Assignment 4

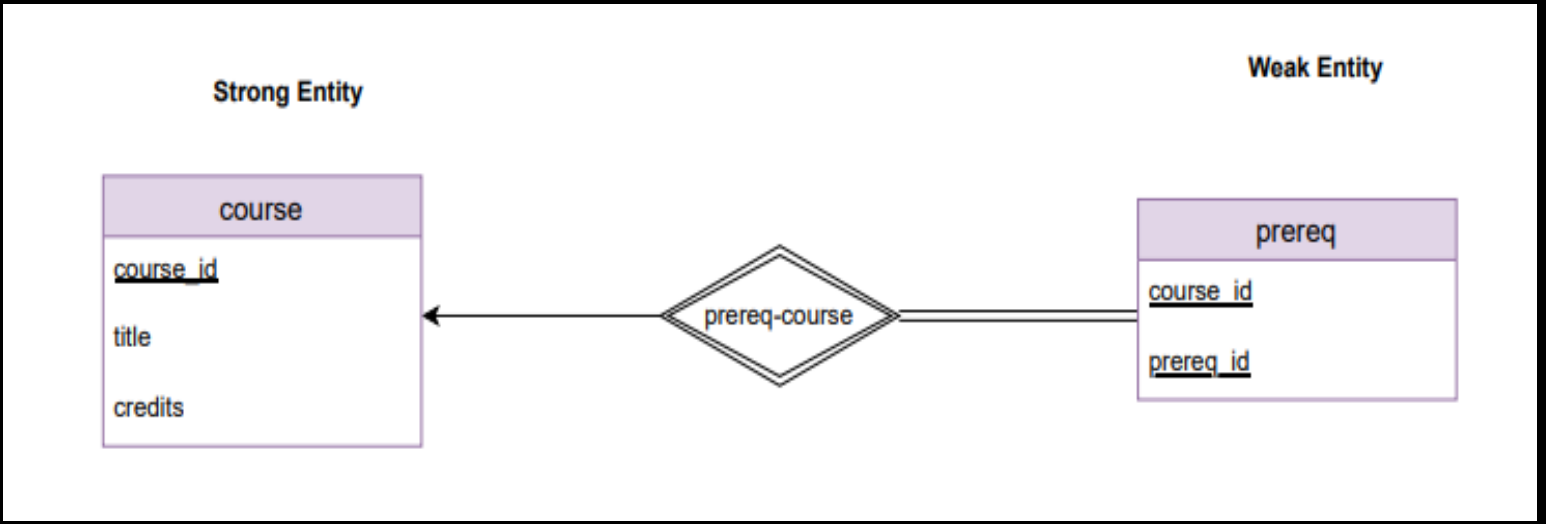
Presented by:

Sharon Jepkosgei

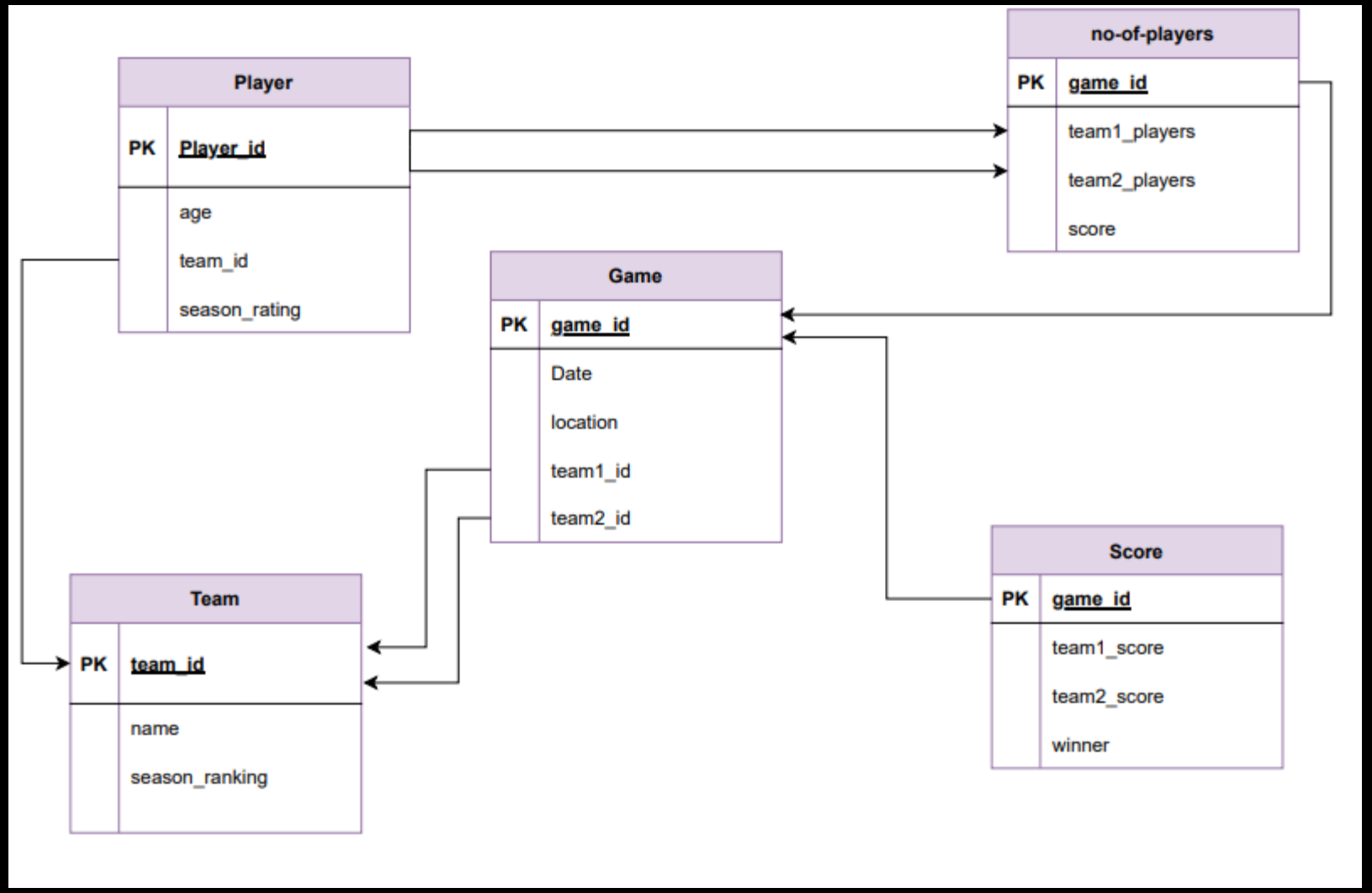
EPPS 6354

Question 1

- Weak entity – Is an entity whose existence depends on another entity
- Its primary key - identifying entity + discriminator attributes
- Strong entity – Its existence do not depend on another variable



Question 2


Player
PK
Player_id
age
team_id
season_rating
no-of-players
PK
game_id
team1_players
team2_players
score
Game
PK
game_id
Date
location
team1_id
team2_id
Team
PK
team_id
name
season_ranking
Score
PK
game_id
team1_score
team2_score
winner

Question 3a

- The natural join between takes and student has these attributes:

(ID, name, dept_name, total credit, course_id, sec_id, semester, year, grade)

- The section relation has these attributes:

(course_id, sec_id, semester, year, building, room number)

- Natural join only considers pairs of tuples with the same value on attributes that appear in the schemas in both relations,
- Adding natural join section would require that common attributes (course_id, sec_id, semester, year) be the same; which there are.

Question 3a

Online SQL interpreter

Run queries directly from the text box below; the university database schema and sample data have been preloaded. (Note: page may take a few seconds to load initially.). All query processing is done right in your browser using the SQLite database. Save the database and load it later, if you want your data to persist when you close the browser tab.
Click here for tips on using SQLite including SQL syntax variations.

Enter SQL commands here

```
1 select course_id, semester, year, sec_id, avg (tot_cred)
2 from takes natural join student
3 where year = 2017
4 group by course_id, semester, year, sec_id
5 having count (ID) >= 2;
```

Execute | Save the db | Load an SQLite database file: Choose File No file chosen

course_id	semester	year	sec_id	avg (tot_cred)
CS-101	Fall	2017	1	65
CS-190	Spring	2017	2	43
CS-347	Fall	2017	1	67

Original work by kripken (sql.js). C to Javascript compiler by kripken (emscripten). Project now maintained by lovasoa

Online SQL interpreter

Run queries directly from the text box below; the university database schema and sample data have been preloaded. (Note: page may take a few seconds to load initially.). All query processing is done right in your browser using the SQLite database. Save the database and load it later, if you want your data to persist when you close the browser tab.
Click here for tips on using SQLite including SQL syntax variations.

Enter SQL commands here

```
1 select course_id, semester, year, sec_id, avg (tot_cred)
2 from takes natural join student natural join section
3 where year = 2017
4 group by course_id, semester, year, sec_id
5 having count (ID) >= 2;
```

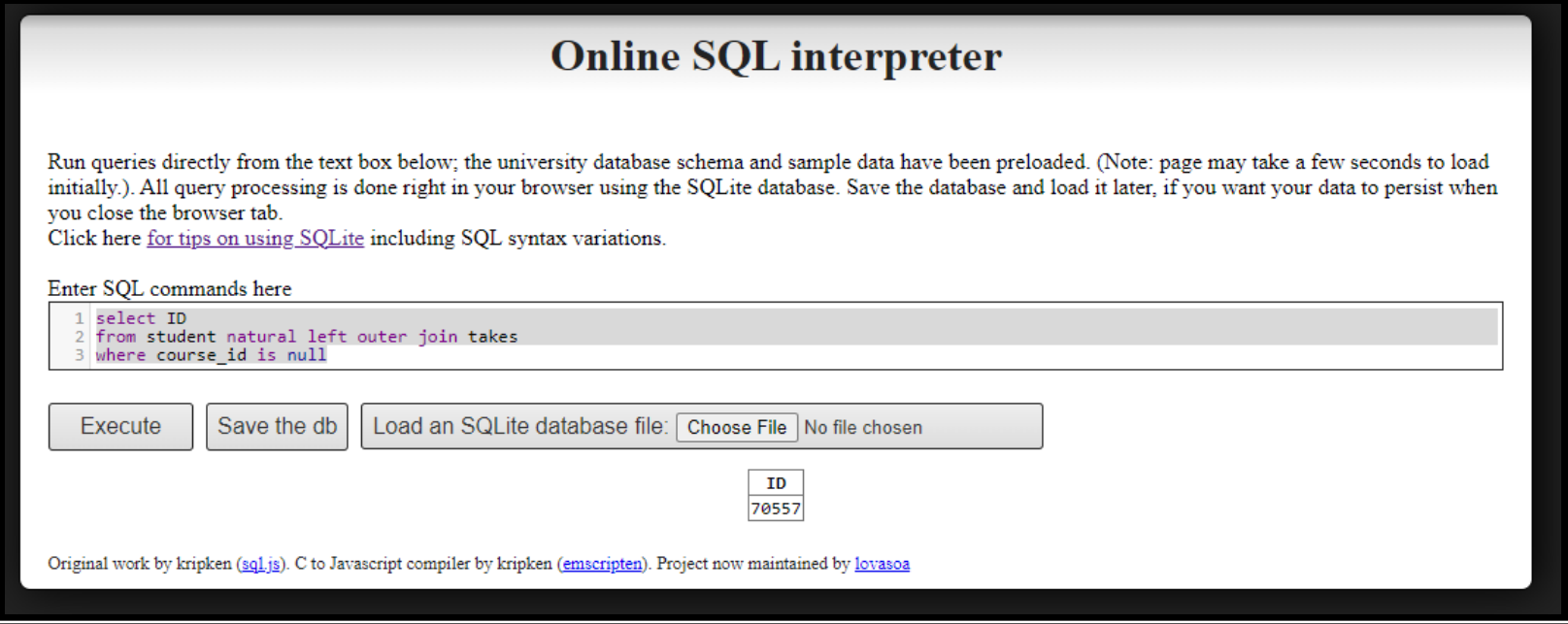
Execute | Save the db | Load an SQLite database file: Choose File No file chosen

course_id	semester	year	sec_id	avg (tot_cred)
CS-101	Fall	2017	1	65
CS-190	Spring	2017	2	43
CS-347	Fall	2017	1	67

Original work by kripken (sql.js). C to Javascript compiler by kripken (emscripten). Project now maintained by lovasoa

Question 3b

- select ID
- from student natural left outer join takes
- where course_id is null



Question 3C

- Select ID
- From employee natural left outer join manages
- Where manager_id is null