Explain Primary data types and complex data types in Hive with an example in brief.

Primary Data types:  
 it is classified into four categories

* Numeric types
* String types
* Date/time types
* Miscellaneous types

Numeric types:

It consists of integral types,floating types,decimal types.

Integral types are TINYINT,SMALLINT,INT,BIGINT.

Floating types are FLOAT,DOUBLE.

String types:

Three types of string are supported in hive as of now. they are STRING,VARCHAR,CHAR.

Date/time types:

Hive provides DATE and TIMESTAMP data types in traditional UNIX time stamp format for date/time related fields in hive.

Date values are represented in the form YYYY-MM-DD.

Time stamp use the format yyyy-MM-dd hh:mm:ss

Miscellaneous types:

Hive supports two more primitive data types,Boolean and binary.Similar to java’s Boolean,Boolean in hive stores true or false values only.

Binary is an array of bytes and similar to VARBINARY in many RDBMS.BINARY columns are stored within the record.

Complex data types:

In addition to primitive data types hive also support some complex data types whichb are not available in many RDBMS.

Hive supports four complex data types,

ARRAY:An ordered sequences of similar type elements that are indexable using zero based integers

Eg:array(‘praveen’,’prabhu’)second element is accessed with array[1].

MAP:collection of key-value pairs. Fields are accessed using array notation keys

E.g:[‘key’]

STRUCT:it is similar to STRUCT in C language. It is a record type which encapsulates a set of named fields that can be any primitive data type. Element in STRUCT type are accessed using the DOT function.

E.g: for a column c of type STRUCt {a INT:b INT} the field a is accessed by the expression of c.a

UNIONTYPE:It is similar to the UNIONS IN C. at any point of time , an union type can hold any one data type from its specified data types