1. Why MapReduce program is needed in Pig Programming?

* Pig Latin makes use of MapReduce since it allows users to describe how data should be processed and then stored to one or more outputs in parallel.
* Pig Latin queries are converted to Map and Reduce tasks so that they can take advantage of parallel processing.

2. What are advantages of Pig over MapReduce?

* Hadoop MapReduce is a compiled language for which a good knowledge on java is needed and users need to think about 2 functions namely the map and reduce whereas Apache Pig is a scripting language and simple.
* Pig provides a higher level of abstraction whereas Hadoop MapReduce provides low level of abstraction.
* Hadoop MapReduce requires more lines of code and is slower when compared to [Pig](https://www.dezyre.com/article/difference-between-pig-and-hive-the-two-key-components-of-hadoop-ecosystem/79).

3. What is Pig engine and what is its importance?

* It is one of the components of Pig Latin that accepts the Pig Latin scripts as input and converts those scripts into MapReduce jobs.
* It parses, optimizes, and automatically executes Pig Latin scripts as a series of MapReduce jobs on a Hadoop cluster.

4. What are the modes of Pig execution?

Pig has two execution modes:

* Local Mode - To run Pig in local mode, you need access to a single machine; all files are installed and run using your local host and file system. ...
* Mapreduce Mode - To run Pig in mapreduce mode, you need access to a Hadoop cluster and HDFS installation.

5. What is Grunt Shell in Pig?

* The Grunt shell of Apache Pig is mainly used to write Pig Latin scripts.
* After invoking the Grunt shell, you can run your Pig scripts in the shell. In addition to that, there are certain useful shell and utility commands provided by the Grunt shell.

6. What are the features of Pig Latin language?

* It provides a rich set of operations like join,filter,sort etc.
* It is a simple language similar to SQL.
* It optimizes the tasks and their execution automatically, so the programmers need to focus only on semantics of the language.
* It analyzes all kinds of data, both structured as well as unstructured. It stores the results in HDFS.

7. Is Pig Latin commands case sensitive?

Pig Latin cannot decide whether it is case-sensitive or not.

* Keywords in Pig Latin are not case-sensitive; for example, LOAD is equivalent to load.
* Relation and field names are case -sensitive. So A = load 'foo'; is not equivalent to a = load 'foo’.
* User-defined Functions names are also case-sensitive, thus COUNT is not the same User-defined functions as count.

8. What is a data flow language?

* In a dataflow language, a stream of data which is passed from instruction to instruction to be processed.
* Conditional execution jumps and procedure calls route the data to different instruction.
* Apache Pig is a tool/platform which is used to analyze larger sets of data representing them as data flows.
* Pig can efficiently perform those jumps, loops and process in an efficient manner.