**1. Why Map-reduce program is needed in Pig Programming?**

Pig is a high-level platform that makes many Hadoop data analysis issues easier to execute. A program written in Pig Latin is a data flow language, which needs an execution engine to execute the query. So, when a program is written in Pig Latin, Pig compiler converts the program into MapReduce jobs.

**2. What are advantages of pig over MapReduce?**

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| **Pig** | **MapReduce** |
| Scripting Language. | Compiled Language. |
| Higher level of abstraction. | Lower level of abstraction. |
| Less line of codes than MapReduce. | More lines of codes. |
| Development effort is less. | More development effort is involved. |

**3. What is pig engine and what is its importance?**

Pig is a data flow language that process parallel on Hadoop. Pig use a special language called Pig Latin scripting to process and analyze the data. It can store and analyze any type of data which either structured or unstructured.

**4. What are the modes of Pig execution?**

You can run Apache Pig in two modes, namely, Local Mode and MapReduce mode

**Local Mode**

In this mode, all the files are installed and run from your local host and local file system. There is no need of Hadoop or HDFS. This mode is generally used for testing purpose.

**MapReduce Mode**

MapReduce mode is where we load or process the data that exists in the Hadoop File System (HDFS) using Apache Pig. In this mode, whenever we execute the Pig Latin statements to process the data, a MapReduce job is invoked in the back-end to perform a particular operation on the data that exists in the HDFS.

**5. What is grunt shell in Pig?**

The Grunt shell of Apache Pig is mainly used to write Pig Latin scripts. Prior to that, we can invoke any shell commands using sh and fs.

**6. What are the features of Pig Latin language?**

* Pig Latin is SQL-like language and it is easy to learn Apache Pig when you are familiar with SQL.
* Using Pig Latin, programmers can perform MapReduce tasks easily without having to type complex codes in Java.
* Provides many built-in operators to support data operations like joins, filters, ordering, etc.

**7. Is Pig Latin commands case sensitive?**

User defined functions, relations and field names in Pig are case sensitive. On the other hand, keywords in Apache Pig are case insensitive. Ex: LOAD is same as load.

**8. What is a data flow language?**

To access the external data, every language must follow many rules and regulations. The instructions are flowing through data by executing different control statements, but data doesn’t get moved. Dataflow language can get a stream of data which passes from one instruction to another instruction to be processed.