Reports for Project Queries

CS 370 Database Management Systems

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First, I answer questions that I pose for myself, then I answer queries based on the ones discussed in class.

#1

```
# What are the names of players who hit a home run in a game?
SELECT DISTINCT p.player_name
FROM player_info AS p
INNER JOIN individual_stats AS i ON p.player_id = i.player_id
WHERE i.home_runs > 0;
```

player_name
Frank
Mike
Jake

#2

```
# From what state is the team that has won the most games?
#  need to first make a game_winner column
ALTER TABLE game_stats
    ADD game_winner INT AS (CASE WHEN score_school_1 > score_school_2 THEN school_1
    WHEN score_school_2 > score_school_1 THEN school_2
    ELSE NULL
    END
    );
SELECT COUNT(game_winner) AS team1_wins
FROM game_stats
WHERE game_winner = 1;
SELECT COUNT(game_winner) AS team2_wins
FROM game_stats
WHERE game_winner = 2;
```

```
SELECT s.school_name, s.state_location, COUNT(*) AS win_count
FROM school_info AS s JOIN game_stats AS g
ON g.game_winner = s.school_id
GROUP BY g.game_winner,s.state_location,s.school_name;
```

school_name	state_location	win_count
Drew	New Jersey	3
Juniata	Pennsylvania	2

#3

```
# What are the positions and number of hits of players in the season's second game?
SELECT p.player_name, p.position, i.hits
FROM player_info as p LEFT JOIN individual_stats as i
ON p.player_id = i.player_id
AND i.game_id = 2
ORDER BY i.hits DESC;
```

player_name	position	hits
Mike	7	2
Dude	3	1
Jake	1	1
Joe	5	0
Frank	8	NULL
Cookie	6	NULL

#4

```
# What are player details and school details for players with more than 4 at bats in a single game?
SELECT s.school_name;
SELECT s.school_name, p.player_name, p.height,p.weight, i.at_bats,i.hits,i.game_id
FROM school_info AS s
    INNER JOIN player_info AS p
          ON s.school_id = p.school_id
    INNER JOIN individual_stats AS i
          ON p.player_id = i.player_id
    WHERE i.at_bats > 4;
```

school_name	player_name	height	weight	at_bats	hits	game_id
Drew	Jake	70	190	5	0	1
Drew	Frank	75	210	5	2	1
Drew	Jake	70	190	5	1	2
Juniata	Mike	65	154	5	2	4
Drew	Jake	70	190	5	2	5

#5

```sql
# What season, number of students, and number of wins does each school have in the database?
SELECT  ANY_VALUE(s.school_name) AS school_name,
        ANY_VALUE(s.season_year) AS season_year,
        ANY_VALUE(s.number_of_students) AS number_of_students,
        COUNT(*) AS win_count
FROM school_info AS s LEFT JOIN game_stats AS g
ON g.game_winner = s.school_id
GROUP BY g.game_winner;
```

school_name	season_year	number_of_stude...	win_count
Juniata	2023	1200	2
Drew	2023	2300	3
Wentworth	2023	3700	1

Now I answer the queries posed in class applicable to our database:

```
# 1
# Give a report that gives the count of the number of observations
# for each of the primary keys in each of the database tables
SELECT COUNT(school_id) AS num_schools FROM school_info;
SELECT COUNT(player_id) AS num_players FROM player_info;
SELECT DISTINCT COUNT(game_id) AS num_game1s FROM game_stats;
# I'm curious if you can combine these into 1 select statement?
```

num_schools
3

num_players
6

num_game1s
5

```
# 2
# Retrieve the last name of all employees where the employee ID is < 4
# Updated for our database:
# Retrieve the last name of all players where the player ID is < 4
SELECT player_name
FROM player_info
WHERE player_id < 4;
```

player_name
Joe
Mike
Dude

```sql
# A report with User_IDs only of people who are attending the same program.
# For other kinds of tables, User_ID only of individuals who have worked
# for a company for 5 years,
# produced a certain product, played on a specific team, etc.
# Updated for our database:
# Retrieve the player ids of players attending the same school
SELECT p.player_id, p.player_name, s.school_name
FROM player_info AS p JOIN school_info AS s
ON p.school_id = s.school_id
WHERE p.school_id = 1;
```

pl...	player_name	school_name
1	Joe	Juniata
2	Mike	Juniata
3	Dude	Juniata

```sql
# 4
# A Report with all User_IDs and two important pieces of information from other tables.
# An example from my study abroad table would be all
# User_IDs, Program, and Length all in one table.
# Updated for our database:
# Retrieve the player IDs, their name, their school name, and their weight
SELECT p.player_id, p.player_name, s.school_name, p.weight
FROM player_info AS p LEFT JOIN school_info AS s
ON p.school_id = s.school_id
```

pl...	player_name	school_name	weight
1	Joe	Juniata	187
2	Mike	Juniata	154
3	Dude	Juniata	224
4	Jake	Drew	190
5	Frank	Drew	210
6	Cookie	Drew	185