Pregel: A System for Large-Scale Graph Processing

NOTE: Your slides/presentation only need to cover background information necessary to answer the given questions (in a clear and well-organized manner). You are allowed to borrow contents from other resources, such as online slides, as long as you acknowledge them. The presentation should be mostly question-focused and proceed mostly in a Q&A format. Please include the questions in your slides. Don’t write detailed answers in the slides and read them to the class. Instead, use bullet points, graphs, or animations to explain your answers to the class.

In your Q&A report, use text to more thoroughly answer the questions. Include a short paragraph at the beginning of the report to summarize the paper.

(1) What is superstep in the Pregel graph processing model? (Section 1)

(2) In the single source shortest path problem what computation is involved in a superstep? (see the slides)

(3) What does synchronicity in the Pregel’s execution refer to? What benefits can it bring? (Section 1)

(4) How is a Pregel program terminated (completing its execution)?

(5) Use Figure 2 to illustrate a Pregel program’s execution.