

Department of Information Systems and Technologies
CTIS259 Database Management Systems and Applications
2025 – 2026 Fall Semester

Lab Guide 12

Instructor : Nimet Ceren SERİM

Week: 9

Assistant : Engin Zafer KIRAÇBEDEL, Hatice Zehra YILMAZ

Date: 10-11.11.2025

Aim of this lab session:

1. Student Database Queries
2. Music Store Database

ORACLE Server Configurations:

IP Address: 139.179.33.231

Port number: 1522

SID: orclctis

Please use Student (fStudentID) accounts !

PART-I

Today, we will practice with the Student Database. If you haven't created the Student database yet, you can download the studentDB.zip file from Moodle. After downloading, create tables and insert data into them using the given scripts.

STUDENT

<u>STUID</u>	STNAME	STSURNAME	CGPA	REG_DATE	GRAD_DATE
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COURSE

<u>CCODE</u>	CNAME	CREDIT
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STUCOURSE

<u>STU_ID</u>	<u>C_CODE</u>	<u>SEM</u>	GRADE
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SEMESTER

<u>SID</u>	<u>SEM</u>	GPA	STANDING
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Student Database Queries:

- List all the students and their letter grades with the courses they have taken in the semester 162;

<u>STNAME</u>	<u>STSURNAME</u>	<u>GRADE</u>	<u>CNAME</u>
MUGE	GONEN	B+	Algorithms and Data Structures

- List all the students who have taken more than 2 courses till now.

<u>STNAME</u>	<u>STSURNAME</u>	<u>COUNT(*)</u>
MUGE	GONEN	3
SERTAC	KOZAN	3

- List all the course names in which none of the students have taken "A";

<u>CNAME</u>
Introduction to Programming
Algorithms and Data Structures

- List the names of students who have never been a **Honour** or **High Honour**;

<u>R</u>	<u>STNAME</u>	<u>STSURNAME</u>
1	DAMLA	ASKIN
2	KEREM	BAYCAN
3	ALI	COSAR

- List the names of courses taken by more than 1 student;

CNAME	COUNT(*)
Database Management Systems and Applications	2
Discrete Mathematics	2
Object Oriented Programming	2

- List the names of courses who have been taken at least 1 High Honour student.

CNAME
Discrete Mathematics
Object Oriented Programming
Database Management Systems and Applications

- List the names of students who have taken higher CGPA than the average CGPA;

STNAME	STSURNAME
1 ALI	COSAR
2 SERTAC	KOZAN
3 DAMLA	ASKIN

- List the student names and number of how many times they have been "Honour" .

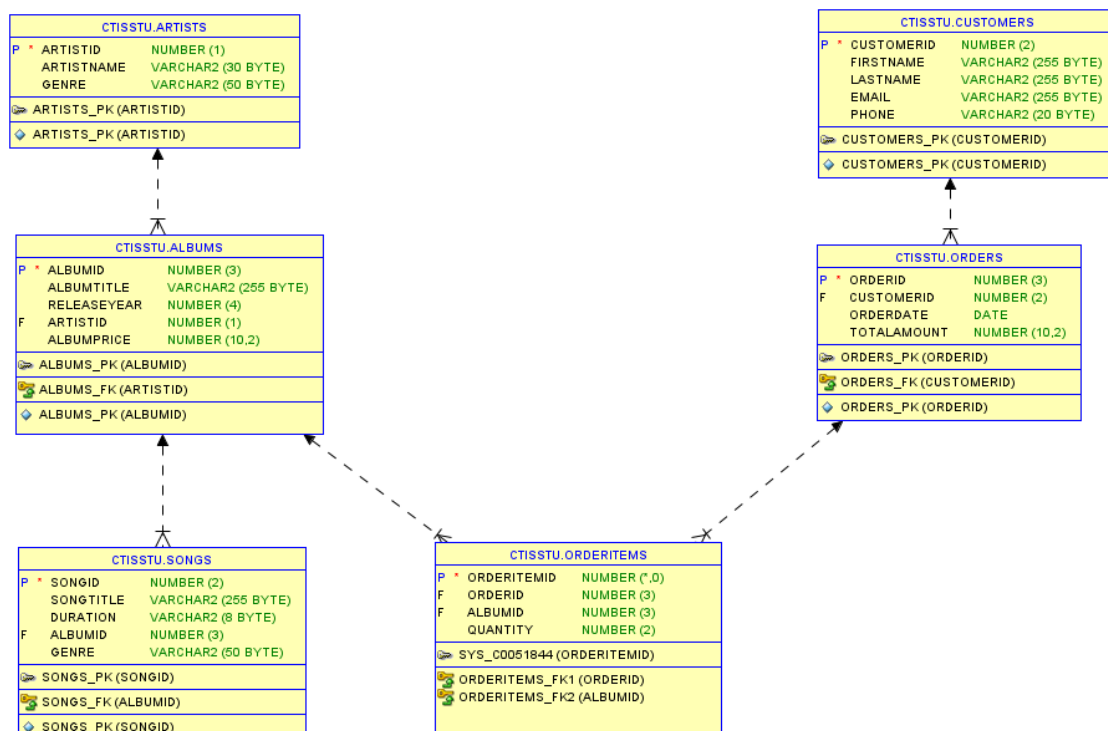
HONOUR_NUMBER	STNAME
2	MUGE

PART-II

Now, we will practice with the Music Store Database.

In this scenario, a customer places an order, selecting specific albums (songs) they want to purchase. Each album may belong to a different artist and have multiple songs. The database stores information about **customers**, **customer purchases**, **order details**, and the relationships between **artists**, **albums**, and **songs**.

To get started, download the **musicDB.zip** file from Moodle. You will find SQL scripts containing commands to create tables (DDL statements) for the following entities: **Artists**, **Albums**, **Songs**, **Customers**, **Orders**, and **OrderItems**. Additionally, there are data insertion statements. Execute these SQL scripts to create the database tables and insert data into them.



DATA IN THE TABLES

CUSTOMERS

	CUSTOMERID	FIRSTNAME	LASTNAME	EMAIL	PHONE
1	1	Alice	Johnson	alice@example.com	123-456-7890
2	2	Bob	Smith	bob@example.com	234-567-8901
3	3	Charlie	Brown	charlie@example.com	345-678-9012
4	4	David	Lee	david@example.com	456-789-0123
5	5	Eva	Williams	eva@example.com	567-890-1234
6	6	Frank	Davis	frank@example.com	678-901-2345
7	7	Grace	Taylor	grace@example.com	789-012-3456
8	8	Henry	Martin	henry@example.com	890-123-4567
9	9	Ivy	Johnson	ivy@example.com	901-234-5678
10	10	Jack	Anderson	jack@example.com	012-345-6789

ARTISTS

	ARTISTID	ARTISTNAME	GENRE
1	1	John Doe	Rock
2	2	Jane Smith	Pop
3	3	Michael Johnson	Hip Hop
4	4	Emily White	R&B
5	5	Chris Brown	Pop
6	6	Alex Turner	Rock
7	7	Alicia Keys	R&B

ALBUMS

	ALBUMID	ALBUMTITLE	RELEASEYEAR	ARTISTID	ALBUMPRICE
1	111	Sample Album 1	2022	1	12.99
2	222	Pop Hits 2023	2023	2	8.99
3	333	Hip Hop Revolution	2021	3	11.25
4	444	R&B Soulful	2020	4	15.4
5	555	Greatest Hits	2019	5	5.2
6	666	Rock Classics	2018	6	14.15
7	777	R&B Anthems	2017	7	10.75
8	888	Sample Album 2	2023	1	8.95
9	999	Rap Revolution	2023	3	11.5

SONGS

	SONGID	SONGTITLE	DURATION	ALBUMID	GENRE
1	1	Rock Anthem	04:15	111	Rock
2	2	Pop Ballad	03:50	222	Pop
3	3	Hip Hop Groove	03:30	333	Hip Hop
4	4	R&B Love Song	04:05	444	R&B
5	5	Pop Dance	03:20	555	Pop
6	6	Rock Ballad	05:00	666	Rock
7	7	R&B Slow Jam	04:30	777	R&B
8	8	Pop Sensation	03:45	888	Pop
9	9	Hip Hop Groove	03:15	999	Hip Hop
10	10	Pop Grooves	03:25	111	Pop
11	11	Rock Revolution	04:10	222	Rock
12	12	Hip Hop Hustle	03:45	333	Hip Hop

ORDERS

	ORDERID	CUSTOMERID	ORDERDATE	TOTALAMOUNT
1	101	1	15-JAN-22	21.98
2	202	2	20-FEB-23	22.5
3	303	2	25-MAR-22	15.4
4	404	4	10-APR-23	15.6
5	505	5	05-MAY-23	56.6
6	606	6	18-JUN-23	21.5
7	707	5	10-MAY-23	21.5

ORDERITEMS

	ORDERITEMID	ORDERID	ALBUMID	QUANTITY
	1	101	111	1
	2	101	222	1
	3	202	333	2
	4	303	444	1
	5	404	555	3
	6	505	666	4
	7	606	777	2
	8	707	777	2

QUERIES

Q1. List all albums released in 2023.

	ALBUMTITLE	ARTISTNAME
1	Pop Hits 2023	Jane Smith
2	Sample Album 2	John Doe
3	Rap Revolution	Michael Johnson

Q2. List all artists who have albums in both the Rock OR Pop genres.

	ARTISTNAME
1	Jane Smith
2	Chris Brown
3	John Doe
4	Alex Turner

Q3. Find the total number of songs in each album.

	ALBUMTITLE	TOTALSONGS
1	Rap Revolution	1
2	Greatest Hits	1
3	R&B Anthems	1
4	Sample Album 1	2
5	R&B Soulful	1
6	Pop Hits 2023	2
7	Hip Hop Revolution	2
8	Rock Classics	1
9	Sample Album 2	1

Q4. List all albums and their total sales amount.

	ALBUMTITLE	TOTALSALESAMOUNT
1	Greatest Hits	15.6
2	R&B Anthems	43
3	Sample Album 1	12.99
4	R&B Soulful	15.4
5	Pop Hits 2023	8.99
6	Hip Hop Revolution	22.5
7	Rock Classics	56.6

Q5. Find the total sales amount for each genre.

	GENRE	TOTALSALESAMOUNT
1	Pop	37.58
2	Hip Hop	45
3	Rock	78.58
4	R&B	58.4

Q6. List all customers who made purchases in the year 2023.

	FIRSTNAME	LASTNAME
1	Bob	Smith
2	David	Lee
3	Frank	Davis
4	Eva	Williams

Q7. Calculate the average price of albums in each genre.

	GENRE	AVGALBUMPRICE
1	Pop	9.03
2	Hip Hop	11.33
3	Rock	12.04
4	R&B	13.08

Q8. List albums that have sold more than 2 units, sorted in descending order based on total quantity sold.

	ALBUMTITLE	TOTALQUANTITYSOLD
1	R&B Anthems	4
2	Rock Classics	4
3	Greatest Hits	3

Q9. Find the customers who made more than one purchase and the total number of their purchases.

	FIRSTNAME	LASTNAME	TOTALPURCHASES
1	Bob	Smith	2
2	Eva	Williams	2

Q10. Display the albums that are not bought by any customer.

	ALBUMID	ALBUMTITLE
1	888	Sample Album 2
2	999	Rap Revolution

Q11. Display the artist names and the total revenue for each artist.

	ARTISTNAME	TOTALREVENUE
1	Michael Johnson	22.5
2	Emily White	15.4
3	Jane Smith	8.99
4	Chris Brown	15.6
5	Alicia Keys	43
6	John Doe	12.99
7	Alex Turner	56.6

Q12. Modify the previous query to display the total revenue for artists who earn more than 'Emily White'.

	ARTISTNAME	TOTALREVENUE
1	Michael Johnson	22.5
2	Chris Brown	15.6
3	Alicia Keys	43
4	Alex Turner	56.6

Q13. List all customers who have made purchases, along with the total amount they spent.

	FIRSTNAME	LASTNAME	TOTALSPENT
1	Alice	Johnson	21.98
2	Bob	Smith	37.9
3	David	Lee	15.6
4	Frank	Davis	21.5
5	Eva	Williams	78.1

Q14. Find the customers who have spent more than the average total amount spent by all customers.

	FIRSTNAME	LASTNAME
	Bob	Smith
	Eva	Williams

Q15. List all artists who have albums in both the Rock AND Pop genres.

	ARTISTNAME
1	Jane Smith
2	John Doe