Week 5 Daily Challenge

Tuesday, January 21, 2020

Question 1: Give an overview of what you understand as the MapReduce technology. Explain how it is similar to the Split-Apply-Combine technology created by Hedley Wickham

Answer:

MapReduce is a programming model. It is used for enabling distributed computations, including data processing on big data sets, in a highly scalable and fault tolerant way.

In a MapReduce program, a Map method, which performs the filtering and sorting function, that is, it takes a particular set of data and converts it to another dataset where each of the elements are saved as tuples.

While a Reduce procedure or method, which performs a summary/counting operation. This always happens after the Map job. It takes the output from a map, converts it to inputs and stores them as smaller tuples

In relation to the Split-Apply-Combine (I’ll refer to as SAC) technology, the MapReduce technology model is a specialization of the Split-Apply-Combine strategy for data analysis and it is used for the purpose of functional programming in the MapReduce framework/infrastructure. This however differs from their original function.

Question 2: Briefly explain three methods for field research.

Answer:

Three methods of research are

1. Direct Observation
2. Qualitative Interviews
3. Survey Questionnaires/Participant Observation

DIRECT OBSERVATION

This can be seen as the first step to understanding the people in an environment and their behavior, prior to interacting with them or developing interview protocols. Here, data is gathered through close visual inspection of the setting of that environment.

QUALITATIVE INTERVIEWS

This is a type of field research method which obtains data by directly asking questions from people. It is appropriate when the researcher wants to maximize their flexibility to pursue topics and ideas as they emerge during the exchange.

SURVEY QUESTIONNAIRES/PARTICIPANT OBSERVATION

Here, the researcher develops an understanding of the composition of a particular setting or society by taking part in the everyday routines alongside its members. It allows the researcher to develop a rich understanding of a setting and of the members within a society.