

# DBMS – INTERVIEW QUESTIONS

*Gives you the interview tips in DBMS*

A free DBMS interview questions by,

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## ABOUT THE AUTHOR

). Aligned with KaaShiv InfoTech's mission,he

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## ACKNOWLEDGEMENT

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### 1. What is DML Compiler?

It translates DML statements in a query language into low-level instruction that the query evaluation engine can understand.

### 2. What is DDL Interpreter?

It interprets DDL statements and record them in tables containing metadata.

### 3. What is Relational Algebra?

It is procedural query language. It consists of a set of operations that take one or two relations as input and produce a new relation.

### 4. What is Relational Calculus?

It is an applied predicate calculus specifically tailored for relational databases proposed by E.F. Codd. E.g. of languages based on it are DSL ALPHA, QUEL.

### 5. What is Functional Dependency?

A Functional dependency is denoted by  $X \rightarrow Y$  between two sets of attributes X and Y that are subsets of R specifies a constraint on the possible tuple that can form a relation state r of R. The constraint is for any two tuples t1 and t2 in r if  $t1[X] = t2[X]$  then they have  $t1[Y] = t2[Y]$ . This means the value of X component of a tuple uniquely determines the value of component Y.

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## 6. What are partial, alternate, artificial, compound and natural key?

- **Partial Key:** It is a set of attributes that can uniquely identify weak entities and that are related to same owner entity. It is sometime called as Discriminator.
- **Alternate Key:** All Candidate Keys excluding the Primary Key are known as Alternate Keys.
- **Artificial Key:** If no obvious key, either stand alone or compound is available, then the last resort is to simply create a key, by assigning a unique number to each record or occurrence. Then this is known as developing an artificial key.
- **Compound Key:** If no single data element uniquely identifies occurrences within a construct, then combining multiple elements to create a unique identifier for the construct is known as creating a compound key.
- **Natural Key:** When one of the data elements stored within a construct is utilized as the primary key, then it is called the natural key.

The phase that identifies an efficient execution plan for evaluating a query that has the least estimated cost is referred to as query optimization.

## 8. What is durability in DBMS?

Once the DBMS informs the user that a transaction has successfully completed, its effects should persist even if the system crashes before all its changes are reflected on disk. This property is called durability.

## 9. What do you mean by atomicity and aggregation?

- **Atomicity:** Either all actions are carried out or none are. Users should not have to worry about the effect of incomplete transactions. DBMS ensures this by undoing the actions of incomplete transactions.
- **Aggregation:** A concept which is used to model a relationship between a collection of entities and relationships. It is used when we need to express a relationship among relationships.

## 10. What are the different phases of transaction?

Different phases are

- Analysis phase
- Redo Phase.
- Undo phase.

