University of Central Florida

DEPARTMENT OF ELECTRICAL ENGINEERING & COMPUTER SCIENCE

COMPUTER SCIENCE DIVISION

CGS 2545 Database Concepts

Assignment 11
Cruise Database Project
Due, Sunday, April 23, 2023 for maximum 100%
Monday, April 24, 2023 for maximum 90%
Tuesday, April 25, 2023 for maximum 80%
Wednesday, April 26, 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. **IMPORTANT!**
   An exported SQL file using MySQL Workbench Data Export option. The file name should be the following format: FirstnameLastnameAssignment#.sql. Example: KarinMarkleAssignment2.sql.
   Be sure to check option "Dump Stored Procedures and Functions", see Figure 12!
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. Use database **cruise**.
2. Write a stored procedure.
3. Generate an ER diagram.

Resources

1. payCheckTemplate.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 **cruise**
1. Create stored procedure **payCheck** to do the following a. Set the delimiter to **$$** b. Parameter list includes i. IN **crewNum** INT ii. INOUT **salary** VARCHAR(4000) c. Declare the following variables i. v_**finished** integer DEFAULT 0 ii. **v_lines** varchar(100) DEFAULT " ---------- ---------- " iii. **v_cFirst** varchar(100) DEFAULT "" iv. **v_cLast** varchar(100) DEFAULT "" v. **v_cAddress** varchar(100) DEFAULT "" vi. **v_cCity** varchar(100) DEFAULT ""; vii. **v_cState** varchar(100) DEFAULT "" viii. **v_cZip** 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_pay** decimal(8,2) DEFAULT 0.0 d. Declare cursor **crew_cursor** for the following join query i. Select 1. **firstName** from table **crew** 2. **lastName** from table **crew** 3. **address** from table **crew** 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 **crewId** in table **timesheet** equals the value in parameter **crewNum** e. Declare continue exception handler for not found set variable **v_finished** equal to 1 f. Open cursor **crew_cursor** g. Loop through the **crew_cursor**, using loop label **get_crew** i. Fetch **crew_cursor** into variables 1. **v_cFirst**

2. **v_cLast**
3. **v_cAddress**
4. **v_cCity**
5. **v_cState**
6. **v_cZip**
7. **v_tHours**
8. **v_pHourly**

ii. Check if variable **v_finished** equals 1; if true, leave the loop using the loop label **get_crew**
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 crew's salary check using an **IF/ELSEIF** decision-making construct based on the following business logic
a. If the crew's hours (i.e., **v_tHours**) are less than or equal to **40 then**
i. **set v_pay** equal to the **hours** multiplied by the **hourly** rate
b. Else If the crew'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_pay** equal to the crew's **40** hours multiplied by their hourly rate (i.e., **v_pHourly**)
iii. **set v_pay** equal to **v_pay** plus **v_overtime**
2. Set INOUT parameter **salary** equal to concatenated
a. **salary**
b. '\From:\n'
3. Set INOUT parameter **salary** equal to concatenated
a. **salary**
b. '\nCGS 2545 Cruiselines\n'
4. Set INOUT parameter **salary** equal to concatenated
a. **salary**
b. '\UCF\n'
5. Set INOUT parameter **salary** equal to concatenated
a. **salary**
b. '\MSB 260\n\n'
6. Set INOUT parameter **salary** equal to concatenated
a. **salary**
b. 'Pay to the order of:\n\n'
7. Set INOUT parameter **salary** equal to concatenated
a. **salary**
b. v_cFirst
c. ' '
d. v_cLast
e. '\n'
8. Set INOUT parameter **salary** equal to concatenated

a. **salary**
b. v_cAddress
c. '\n'

9. Set INOUT parameter **salary** equal to concatenated
    a. **salary**
    b. v_cCity
    c. ', '
    d. v_cState
    e. ' '
    f. v_cZip
    g. '\n'
10. Set INOUT parameter **salary** equal to concatenated
    a. **salary**
    b. 'In the amount of:\n\n'
11. Set INOUT parameter **salary** equal to concatenated
    a. **salary**
    b. '$'
    c. v_pay
    d. '\n'
12. Set INOUT parameter **salary** equal to concatenated
    a. **salary**
    b. '\n'
    c. v_lines
    d. '\n'

h. End the loop using the loop label **get_crew**
i. Close the stored cursor **crew_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 **@salary** equal to **“”**
    b. Call stored procedure passing arguments
        a. **crewId** from table **timesheet**
        b. **@salary** session variable
    c. Select **@salary**
3. Generate an ER Diagram using MySQL Workbench, save as a .mwb file
4. Export database **cruise** 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 **payCheck** for crew Ty Bell, should look like Figure 1
Test Case 2	Call stored procedure **payCheck** for crew Oliwier Barnett, should look like Figure 2
Test Case 3	Call stored procedure **payCheck** for crew Rebekah Morgan, should look like Figure 3
Test Case 4	Call stored procedure **payCheck** for crew Krystal Walters, should look like Figure 4

Test Case 5	Call stored procedure **payCheck** for crew Kaya Hodge, should look like Figure 5
Test Case 6	Call stored procedure **payCheck** for crew Paris Solis, should look like Figure 6
Test Case 7	Call stored procedure **payCheck** for crew Umaiza Heath, should look like Figure 7
Test Case 8	Call stored procedure **payCheck** for crew Floyd Johns, should look like Figure 8
Test Case 9	Call stored procedure **payCheck** for crew Jemima Miller, should look like Figure 9
Test Case 10	Call stored procedure **payCheck** for crew Raja Glass, should look like Figure 10
Test Case 11	ER Diagram should look like Figure 11

Figure 1 Ty Bell Salary

Figure 2 Oliwier Barnett Salary

Figure 3 Rebekah Morgan Salary

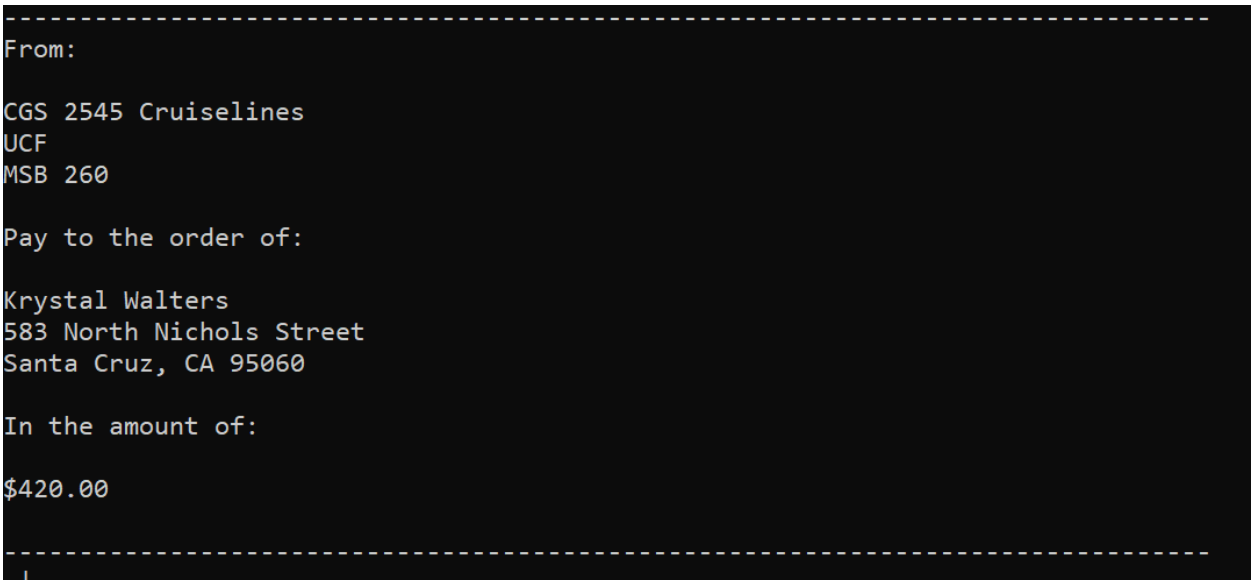

Figure 4 Krystal Walters Salary

```
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From:

CGS 2545 Cruiselines
UCF
MSB 260

Pay to the order of:

Kaya Hodge
9572 William Lane
Noblesville, IN 46060

In the amount of:

$588.00

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Figure 5 Kaya Hodge Salary

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From:

CGS 2545 Cruiselines
UCF
MSB 260

Pay to the order of:

Paris Solis
763 West Mulberry St
Battle Creek, MI 49016

In the amount of:

$645.00

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Figure 6 Paris Solis Salary

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From:

CGS 2545 Cruiselines
UCF
MSB 260

Pay to the order of:

Umaiza Heath
545 Ohio Ave
Scottsdale, AZ 85260

In the amount of:

$1400.00

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Figure 7 Umaiza Heath Salary

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From:

CGS 2545 Cruiselines
UCF
MSB 260

Pay to the order of:

Floyd Johns
2 Shore Street
Trumbull, CT 06611

In the amount of:

$420.00

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Figure 8 Floyd Johns Salary

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From:

CGS 2545 Cruiselines
UCF
MSB 260

Pay to the order of:

Jemima Miller
9290 Indian Spring Rd.
Indian Trail, NC 28079

In the amount of:

$980.00

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Figure 9 Jemima Miller Salary

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From:

CGS 2545 Cruiselines
UCF
MSB 260

Pay to the order of:

Raja Glass
7918 Talbot Ave.
Chillicothe, OH 45601

In the amount of:

$800.00

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Figure 10 Raja Glass Salary

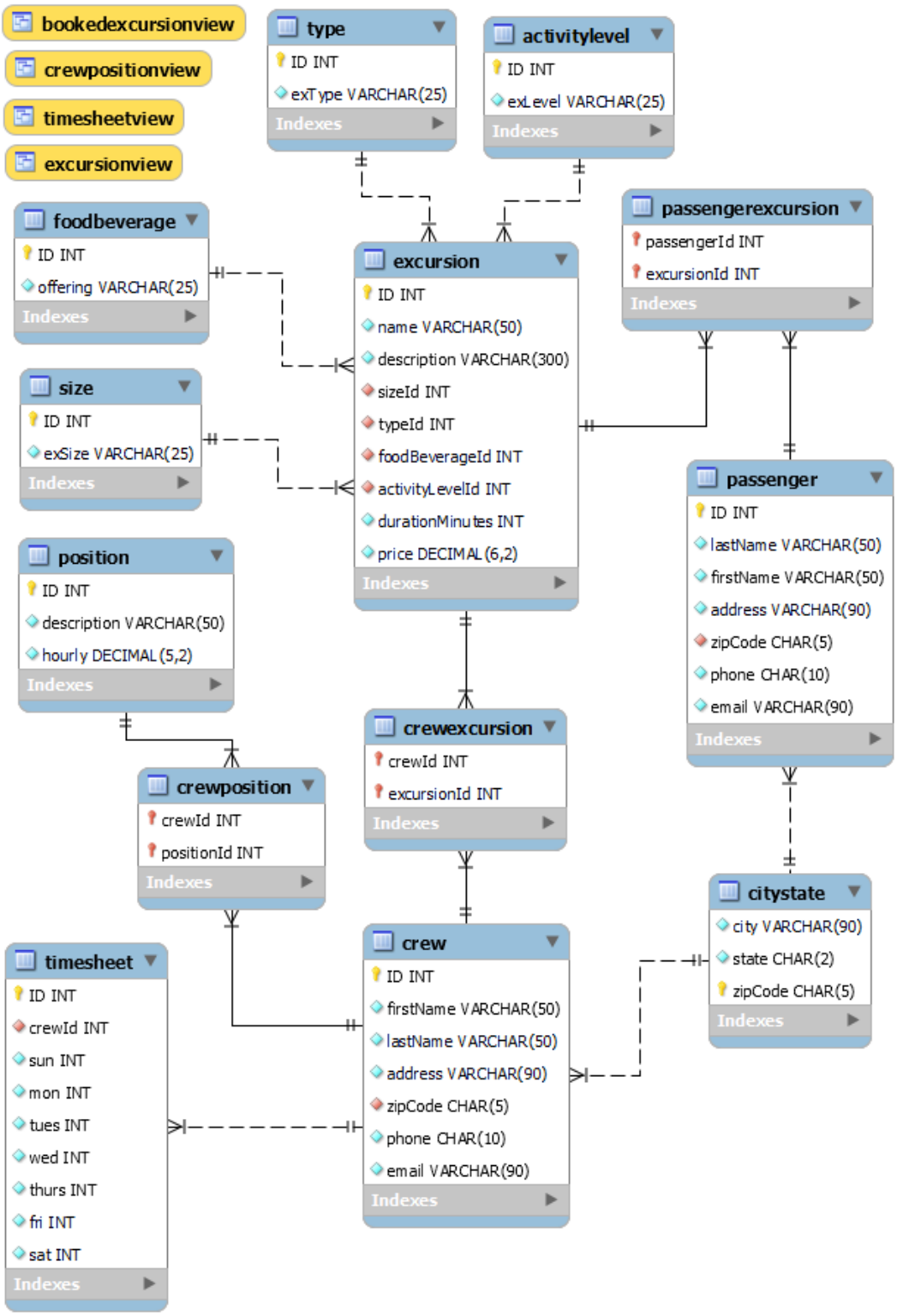

Figure 11 ER Diagram

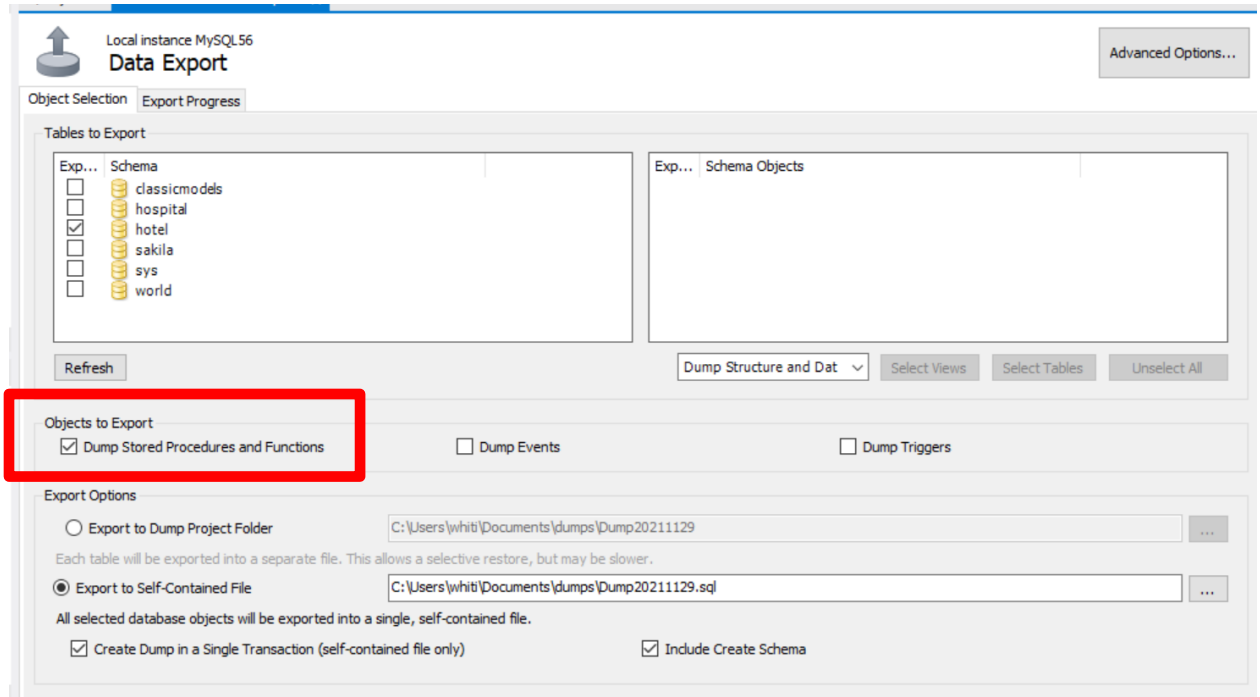

Figure 12 MySQL Workbench Data Export