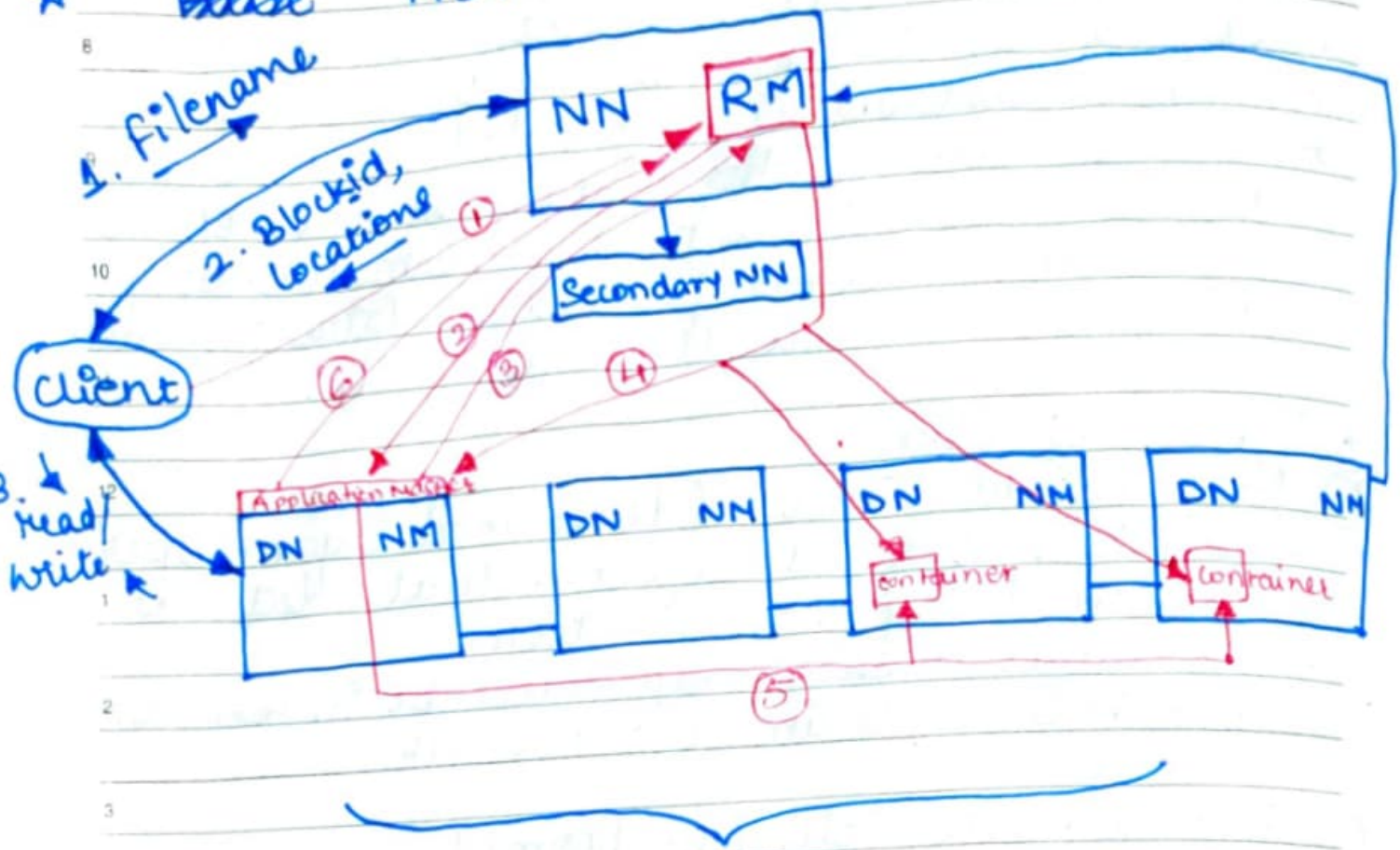
2022

25 DAY 359-006 WEEK 52 SUNDAY DECEMBER

★ HDFS AND YARN for MR Job.



Blue → HDFS (R/W) slave
Red → YARN (MR).

Blue

Write
1. Client communicates with namenode for metadata
2. The NN responds with no. of blocks, locations, replica to client.
3. Client interacts with DN and writes file one by one and loads the replicas too.
4. After completion DN will send write confirmation to NN.

Read
1. Client communicates with NN for metadata.
2. The NN responds with locations of DN containing blocks to client.

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

3. The client interacts with DN & starts reading parallely based on info. received by NN.
4. When client receives all the blocks of file, it combines them into original form.

REQ MF
① Client submits job to RM.
② In RM → Application Manager negotiates first container for Application Master on one of NM.
③ The application master requests resources required for the job to be processed through NM.
④ The container information is sent to Application master & are launched in NM (resp.) where data is present.
⑤ The application master executes the task provided by client in the container in NM.
⑥ After completion the result is stored in HDFS & Application Master releases its resources to RM.

App. Master
If any ~~Node~~ fails the RM schedules the Application Master on another Node.