IMS-DB INTERVIEW QUESTIONS

Dear readers, these **IMS-DB Interview Questions** have been designed specially to get you acquainted with the nature of questions you may encounter during your interview for the subject of **IMS-DB**. As per my experience good interviewers hardly plan to ask any particular question during your interview, normally questions start with some basic concept of the subject and later they continue based on further discussion and what you answer:

What is a hierarchy path?

Hierarchy path is a line that starts at the root, passes through the intermediate levels in the hierarchy, and ends at a segment at the bottom of the hierarchy.

What is a root segment?

A segment that lies at the top of the hierarchy is called the root segment. It is the only segment through which all dependent segments are accessed.

What are twin segments?

Two or more segment occurrences of a particular segment type under a single parent segment occurrence are called twin segments.

Define segment occurrence.

A segment occurrence is an individual segment of a particular type containing user data.

What is a database record?

Each occurrence of the root segment plus all its subordinate segment occurrences make up for one database record.

What is the limitation on the number of levels in a DL/I database?

We can have 15 levels in a DL/I database.

How many segment types can you have in a DL/I database?

A DL/I database can have 255 segment types.

What are the control blocks in IMS?

There are two control blocks: the Database Descriptor *DBD* and Program Specification Block *PSB*.

What are common DLI functions?

The common functions are GU, GN, GNP, GHU, GHN, REPL, ISRT, and DLET.

What are the command codes and their purposes?

Command codes extend the function of an SSA call. They simplify programming and improve performance.

What is the use of PROCOPT?

Procopt parameter specifies PROCESSING OPTIONS that define the type of processing performed on a segment.

What is multi-positioning?

Multi-positioning is an option whereby the IMS maintains a separate position on each hierarchical path. When more than one PCBs refer to the same DBD, it is called multi-positioning.

Define a search field.

The field that is used to retrieve the data is known as a search field.

What is a GOBACK statement?

A Goback statement is used to pass the control back to the IMS control program.

Define a call statement.

A Call statement is used to request for DL/I services such as performing certain operations on the IMS database.

What is the function of a GU call?

'GU' or Get Unique works similar to the random read statement in COBOL. It is used to fetch a particular segment occurrence based on the field values which can be provided using Segment Search Arguments.

What is the function of a GHU call?

'GHU' or Get Hold Unique specifies that we are going to update a segment after retrieval. GHU corresponds to the GU call.

What is the function of SSA?

SSA is known as Segment Search Arguments. SSA is an optional parameter. It is used to identify the segment occurrence being accessed. We can include any number of SSAs depending on the requirement.

Explain index pointer segment.

DL/I stores the pointer to segments of the indexed database in a separate database. Index pointer segment is the only type of secondary index.

Which is the first statement in COBOL-IMS programs?

Entry statement is the first statement after the procedure division.

What is the return code you get after a successful IMS call?

We receive spaces after a successful call.

What is the use of Sparse Sequencing?

We can remove some of the index source segments from the index using sparse sequencing with secondary index database. Sparse sequencing is used to improve the performance. When some occurrences of the index source segment are not used, we can remove that. Sparse sequencing is also known as Sparse Indexing.

Explain Logical relationship.

A logical relationship is a path between two segments related logically and not physically. Usually a logical relationship is established between separate databases. But it is possible to have a relationship between the segments of one particular database.

What are logical twins?

Logical twins are the occurrences of a logical child segment type that are subordinates to a single occurrence of the logical parent segment. DL/I makes the logical child segment appear like an actual physical child segment. This is also known as virtual logical child segment.

What is a concatenated segment?

A logical child segment always begins with the complete concatenated key of the destination parent. This is known as Destination Parent Concatenated Key *DPCK*. Always code the DPCK at the start of your segment I/O area for a logical child. In a logical database, the concatenated segment makes the connection between segments that are defined in different physical databases.

Explain DL/I log.

When an application program abnormally ends, it is necessary to revert the changes done by the application program, correct the errors, and re-execute it. To do this procedure, it is required to have the DL/I log.

What is a checkpoint?

A checkpoint is a stage where the modifications done to a database by an application program are considered complete and accurate.

Which database processing is very fast?

IMS DB processing is very fast as compared to DB2.

Which database is difficult to manage?

IMS predefined tree structure reduces flexibility and it is difficult to manage.

Through which segment all dependent segments are accessed?

A segment that lies at the top of the hierarchy is called the root segment. It is the only segment through which all dependent segments are accessed.

How can we access the data in IMS DB?

Data can be processed in both the ways: Sequential & Random.

What is the predefined pattern for sequential processing?

Predefined pattern for accessing data in DL/I is first down the hierarchy, then left to right.

For FIELD macro statement in DBDGEN, what does TYPE=P parameter specifies?

TYPE=P specifies Packed decimal data type for the field which we have declared.

For FIELD macro statement in DBDGEN, what does TYPE=X parameter specifies?

TYPE=X specifies Hexadecimal data type for the field which we have declared.

What does SENSEG stands for?

SENSEG is known as Segment Level Sensitivity. It defines the program's access to parts of the database and it is identified at the segment level.

Which parameter specifies the language in which the application program is written in PSBGEN?

The LANG parameter specifies the language in which the application program is written, e.g., COBOL.

Which is used to pass the control back to the IMS control program?

GOBACK is used to pass the control back to the IMS control program.

Which function is used to get a unique record for update purpose?

'GHU' code is used for Get Hold Unique. Hold function specifies that we are going to update the segment after retrieval. The Get Hold Unique function corresponds to the Get Unique call.

Which function is used to retrieve segment occurrences in sequence subordinate to an established parent segment?

'GNP' code is used for Get Next within Parent. This function is used to retrieve segment occurrences in sequence subordinate to an established parent segment.

Which function is used for recovering the database?

'CHKP' code is used for the Checkpoint function. It is used in the recovery features of IMS.

In PCB which field is used to store the level of the segment that was processed?

Segment level is known as Segment Hierarchy Level Indicator. It contains character data and is two bytes long. A segment level field stores the level of the segment that was processed. When a segment is retrieved successfully, the level number of the retrieved segment is stored here.

In PCB which field stores the area for its own internal linkage related to an application program?

Reserved DL/I is known as the reserved area of the IMS. It stores four bytes binary data. IMS uses this area for its own internal linkage related to an application program.

Which SSA provides the name of the segment being used inside the call?

An unqualified SSA provides the name of the segment being used inside the call.

What is the length of an unqualified SSA?

A basic unqualified SSA is 9 bytes long. The first 8 bytes hold the segment name which is being used for processing. The last byte always contains space.

Where do we code command code in a qualified SSA?

Command code is coded at the tenth position.

If a call is successful what value you will get in STATUS-CODE field?

If a call is successful you will get spaces in STATUS-CODE field.

Multiple PCBs can not be defined for a single database. State whether true or false?

This statement is incorrect as Multiple PCBs can be defined for a single database.

It is not possible for a program to maintain multiple positions in a database using a single PCB. State whether true or false?

This statement is incorrect as a program can maintain multiple positions in a database using a single PCB.

For Bidirectional Virtual relationship the logical connection goes from the logical child to the logical parent and it cannot go the other way around. State whether true or false?

This statement is wrong as Bidirectional Virtual relationship allows access in both the directions. The logical child in its physical structure and the corresponding virtual logical child can be seen as paired segments.

What does MPP stands for?

MPP stands for Message Processing Program.

What is Next ?

Further you can go through your past assignments you have done with the subject and make sure you are able to speak confidently on them. If you are fresher then interviewer does not expect you will answer very complex questions, rather you have to make your basics concepts very strong.

Second it really doesn't matter much if you could not answer few questions but it matters that whatever you answered, you must have answered with confidence. So just feel confident during your interview. We at tutorialspoint wish you best luck to have a good interviewer and all the very best for your future endeavor. Cheers :-)