

Data Structures and Algorithms – CS2402

Quiz 3 – Solution

10 points - 10 minutes

Short questions. For each of the following questions (1-8), circle the correct answer(s) (i, ii, or iii) when given choices, or give a short answer, or fill in the blanks:

1. What does BFS means (as studied in class)?
Best First Search.
2. What is simulation for?
 - (a) **to train personnel**
 - (b) **to gain information**
3. What principal data structure is used to implement a discrete event simulation?
Queue.
4. Up to how many events are usually taken into account in a efficient simulation?
 - i. 1 or 2
 - ii. **3 or 4**
 - iii. 5 or 6
5. In the simulation of a bank, what are the two events that are considered?
 - (a) **customer arrives at the bank**
 - (b) **teller helps customer**
6. In the simulation of a bank, what are the parameters?
the flow of customers (arrival time, and service requested), and the number of tellers.
7. In the simulation of a bank, give a complete description of a customer, as you will use it in the simulation¹.
a customer is completely described by its arrival time, and service.
8. In the simulation of the bank, give three types of information you want to gain from running such a simulation?
 - (a) **length of lines**
 - (b) **idle times of tellers**
 - (c) **customers' waiting times**

¹Name the elements that are sufficient to describe a customer.