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**TP5**

## Exercise n°1

1. Routing table :

N22 + 1 -> N23: [23, 42)  
 N22 + 2 -> N42: [42, 54)  
 N22 + 4 -> N42: [42, 54)  
 N22 + 8 -> N42: [42, 54)  
 N22 + 16 -> N42: [42, 54)  
 N22 + 32 -> N54: [54, 23)

1. The first node it will contact will be node 54
2. N22 uses finger 6 (N22 + 32) to forward the query to N54.  
   N54 uses finger 5 (N54 + 16) to forward the query to N1.  
   The interval between N22 to N1 will contain object id 0.

## Exercise n°2

1. If the coordinator *F* fail, the entire network will fail to since every requests pass through *F*, and it contains all identifiers.
2. *F* doesn't provide a better availability because in case of failure the whole network will be down, instead of just one node if *F* doesn't exist.
3. It will help to have a better availability because if *F* fails, *F0* will replace *F*, so the network will still be available, and clients will be able to send & receive requests.
4. We can use the Chord system, because if one node fails, the other one will replace it, and as every node as it is identifier table they will not also fail.

## Exercise n°3

1. If W = 1, The fault tolerance is equals to 0, we can have failures if there is only one available service. The availability could be an issue with only one writing server.
2. The system needs to store the data and send the answer to the other clients.
3. Yes, it should be written to avoid differences between clients with the new vector clock
4. No, it is not possible.
5. Using asynchronous method, the last answer is sent to the client.