



MIDDLE EAST TECHNICAL UNIVERSITY
NORTHERN CYPRUS CAMPUS

DEPARTMENT
OF COMPUTER ENGINEERING

CNG 351
Data Management and File Structures
Assignment 4

Team Details

Member 1

Name: Mert Can
Surname: Bilgin
Student ID: 2453025

Member 2

Name: Hami
Surname: Karşı
Student ID: 2453322

Use Case 1 – FindJob

Queries:

1. List the id, name, surname and telephone number of all members in the system.

```
SQL> SELECT member_id, name, surname, tel FROM Member;
```

| MEMBER_ID | NAME | SURNAME | TEL |
|-----------|--------|-----------|------------|
| 4094 | Lesley | Glison | 3157117898 |
| 1333 | Teddy | Studdeard | 4374040869 |
| 9888 | Gale | Etty | 2594272038 |
| 7324 | Katti | Broggini | 9195006297 |
| 3088 | Yeliz | Yesilada | 5905773542 |

2. List the name and the date of creation of the groups that are “Unlisted”(type) and created by the member with the ID of 1333.

```
SQL> SELECT group_name, creation_date FROM GroupInfo WHERE group_type = 'Unlisted' and created_by = 1333;
```

| GROUP_NAME | CREATION_ |
|------------|-----------|
| Education | 13-JUN-16 |

3. List the name, surname, and email address of the Members who created Standard groups after the 1st of January 2022.

```
SQL> SELECT name, surname, email  
2 FROM Member  
3 WHERE member_id IN (SELECT created_by FROM GroupInfo WHERE group_type = 'Standard' AND creation_date > DATE'2022-01-01');
```

| NAME | SURNAME |
|---------------------------------|-----------|
| Teddy | Studdeard |
| tstuddeard6@theglobeandmail.com | |
| Katti | Broggini |
| kbroggini8@photobucket.com | |

4. We would like to display all the posts (listing their title and content) that are made by all the connections of the member called “Yeliz Yesilada”.

```
SQL> SELECT title, content
2 FROM Post
3 WHERE posted_by IN(SELECT connection_member_id FROM ConnectionList WHERE
4 member_id = (SELECT member_id FROM Member WHERE name = 'Yeliz' AND surname = 'Yesilada'));

TITLE
-----
CONTENT
-----
Winning
If winning is not everything...why do we keep score?

Jave programming codeGO
This competition where all contest fosters creativity, teamwork, and innovation
in building new software programs, and enables students to test their ability to
perform under pressure.
```

5. There is a company called“Curiosity” and this company would like to receive a report that shows the list of employee names (name/surname) that has created a group, the name of that group and also the manager name/surname of that group.

```
SQL> SELECT M.name, M.surname, G.group_name, Mng.name, Mng.surname
2 FROM Member M
3 JOIN GroupInfo G ON M.member_id = G.created_by
4 JOIN Member Mng ON G.manager_id = Mng.member_id
5 WHERE M.company_id = (SELECT company_id FROM Company WHERE companyname = 'Curiosity');

NAME                SURNAME                GROUP_NAME
-----
NAME                SURNAME
-----
Katti                Broggini                Art
Katti                Broggini
Katti                Broggini                Next Sports
Lesley               Glison
```

6. There is an assessment in the system named as “Introduction to Phyton”. We would like to list the name/surname of the members and how many times they took this assessment.

```
SQL> SELECT M.name, M.surname, COUNT(M.member_id)
  2 FROM AssessmentTaken A1, Assessment A2, Member M
  3 WHERE A2.name = 'Introduction to Phyton' AND A1.assessment_id = A2.assessment_id
  4 AND A1.member_id = M.member_id
  5 GROUP BY M.member_id, M.name, M.surname;
```

| NAME | SURNAME | COUNT(M.MEMBER_ID) |
|-------|-----------|--------------------|
| Teddy | Studdeard | 3 |
| Katti | Broggini | 1 |

Use Case 2 – NCCCloud

Content of the Tables:

User:

```
SQL> SELECT * FROM Users
  2 ;
```

| USERNAME | NAME | SURNAME | EMAIL | DOB |
|-------------|-------|----------|-----------------------|-----------|
| nheinritz0 | Nil | Heinritz | nheinritz@gmail.com | 24-JUN-97 |
| ssolan5 | Salim | Sloan | ssolan5@gmail.com | 24-JUN-97 |
| mrozenbaum1 | Rozen | Baum | mrozenbaum1@gmail.com | 06-MAR-90 |

| USERNAME | NAME | SURNAME | EMAIL | DOB |
|----------|-------|---------|-------------------|-----------|
| irevie3 | David | Irevie | irevie3@gmail.com | 22-MAY-98 |

Subscription:

```
SQL> SELECT * FROM Subscription;
```

| SUBSCRIPTION_ID | | TYPE |
|-----------------|---------------|------|
| MONTHLY_PRICE | PAYMENT_TYPE | |
| 1 | | high |
| 450 | credit-card | |
| 2 | | mid |
| 350 | PayPal | |
| 3 | | low |
| 150 | bank-transfer | |

| SUBSCRIPTION_ID | | TYPE |
|-----------------|--------------|------|
| MONTHLY_PRICE | PAYMENT_TYPE | |
| 4 | | high |
| 450 | credit-card | |
| 5 | | low |
| 450 | credit-card | |

UserSubscription:

```
SQL> SELECT * FROM UserSubscription;
```

```
USERNAME
```

```
-----  
SUBSCRIPTION_ID
```

```
START_DAT  END_DATE
```

```
-----  
nheinritz0
```

```
1
```

```
18-FEB-21  18-OCT-21
```

```
ssolan5
```

```
2
```

```
23-MAY-22  23-MAY-22
```

```
mrozenbaum1
```

```
3
```

```
03-DEC-22  03-JUN-23
```

```
USERNAME
```

```
-----  
SUBSCRIPTION_ID
```

```
START_DAT  END_DATE
```

```
-----  
irevie3
```

```
5
```

```
11-APR-21  31-DEC-23
```

```
nheinritz0
```

```
4
```

```
19-OCT-21  19-OCT-22
```

Computer:

```
SQL> SELECT * FROM Computer;
```

| ID | PRICE |
|---------------------------------|---------------------|
| CPU | |
| GPU | TIME_BOUG MAINTENAN |
| 1 | 12000 |
| AMD Ryzen 3 4100 Processor | |
| Nvidia GTX 1650 | 15-MAR-21 21-DEC-21 |
| 2 | 36000 |
| Intel® Core i7-12700F Processor | |
| Nvidia RTX 3080 | 27-JAN-22 30-JUN-22 |
| ID | PRICE |
| CPU | |
| GPU | TIME_BOUG MAINTENAN |
| 3 | 66000 |
| Intel® Core i9-12900K Processor | |
| Nvidia RTX 3090 | 06-MAY-22 06-NOV-22 |
| 4 | 12000 |
| AMD Ryzen 3 4100 Processor | |
| ID | PRICE |
| CPU | |
| GPU | TIME_BOUG MAINTENAN |
| Nvidia GTX 1650 | 15-MAR-21 21-DEC-21 |

| | |
|---------------------------------|---------------------|
| 5 | 36000 |
| Intel® Core i7-12700F Processor | |
| Nvidia RTX 3080 | 27-JAN-22 30-JUN-22 |
| 6 | 66000 |
| ID | PRICE |
| CPU | |
| GPU | TIME_BOUG MAINTENAN |
| Intel® Core i9-12900K Processor | |
| Nvidia RTX 3090 | 06-MAY-22 06-NOV-22 |
| 7 | 12000 |
| AMD Ryzen 3 4100 Processor | |
| Nvidia GTX 1650 | 15-MAR-21 21-DEC-21 |
| ID | PRICE |
| CPU | |
| GPU | TIME_BOUG MAINTENAN |
| 8 | 66000 |
| Intel® Core i9-12900K Processor | |
| Nvidia RTX 3090 | 06-MAY-22 06-NOV-22 |
| 9 | 36000 |
| Intel® Core i7-12700F Processor | |
| Nvidia RTX 3080 | 27-JAN-22 30-JUN-22 |
| ID | PRICE |
| CPU | |
| GPU | TIME_BOUG MAINTENAN |

| | |
|---------------------------------|---------------------|
| 10 | 12000 |
| AMD Ryzen 3 4100 Processor | |
| Nvidia GTX 1650 | 15-MAR-21 21-DEC-21 |
| 11 | 66000 |
| Intel® Core i9-12900K Processor | |
| ID | PRICE |
| CPU | |
| GPU | TIME_BOUG MAINTENAN |
| Nvidia RTX 3090 | 06-MAY-22 06-NOV-22 |
| 12 | 36000 |
| Intel® Core i7-12700F Processor | |
| Nvidia RTX 3080 | 27-JAN-22 30-JUN-22 |
| 13 | 66000 |
| ID | PRICE |
| CPU | |
| GPU | TIME_BOUG MAINTENAN |
| Intel® Core i9-12900K Processor | |
| Nvidia RTX 3090 | 06-MAY-22 06-NOV-22 |
| 14 | 66000 |
| Intel® Core i9-12900K Processor | |
| Nvidia RTX 3090 | 06-MAY-22 06-NOV-22 |

| | |
|---------------------------------|---------------------|
| 14 | 66000 |
| Intel® Core i9-12900K Processor | |
| Nvidia RTX 3090 | 06-MAY-22 06-NOV-22 |
| ID | PRICE |
| CPU | |
| GPU | TIME_BOUG MAINTENAN |
| 15 | 36000 |
| Intel® Core i7-12700F Processor | |
| Nvidia RTX 3080 | 27-JAN-22 30-JUN-22 |
| 16 | 66000 |
| Intel® Core i9-12900K Processor | |
| Nvidia RTX 3090 | 06-MAY-22 06-NOV-22 |
| ID | PRICE |
| CPU | |
| GPU | TIME_BOUG MAINTENAN |
| 17 | 36000 |
| Intel® Core i7-12700F Processor | |
| Nvidia RTX 3080 | 27-JAN-22 30-JUN-22 |
| 18 | 36000 |
| Intel® Core i7-12700F Processor | |
| ID | PRICE |
| CPU | |
| GPU | TIME_BOUG MAINTENAN |
| Nvidia RTX 3080 | 27-JAN-22 30-JUN-22 |

Game:

```
SQL> SELECT * FROM Game;
```

```
GAME_ID
```

```
GAME_NAME
```

```
GAME_DESCRIPTION
```

```
1
```

```
God of War: Ragnarok
```

```
God of War Ragnarok is an action-adventure game developed by Santa Monica Studio and published by Sony Interactive Entertainment. It was released worldwide on November 9, 2022, for the PlayStation 4 and PlayStation 5, marking the first cross-gen release in the God of War series.
```

```
GAME_ID
```

```
GAME_NAME
```

```
GAME_DESCRIPTION
```

```
2
```

```
Cyberpunk 2077
```

```
Cyberpunk 2077 is an action role-playing video game developed by CD Projekt Red and published by CD Projekt. The story takes place in Night City, an open world set in the Cyberpunk universe.
```

```
3
```

```
GAME_ID
```

```
GAME_NAME
```

```
GAME_DESCRIPTION
```

```
Assassin's Creed Valhalla
```

```
Assassin's Creed Valhalla is a 2020 action role-playing video game developed by Ubisoft Montreal and published by Ubisoft. It is the twelfth major installment in the Assassin's Creed series, and the successor to 2018's Assassin's Creed Odyssey.
```

```
4
```

```
GAME_ID
```

```
GAME_NAME
```

```
GAME_DESCRIPTION
```

```
The Witcher 3: Wild Hunt
```

```
The Witcher 3: Wild Hunt is a 2015 action role-playing game developed and published by CD Projekt. It is the sequel to the 2011 game The Witcher 2: Assassins of Kings and the third game in The Witcher video game series, played in an open world with a third-person perspective.
```

```
5
```

```
GAME_ID
```

```
GAME_NAME
```

```
GAME_DESCRIPTION
```

```
Don't Starve Together
```

```
Don't Starve Together is the standalone multiplayer expansion of the uncompromising wilderness survival game, Don't Starve. Now including Reign of Giants; adding new characters, seasons, creatures, biomes, and Giant new challenges to Don't Starve Together.
```

```
6
```

```
GAME_ID
```

```
GAME_NAME
```

```
GAME_DESCRIPTION
```

```
We Were Here Together
```

```
Embark on a puzzle solving adventure in which you and a partner must prove you can communicate and work together to escape the haunted Castle Rock.
```


Library:

```
SQL> SELECT * FROM Library;
```

| LIBRARY_CONNECTION_TOKEN | | |
|--------------------------|--|--------------|
| ----- | | |
| USERNAME | | LIBRARY_NAME |
| ----- | | ----- |
| 044e61f9d672 | | |
| nheinritz0 | | Steam |
| 9f9d8e6173ea | | |
| ssolan5 | | Epic Games |
| 074a94021595 | | |
| mrozenbaum1 | | Steam |

| LIBRARY_CONNECTION_TOKEN | | |
|--------------------------|--|--------------|
| ----- | | |
| USERNAME | | LIBRARY_NAME |
| ----- | | ----- |
| 881cd083a7c2 | | |
| irevie3 | | Steam |
| 1e89613783dd | | |
| irevie3 | | Epic Games |

LibraryGame:

```
SQL> SELECT * FROM LibraryGame;
```

```
LIBRARY_CONNECTION_TOKEN
```

```
-----  
GAME_ID
```

```
-----  
044e61f9d672
```

```
1
```

```
044e61f9d672
```

```
3
```

```
044e61f9d672
```

```
4
```

```
LIBRARY_CONNECTION_TOKEN
```

```
-----  
GAME_ID
```

```
-----  
074a94021595
```

```
4
```

```
074a94021595
```

```
5
```

```
074a94021595
```

```
6
```

```
LIBRARY_CONNECTION_TOKEN
```

```
-----  
GAME_ID
```

```
-----  
1e89613783dd
```

```
2
```

```
1e89613783dd
```

```
3
```

```
881cd083a7c2
```

```
1
```

```
LIBRARY_CONNECTION_TOKEN
```

```
-----  
GAME_ID
```

```
-----  
881cd083a7c2
```

```
4
```

```
9f9d8e6173ea
```

```
2
```

```
11 rows selected.
```

PlaySession:

```
SQL> SELECT * FROM PlaySession;

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
1
4
044e61f9d672

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
10-OCT-22 01.50.00.000000 PM
10-OCT-22 03.50.00.000000 PM

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
2
```

```
GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
08-NOV-22 06.36.00.000000 PM
08-NOV-22 11.06.00.000000 PM

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
6
6
074a94021595

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
23-APR-22 09.50.00.000000 AM
08-NOV-22 12.53.00.000000 PM
```

```
GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
3
3
1e89613783dd

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
18-OCT-22 09.38.00.000000 PM
18-OCT-22 10.01.00.000000 PM

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
3
1
044e61f9d672
```

```
GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
14-OCT-22 01.50.00.000000 PM
14-OCT-22 03.50.00.000000 PM

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
2
10
9f9d8e6173ea

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
23-APR-22 09.50.00.000000 AM
23-APR-22 01.53.00.000000 PM
```

```

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
5
12
074a94021595

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
16-OCT-22 01.58.00.000000 PM
16-OCT-22 03.47.00.000000 PM

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
4
8
881cd083a7c2

```

```

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
4
19
044e61f9d672

GAME_ID
-----
COMPUTER_ID
-----
LIBRARY_CONNECTION_TOKEN
-----
START_DATE_TIME
-----
END_DATE_TIME
-----
13-NOV-22 10.10.00.000000 PM
14-NOV-22 12.26.00.000000 AM

9 rows selected.

```

Queries:

1. List the username, name, surname and email address of all users in the system.

```
SQL> SELECT username, name, surname, email FROM Users;
```

```

USERNAME
-----
NAME
-----
SURNAME
-----
EMAIL
-----
nheinritz0
Nil
Heinritz
nheinritz0@gmail.com

USERNAME
-----
NAME
-----
SURNAME
-----
EMAIL
-----
ssolan5
Salim
Sloan
ssolan5@gmail.com

USERNAME
-----
NAME
-----
SURNAME
-----
EMAIL
-----
mrozenbaum1
Rozen
Baum
mrozenbaum1@gmail.com

```

```

USERNAME
-----
NAME
-----
SURNAME
-----
EMAIL
-----
irevie3
David
Irevie
irevie3@gmail.com

```

2. List the price, cpu and gpu details of all computers that costed more than 15000 and were bought after the 30th of January 2022, and they have a maintenance date after 10th of June 2022.

```
SQL> SELECT price, cpu, gpu FROM Computer
  2  WHERE price > '15000' AND time_bought > TO_DATE('30/01/2022', 'DD/MM/YYYY') AND maintenance_date > TO_DATE('10/06/2022', 'DD/MM/YYYY');

PRICE
-----
CPU
-----
GPU
-----
66000
Intel® Core™ i9-12900K Processor
Nvidia RTX 3090

66000
Intel® Core™ i9-12900K Processor
Nvidia RTX 3090

PRICE
-----
CPU
-----
GPU
-----
66000
Intel® Core™ i9-12900K Processor
Nvidia RTX 3090

66000
Intel® Core™ i9-12900K Processor

PRICE
-----
CPU
-----
GPU
-----
Nvidia RTX 3090
```

```
66000
Intel® Core™ i9-12900K Processor

PRICE
-----
CPU
-----
GPU
-----
Nvidia RTX 3090

66000
Intel® Core™ i9-12900K Processor
Nvidia RTX 3090

66000

PRICE
-----
CPU
-----
GPU
-----
Intel® Core™ i9-12900K Processor
Nvidia RTX 3090

66000
Intel® Core™ i9-12900K Processor
Nvidia RTX 3090

7 rows selected
```

3. List the name and surname of all the users who have a subscription after the 1st of January 2022. We are interested in the starting date of the subscriptions.

```
SQL> SELECT name, surname FROM Users, UserSubscription
2  WHERE Users.username = UserSubscription.username AND
3  start_date > TO_DATE('01/01/2022','DD/MM/YYYY');
```

| NAME |
|---------|
| SURNAME |
| Salim |
| Sloan |
| Rozen |
| Baum |

4. List the name, surname and the ID of the games that are stored in the libraries of all users.

```
SQL> SELECT name, surname, Game.game_id
2  FROM Users, Library, LibraryGame, Game
3  WHERE Users.username = Library.username
4  AND Library.library_connection_token = LibraryGame.library_connection_token
5  AND LibraryGame.game_id = Game.game_id;
```

| NAME |
|----------|
| SURNAME |
| GAME_ID |
| Nil |
| Heinritz |
| 1 |
| Nil |
| Heinritz |
| 3 |
| NAME |
| SURNAME |
| GAME_ID |
| Nil |
| Heinritz |
| 4 |
| Rozen |
| Baum |
| NAME |
| SURNAME |
| GAME_ID |
| 4 |

```

Rozen
Baum
5

Rozen

NAME
-----
SURNAME
-----
GAME_ID
-----
Baum
6

David
Irevie
2

NAME
-----
SURNAME
-----
GAME_ID
-----
David
Irevie
3

David
Irevie
1

```

```

NAME
-----
SURNAME
-----
GAME_ID
-----

David
Irevie
4

Salim
Sloan

NAME
-----
SURNAME
-----
GAME_ID
-----
2

11 rows selected.

```

5. List the name, surname of all the users that played the game “Assassin’s Creed Valhalla” after the 17th of October. You need to list only the users who played with the Computer with a GPU of Nvidia RTX 3090.

```
SQL> SELECT name, surname
  2 FROM Users, PlaySession, Game, Library
  3 WHERE Library.library_connection_token = PlaySession.library_connection_token
  4 AND PlaySession.game_id = Game.game_id
  5 AND Users.username = Library.username
  6 AND Game.game_name = 'Assassin's Creed Valhalla'
  7 AND PlaySession.start_date_time > TO_DATE('17/10/2022', 'DD/MM/YYYY');

NAME
-----
SURNAME
-----
David
Irevie
```

6. List the name, surname of all users and their total play time for the game “Assassin’s Creed Valhalla”.

```
SQL> SELECT name, surname, SUM((CAST(end_date_time as date) - CAST(start_date_time as date))*1440)
  2 AS TotalPlayTimeinMinutes
  3 FROM Users LEFT JOIN Library
  4 ON Library.username = Users.username
  5 LEFT JOIN PlaySession
  6 ON Library.library_connection_token = PlaySession.library_connection_token
  7 LEFT JOIN Game
  8 ON PlaySession.game_id = Game.game_id
  9 WHERE Game.game_name = 'Assassin's Creed Valhalla'
 10 GROUP BY name, surname;

NAME
-----
SURNAME                                TOTALPLAYTIMEINMINUTES
-----
David
Irevie                                23

Nil
Heinritz                              120
```