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

ANS: Pig is written in Java and compiles Pig Latin scripts into to MapReduce jobs. Think of Pig as a compiler that takes Pig Latin scripts and transforms them into Java.

2. What are advantages of pig over MapReduce?

ANS:

* Pig Latin provides all of the standard data-processing operations, such as join, filter, group by, order by, union, etc.
* MapReduce requires programmers:
* Programmers must think in terms of map and reduce functions.
* Most probably Java programmers are required.
* In Pig Latin joins and ordering codes comprise of 8-9 lines of code and take few minutes to write and debug. The same code in MapReduce will span hundred lines of code and takes hours to develop.
* It has the ability to perform computations which can not be done by MapReduce.

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

ANS: [Pig](http://en.wikipedia.org/wiki/Pig_%28programming_tool%29) is an application that works on top of MapReduce, Yarn or Tez. Pig is written in Java and compiles Pig Latin scripts into to MapReduce jobs. Think of Pig as a compiler that takes Pig Latin scripts and transforms them into Java.

It acts as an interpreter between pig latin script and MapReduce jobs. It creates environment to execute Pig scripts into series of mapreduce jobs in parallel manner.

4. What are the modes of Pig execution?

ANS: MapReduce/Haddop Mode

Local Mode

5. What is grunt shell in Pig?

ANS: Pig runs using below:

•**With Grunt Shell:**

•Interactive Shell for executing Pig Commands.

•Used when script file is not provided.

•Can execute scripts from Grunt via run or exec commands

•**Using Script Files:**

•Executes Commands in a file.

•pig ScriptFile.pig

•Pig commands are executed using script files as batch Jobs.

6. What are the features of Pig Latin language?

ANS:

**Pigs eat anything:**

•Pig can operate on data with or without metadata.

**Pigs survive in any environment:**

•Pig is intended to be a language for parallel data processing.

•Pig is not tied to any particular framework.

**Pigs Fly:**

•Pig processes data very fast-no need to go through a time-consuming data import process prior to running queries, as in conventional databases.

**Pigs are domesticated:**

•Pig allows integration of user code where ever possible, so it supports user defined:

•field transformation functions

•user defined aggregates

•user defined conditionals.

7. Is Pig latin commands case sensitive?

ANS: No. Only functions are case sensitive.

8. What is a data flow language?

ANS: In computer programming, **dataflow** programming is a programming paradigm that models a program as a directed graph of the **data flowing** between operations, thus implementing **dataflow** principles and architecture.

Pig Latin script describes a directed acyclic graph (DAG), where the edges are data flows and the nodes are operators that process the data.