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# PROGRAMMING FOR BIG DATA PROCESSING

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Big data became popular with the MapReduce programming model, and the big ecosystems grow big with the Hadoop system, an open-source implementation of MapReduce model. Programming is the key to understand the big data processing. In this lecture, three popular big data processing paradigms and related programming issues are introduced. First, the programming for batch data processing is introduced. The content covers the motivation for new big data processing model, MapReduce programming model, the MapReduce framework and the Hadoop ecosystems. Then, the programming for graph processing is presented, as graph is one of most popular data structure in the big data era. This part covers graph programming model, graph processing frameworks, and the related system issues. At last, the streaming data processing is introduced. Stream data processing refer to the processing the big data with big velocity, and the real time data processing. In this part, typical streaming processing system architectures, typical systems and related programming models are introduced.

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