Assignment 1.

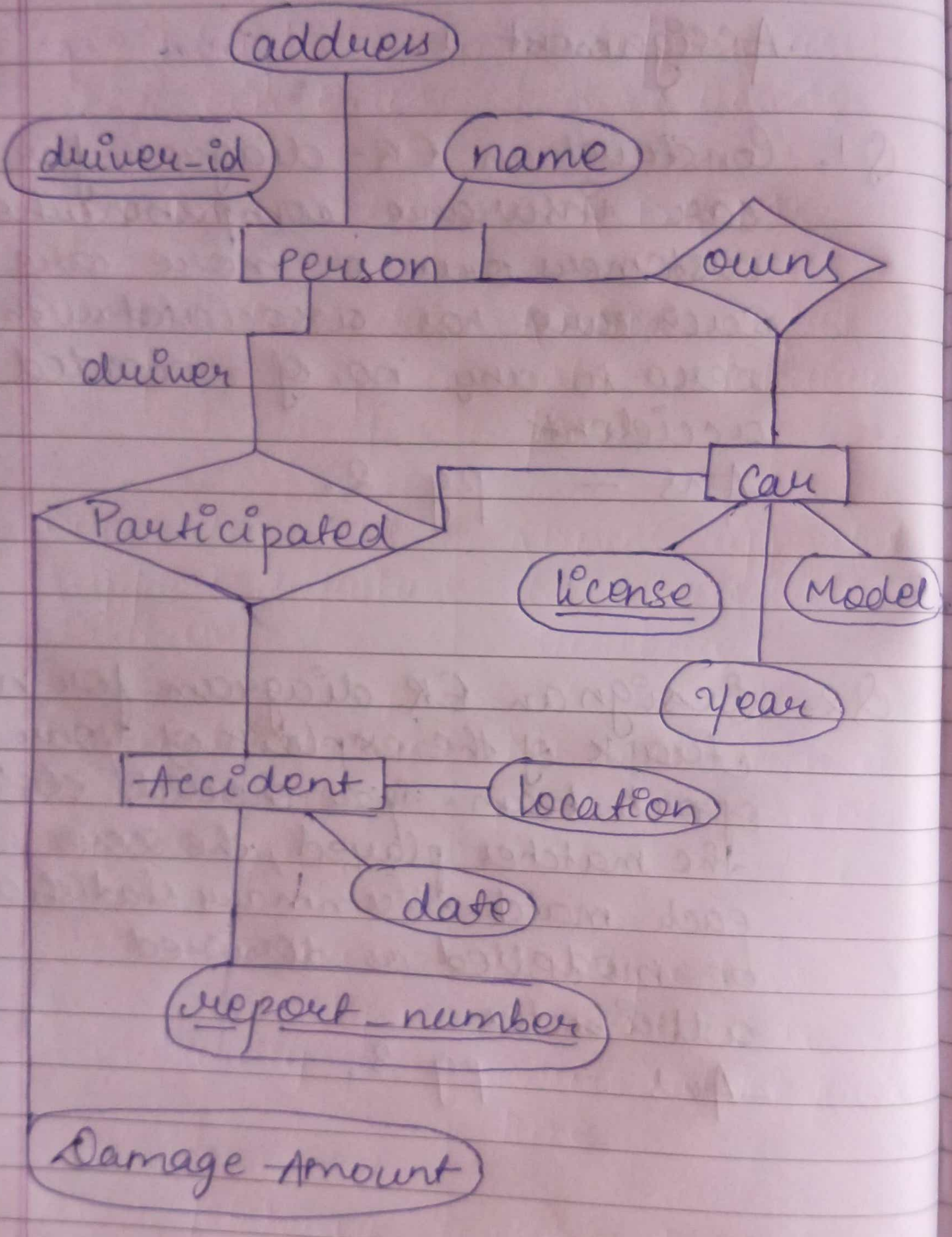
Q1. Construct an ER- diagram for a car insurance company whose customers own or more cars each. Each care has associated with it zero to any no. of recorded accidents

Ans - pg 2.

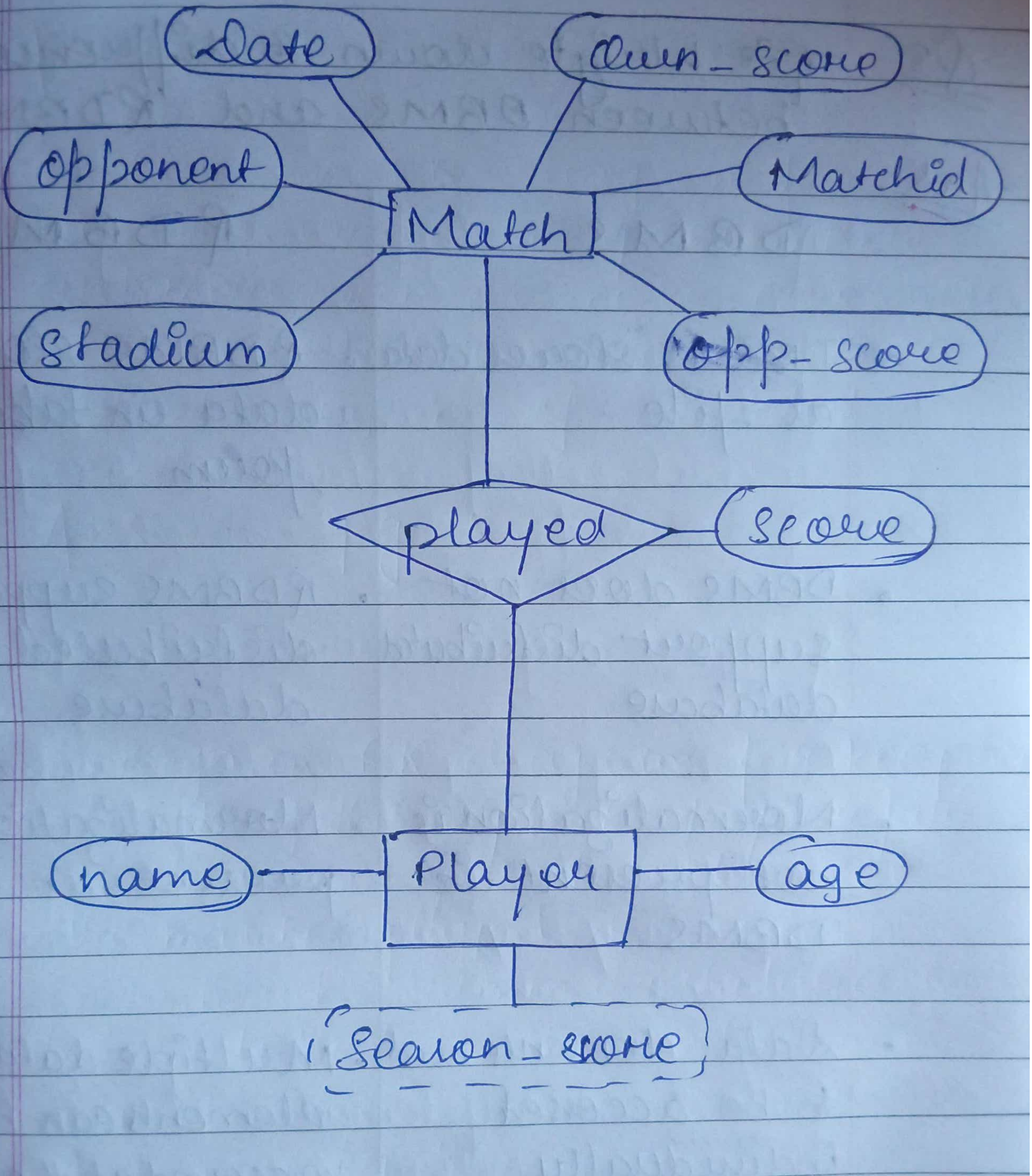
Q2. Design an ER diagram for keeping track of the exploits of your fav sports team. You should store the matches played, the scores in each match. Summary statistics should be modelled as derived attributes.

-Ans - pg 3.

Ans 1


address
driver-id
name
Person
owns
driver
Car
Participated
license
Model
year
Accident
location
date
report_number
Damage-Amount

Ans 2.


Date
own_score
opponent
Matchid
Match
stadium
opp_score
played
score
name
Player
age
season_score

Q3 ~~Q1~~ Wrigte down 8 differences between DBMS and RDBMS.

Ans

DBMS	RDBMS
• DBMS stores data as file	• RDBMS stores data in tabular form
• DBMS does not support distributed database	• RDBMS supported distributed database.
• Normalization is not present in DBMS	• Normalization is present in RDBMS
• Data elements need to be accessed individually	• Multiple data elements can be accessed at the same time
• Data fetching is slower for the large amount of data	• Data fetching is fast because of relational approch

DBMS	RDBMS
• The data in DBMS is subject to low security levels with regards to data manipulatio	• Their exists multiple levels of data security in RDBMS.
• Low software and hardware necessities	• Higher software and hardware necessities.
• DBMS is meant to be for small organization and deal with small data ..	• RDBMS is designed to handle large amount of data.
• It supports single user	• Support Multiple user.
• Examples:- XML, Window Registry, etc.	Examples:- My SQL, SQL Server, Oracle, Microsoft Acces, etc.

Q4 Explain Codd's 12 rules for RDBMS.

Ans Codd's 12 rules for RDBMS are:-

→ Rule 1. :- Information Rule.

- A database contains various informatio and this information must be stored in each cell of a table in the form of rows & coloumns.

→ Rule 2. :- Guaranteed Access Rule.

- Every single or precise data may be accessed logically ~~forom~~ from a relational database using the combinatio of primary key value, table name, & coloumn name.

→ Rule 3. :- Systematic Treatment of NULL Values.

- The NULL Values in a database must be given a systematic and uniform treatment. A Null can be interpreted as one of the following — data is missing, unknown data or data that is not applicable.

→ Rule 4. :- Active Online Catalog.

- This represents the entire logically structure of the descriptive database that must be stored online and is known as a database dictionary. It authorizes users to access the database and impliment a similar query language to access the database.

→ Rule 5. :- Comprehensive Data SuLanguage Rule.

- A database can only be accessed using a language having linear ~~system~~ syntax that supports data manipulation and transaction management operations. This language can directly be used or by means of some application. If the database allows access to data without any help of this language, then it is considered as a violation.

→ Rule 6. :- View Updating Rule.

- All the views of a database, which can theoretically be updated, must also be updatable by the system.

→ Rule 7. :- Relational Level Operation
(High Level Insert, Update, Delete Rul

- A database system should follow high-level relational operation such as insert, update and delete in each level or a single row. It also supports union, intersection and minus operation in the database system.

→ Rule 8. : Physical Data Independence

- All stored data in a database or an application must be physically independe to access the database. Each data should not depend on other data or an application. If data is updated or the physical structure of the database is changed, it will not show any effect on external application that are accessing the data from the database.

→ Rule 9. :- Logical Data Independence.

- Any change in logical data must not affect the application using it, it must be independent of its users view

→ Rule 10. :- Integrity Independence Rule.

- A database must maintain integrity independence when inserting data into table's cells using the SQL query language. All entered values should not be changed or rely on any external factor or application to maintain integrity. It is also helpful in making the database independent for each front-end application.

→ Rule 11. :- Distribution Independence Rule.

- The end-user must not be able to see that the data is distributed over various location. Users should always get the impression that the data is located at one site only. This rule has been.

regarded as the foundation of distributed database systems.

→ Rule 12:- Non-Subversion Rule.

If a system has an interface that provides access to low level records then the interface must not be able to subvert the system and bypass security and integrity constraints.

——— ——