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**Theory Assignment 2**

**Architectures**

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**Exercise 1 -**

If a client and a server are placed far apart, we may see network latency dominating overall performance. How can we tackle this problem?

**Exercise 2 -**

In a structured overlay network, messages are routed according to the topology of the overlay. What is an important disadvantage of this approach?

**Exercise 3 -**

Not every node in a peer-to-peer network should become superpeer. What are reasonable requirements that a superpeer should meet?

**Exercise 4 -**

What are the pros and cons of structured and unstructured p2p topologies?

**Exercise 5 -**

What is the Chord system? Explain how it finds a machine containing a specific key.

**Exercise 6 -**

What is the difference between vertical distribution and horizontal distribution?