
 - ii. set **v_deposit** equal to the employee's **40** hours multiplied by their hourly rate (i.e., **v_pHourly**)
 - iii. set **v_deposit** equal to **v_deposit** plus **v_overtime**
 - 2. Set INOUT parameter **deposit** equal to concatenated
 - a. **deposit**
 - b. '\From:\n'
 - 3. Set INOUT parameter **deposit** equal to concatenated
 - a. **deposit**
 - b. '\n CGS 2545 Regional Airlines \n'
 - 4. Set INOUT parameter **deposit** equal to concatenated
 - a. **deposit**
 - b. '\UCF\n'
 - 5. Set INOUT parameter **deposit** equal to concatenated
 - a. **deposit**
 - b. '\MSB 260\n\n'
 - 6. Set INOUT parameter **deposit** equal to concatenated
 - a. **deposit**
 - b. 'Pay to the order of:\n\n'
 - 7. Set INOUT parameter **deposit** equal to concatenated
 - a. **deposit**
 - b. v_empFirst
 - c. ''
 - d. v_empLast
 - e. '\n'
 - 8. Set INOUT parameter **deposit** equal to concatenated
 - a. **deposit**
 - b. v_empAddress
 - c. '\n'
 - 9. Set INOUT parameter **deposit** equal to concatenated
 - a. **deposit**
 - b. v_empCity
 - c. ','
 - d. v_empState
 - e. ''
 - f. v_empZip

g. '\n' 10. Set INOUT parameter deposit equal to concatenated a. deposit b. 'In the amount of:\n\n' 11. Set INOUT parameter deposit equal to concatenated a. deposit b. '\$' c. v_deposit d. '\n' 12. Set INOUT parameter deposit equal to concatenated a. deposit b. \n\n*** Pay will be deposited into account number provided ***\n' 13. Set INOUT parameter deposit equal to concatenated a. deposit b. '\n' c. v_lines d. '\n' h. End the loop using the loop label get_employee i. Close the stored cursor employee_cursor j. End stored procedure k. Set the delimiter back to ;	
2.	Write the source code to test the stored procedure a. Set session variable @ deposit equal to “” b. Call stored procedure passing arguments a. employeeId from table timesheet b. @ deposit session variable c. Select @ deposit
3.	Generate an ER Diagram using MySQL Workbench, save as a .mwb file
4.	Export database airline using MySQL Workbench, save as a .sql file
5.	Provide written source code in a .sql file

Test Cases	
Test Case 1	Call stored procedure payDeposit for employee Ernest Higgins, should look like Figure 1
Test Case 2	Call stored procedure payDeposit for employee Awais Carrillo, should look like Figure 2
Test Case 3	Call stored procedure payDeposit for employee Harvey West, should look like Figure 3
Test Case 4	Call stored procedure payDeposit for employee Rebekah Morgan, should look like Figure 4
Test Case 5	Call stored procedure payDeposit for employee Fern Garner, should look like Figure 5
Test Case 6	Call stored procedure payDeposit for employee Oliwier Barnett, should look like Figure 6

Test Case 7	Call stored procedure payDeposit for employee Nico Prince, should look like Figure 7
Test Case 8	Call stored procedure payDeposit for employee Kaya Hodge, should look like Figure 8
Test Case 9	Call stored procedure payDeposit for employee Brodie Gordon, should look like Figure 9
Test Case 10	Call stored procedure payDeposit for employee Mathew Horton, should look like Figure 10
Test Case 11	ER Diagram should look like Figure 11

```

-----
From:

CGS 2545 Regional Airlines
UCF
MSB 260

Pay to the order of:

Ernest Higgins
451 Marshall Lane
Trumbull, CT 06611

In the amount of:

$1480.00

*** Pay will be deposited into account number provided ***
-----

```

Figure 1 Ernest Higgins Deposit

```
-----  
From:  
  
CGS 2545 Regional Airlines  
UCF  
MSB 260  
  
Pay to the order of:  
  
Awais Carrillo  
225 South Manhattan Street  
Indian Trail, NC 28079  
  
In the amount of:  
  
$520.00  
  
*** Pay will be deposited into account number provided ***  
-----
```

Figure 2 Awais Carrillo Deposit

```
-----  
From:  
  
CGS 2545 Regional Airlines  
UCF  
MSB 260  
  
Pay to the order of:  
  
Harvey West  
9 Cherry Ave  
Chesterfield, VA 23832  
  
In the amount of:  
  
$1320.00  
  
*** Pay will be deposited into account number provided ***  
-----
```

Figure 3 Harvey West Deposit

```
-----  
From:  
  
CGS 2545 Regional Airlines  
UCF  
MSB 260  
  
Pay to the order of:  
  
Rebekah Morgan  
9437 East 6th Street  
Waldorf, MD 20601  
  
In the amount of:  
  
$1680.00  
  
*** Pay will be deposited into account number provided ***  
-----
```

Figure 4 Rebekah Morgan Deposit

```
-----  
From:  
  
CGS 2545 Regional Airlines  
UCF  
MSB 260  
  
Pay to the order of:  
  
Fern Garner  
37 Gartner Court  
Ballston Spa, NY 12020  
  
In the amount of:  
  
$1720.00  
  
*** Pay will be deposited into account number provided ***  
-----
```

Figure 5 Fern Garner Deposit

From:

CGS 2545 Regional Airlines
UCF
MSB 260

Pay to the order of:

Oliwier Barnett
81 Cedar Swamp St.
Vicksburg, MS 39180

In the amount of:

\$645.00

*** Pay will be deposited into account number provided ***

Figure 6 Oliwier Barnett Deposit

From:

CGS 2545 Regional Airlines
UCF
MSB 260

Pay to the order of:

Nico Prince
20 Middle River Street
Willoughby, OH 44094

In the amount of:

\$1680.00

*** Pay will be deposited into account number provided ***

Figure 7 Nico Prince Deposit

```
-----  
From:  
  
CGS 2545 Regional Airlines  
UCF  
MSB 260  
  
Pay to the order of:  
  
Kaya Hodge  
9572 William Lane  
Noblesville, IN 46060  
  
In the amount of:  
  
$1806.00  
  
*** Pay will be deposited into account number provided ***  
-----
```

Figure 8 Kaya Hodge Deposit

```
-----  
From:  
  
CGS 2545 Regional Airlines  
UCF  
MSB 260  
  
Pay to the order of:  
  
Brodie Gordon  
71 Jackson Ave.  
Noblesville, IN 46060  
  
In the amount of:  
  
$2030.00  
  
*** Pay will be deposited into account number provided ***  
-----
```

Figure 9 Brodie Gordon Deposit

From:

CGS 2545 Regional Airlines
UCF
MSB 260

Pay to the order of:

Mathew Horton
1 Rockland Ave.
Noblesville, IN 46060

In the amount of:

\$2030.00

*** Pay will be deposited into account number provided ***

Figure 10 Mathew Horton Deposit

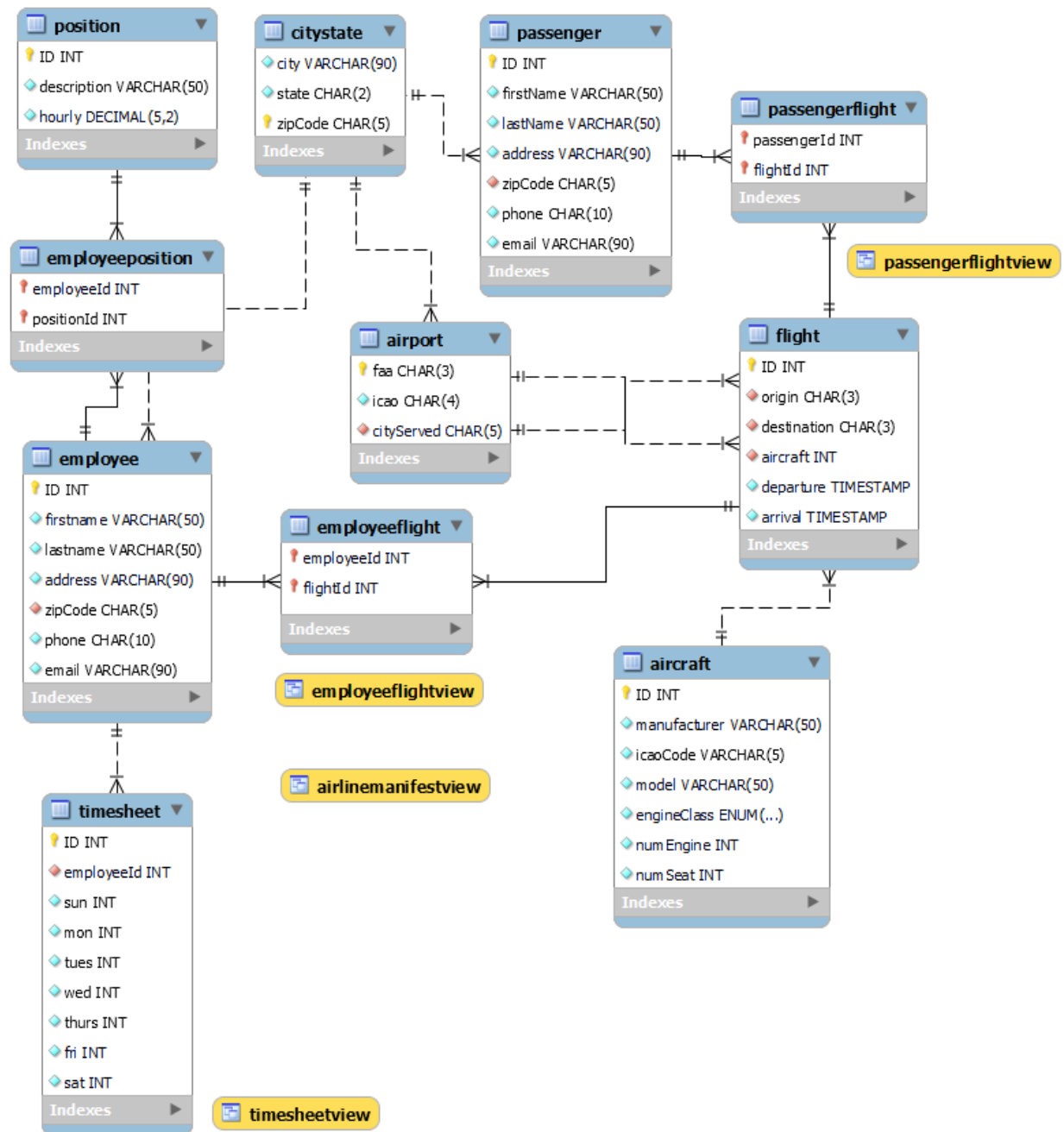


Figure 11 ER Diagram