EMU415 DBMS Homework1

AUTHOR
team_yes_sql

TEAM MEMBERS

```
# Retrieve and display team members' information
team_members <- dbGetQuery(con, "SELECT first_name, last_name, student_id FROM team_members")

print(team_members)
```

```
  first_name last_name student_id
1      Cemil      Neşe   21948303
2 Ömer Faruk    Çiftçi   21831151
3       Emre       Gül   21948121
4      Kerem    Kaplan   21948168
5      Beyza    Göktaş   21948102
6 Ahmet Taha  Karakaya   21948192
7 Hatice Nur     Güneş   21948135
```

QUESTION 5

- Find the total number of team members

```
SELECT COUNT(*) AS number_of_members FROM team_members;
```

1 records

number_of_members
7

- List team members by age from oldest to youngest.

```
SELECT member_id, first_name, last_name, student_id, age FROM team_members ORDER BY age DESC;
```

7 records

member_id	first_name	last_name	student_id	age
2	Ömer Faruk	Çiftçi	21831151	25
3	Emre	Gül	21948121	24
1	Cemil	Neşe	21948303	22
4	Kerem	Kaplan	21948168	22
5	Beyza	Göktaş	21948102	22
6	Ahmet Taha	Karakaya	21948192	22
7	Hatice Nur	Güneş	21948135	22

- Identify the range of expected graduation years within your team

```
SELECT DISTINCT graduation_year FROM team_members;
```

2 records

graduation_year
2024
2023

- Analyze the distribution of team members across different joining years

```
SELECT COUNT(*) AS joined_2018 FROM team_members WHERE join_year = 2018;
```

1 records

joined_2018
1

```
SELECT COUNT(*) AS joined_2019 FROM team_members WHERE join_year = 2019;
```

1 records

joined_2019
6

QUESTION 6

```
SELECT
    SHA1(CONCAT(
        COUNT(*),
        '-',
        MIN(graduation_year),
        '-',
        AVG(age)
    )) AS team_identifier
FROM
    team_members;
```

1 records

team_identifier
8165b97a6d0aca32fb2464198932d2c437ee9e0d

Cryptographic algorithms like SHA-1 are used in database management for various purposes, such as ensuring data integrity and security. For example, SHA-1 hashes can be computed for sensitive data like passwords before storing them in the database, making it difficult for attackers to recover the original passwords. Additionally, SHA-1 hashes can be used to verify the integrity of data stored in the database, ensuring that it has not been tampered with.