Assignment I (L1-L9)

1. List the major components of a DBMS architecture and describe their functions.
2. Discuss the responsibilities of a DBA. Explain what would happen if a DBA was not responsible for an enterprise database system? Why does the DBA need to understand query optimization?
3. Could a modern university be supported if a file processing system was used to manage enterprise information? List the major difficulties that are likely to arise if no database system was available to the university. Explain the difficulties.
4. Given database schema for the ODI cricket database:

Match(matchID,team1,team2,ground,date,winner)

Player(PlayerID,Lname,Fname,Country,YBorn,BPlace,FTest)

Batting(MatchID,PID,Order,HOut,FOW,NRuns,Mts,Nballs,Fours,Sixes)

Bowling(MatchID,PID,NOvers,Maidens,NRuns,NWickets)

Using the database give queries for the following:

i. Retrieve the names of players whose maximum score is higher than the average score of all players.

ii. Find the country of the player which has the highest maximum score in the database.

iii. Find the names of all employees who have a supervisor with the same birthday as theirs.

iv. Find the names of all employees who are directly supervised by PriyaYadav.

1. List as many conditions as you can think of, where a view can be safely updated.
2. Formulate in SQL, the query ‘Find IDs of players who have either bowled or batted (or did both) in the ODI match 2689 using set operations.  
   Is the formulation given below correct? Explain the reasons for your answer.  
    Select PID  
    from Batting

Where MatchID=’2689’

Or PID in (Select PID From Bowling where MatchID=’2689’)  
Formulate this query in one other way and show how this formulation is correct.

1. List all the different forms used in the WHERE clause.
2. Explain with examples all the different forms of Nested Subqueries. Provide examples using the ODI Cricket Database.