

COEN 317: Distributed Systems
Spring 2020
Homework Assignment 1
Due: Friday, 4/21/2020 @11:59pm

Reading: Text Book Chp 1, 2

1. What is the role of middleware in a distributed system?
2. Explain what is meant by (distribution) transparency and give examples
3. There are several types of transparency and it is one of the goals of a Distributed System. Why is it not always a good idea to aim at implementing the highest degree of transparency?
4. Give three different techniques to achieve a scalable (distributed) system
5. Briefly explain the main difference (what is the main emphasis) among the following different types of distributed systems:
 - distributed computing,
 - client/Server Distributed Information Systems
 - distributed Pervasive Systems
6. We know replication and caching are two important scaling approaches. However, they bring us with another scalability problem. What is that problem? How can it be solved?
7. What is an open distributed system and what benefits does openness provide?

Reading: Text Book Chp 3, 4, 6

- 1) 3.7
- 2) 4.1
- 3) 4.15
- 4) 6.2
- 5) 6.8