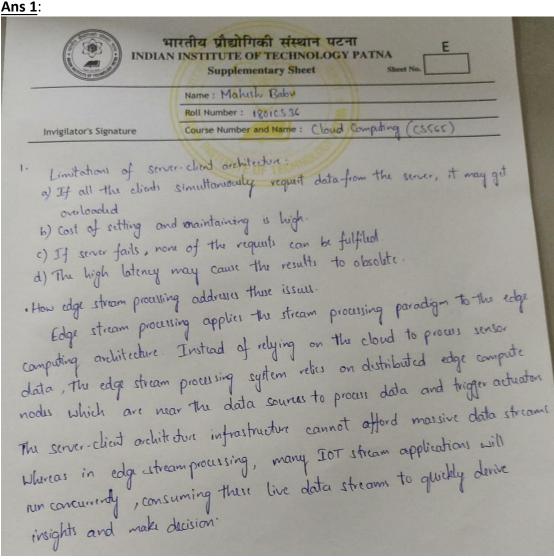
CS565: Cloud Computing

Reading Assignment 2

Solutions **Roll No.**: 1801CS31 Date: 22-Apr-2022



<u>Ans 2</u>:

<Answer goes here>

Ans 3:

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भारतीय प्रौद्योगिकी संस्थान पटना INDIAN INSTITUTE OF TECHNOLOGY PATNA Supplementary Sheet Sheet No.
Invigilator's Signature Name: Ameranen' Navya Size Roll Number: 1801CSO6 Course Number and Name: CSSGS Cloud Computing.
3) Failure recovery mechanism on top of dynamic dataflow Abstraction
As the overlay is self-organizing and self-vepairing, the dataflow graph for each 10T application can be
automatically recovered by restarting failed operator
on another node. DART System has a Components:
a set of distributed schedulers and a set of woodens.
A general approach is checkpointing periodically los
11 - La States to a nexistent storage system
1 parior hode retneves (nech pointed star up
Since, this is Slow appoints we closed a paring state
memory is divided replicated and check pointed memory is divided replicated and check pointed
memory is arriaged represent and creative odec. It each node's leaf set nodes by using erasurecodec.
Once any failure happens, backur hodes take over
Once any failure happens, backur hodes take over, and retrives state fragments from a subject of leaf. Set nodes to recompute state and resume powersny. Set nodes to recompute state and resume powersny.
and retrives State and resume powers to
Set nodes to recompute
Dravery for to recompart
loverage the datation upon failures.
leverage the dataflow garriller upon failures.
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<u>Ans 4</u>:

- 4) What are the key phases in the execution pipeline for processing an IoT steam application?
- Ans) key phases of IoT steam application include
 - (i) Query Parsing and Optimization

The user code in passed into logical execution plan represented by DAG -> Vertices are stream operators Edges are data flow

- (ii) Operator replacement.

 DACE is converted to physical execution plan with multiple tasks in parallel. System places all operations on distributed edge nodes to minimize query latency and maximize throughput
- (iii) Compute & shuffle local data and shuffle results from one stage to next stage.

