

Part B: Clouds

1. Explain different types of cloud services. Please elaborate each one and give examples (8 Marks)
2. (8 Marks)
 - (a) Explain Map and Fold functions in Functional programming.
 - (b) How can you generate list of partial sums given a list of numbers
[1, 3, 6, 2, 7, 4] -> [0, 1, 4, 10, 12, 19, 23]
3. How clouds and grids are related. Please elaborate the similarities and dissimilarities. (4 Marks)
4. Please explain the Availability zones and Elastic IP features of Amazon cloud (4 Marks)
5. Please explain the main activities of the MapReduce execution framework. Elaborate them in detail. (8 Marks)
6. Elaborate TF-IDF Term Weighting algorithm, discussed in information retrieval lecture and explain how you can compute it using MapReduce. (10 Marks)
7. Please explain the characteristics of the DFS (Distributed File System) along with its components in any of the implementations. (8 Marks)