

National University of Computer and Emerging Sciences, Lahore Campus



Course Name: Database Systems
Degree Program: BS(Data Science)
Total Marks: 80
Due Date: Wed 28 Feb-2024
Section: BDS A, B and C
Total Questions: 15

Course Code: CS2005
Semester: Spring 2024
Weight Page(s): 2

Student : Name: _____ Roll No. _____ Section: _____

Instruction/Notes: Please submit handwritten assignment in class/office as well as scanned copy in google classroom.

Assignment#2

Write **SQL and RA** to answer the following queries.

Consider the following relational database for the Super Baseball League. It keeps track of teams in the league, coaches and players on the teams, work experience of the coaches, bats belonging to each team, and which players have played on which teams. Note the following facts about this environment:

- The database keeps track of the history of all of the teams that each player has played on and all of the players who have played on each team.
- The database only keeps track of the current team that a coach works for.
- Team number, team name, and player number are each unique attribute across the league.
- Coach name is only unique within a team (and we assume that a team cannot have two coaches of the same name.)
- Serial number (for bats) is only unique within a team.
- In the Affiliation table, the Years attribute indicates that number of years that a player played on a team; the batting average is for the years that a player played on a team.

<u>TEAMNUM</u>	TEAMNAME	CITY	MANAGER
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TEAM Table

<u>TEAMNUM</u>	<u>COACHNAME</u>	TELEPHONE
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COACH Table

<u>TEAMNUM</u>	<u>COACHNAME</u>	<u>EXPERIENCETYPE</u>	YEAREXPERIENCE
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WORK EXPERIENCE Table

<u>TEAMNUM</u>	<u>SERIALNUM</u>	MANUFACTURER
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BATS Table

<u>PLAYERNUM</u>	PLAYERNAME	AGE
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PLAYER Table

<u>PLAYERNUM</u>	<u>TEAMNUM</u>	YEARS	BATTINGAVG
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AFFILIATION Table

Questions:

1. Find the names and city of all the team with team number greater than 15. List the results alphabetically by team name. (5 points)
2. Display the name of player who are under 18.(5 points)
3. List all of the coaches whose last names begin with 'R' and who have between 5 and 10 years of experience as college coaches (see YEARSEXPERIENCE and EXPERIENCETYPE). (5 points)
4. Find the total number of years of experience of Coach Waqar on team number 25. (5 points)
5. Find the number of different types of experience that Coach Waqar on team number 3 has. (5 points)
6. Find the total number of years of experience of each coach on team number 3. (5 points)
7. How many different manufacturers make bats for the league's teams?(5 points)
8. Assume that team names are unique. Find the names of the players who have played for the Yankees for at least five years (see YEARS in the AFFILIATION Table.) (10 points)
9. Assume that team names are unique. Find the total number of years of work experience of each coach on the Royals, but only include in the result those coaches who have more than eight years of experience. (5 points)
10. Find the names of the league's youngest players. (5 points)
11. Find the names of the league's youngest players whose last names begin with the letter 'M'. (5 points)
12. Find the name of player who have been affiliated with more than two teams. (5 points)
13. Find the player who are not affiliated with any team. (5 points)
14. For each player find the number of team they have been affiliated with in the career. (5 points)
15. For each team list every batting average(5 points)