

Homework 18, ISTA-220

Chapter 18, C# Step by Step

July 28, 2018

1 Homework

1.1 Readings

Read chapter 18, pages 399 – 422 in the *C# Step by Step* book.

1.2 Discussion Questions

Answer the discussion questions in writing.

1. You are building a help ticket system. You want to ensure that the older the ticket, the sooner it will be handled by the team. For example, a ticket submitted a week ago has a higher priority than a ticket just submitted. What kind of data structure would you use, and why?
2. You are building a tracking system for seasonal agricultural farm labor. The labor requirements vary widely, depending on the season. Your requirement is that the newest hires are terminated first, and that our more experienced hires are kept longer. What kind of data structure would you use, and why?
3. You are building a transaction database. Your requirement is that the database adds data very quickly, and that deletions, updates, and searches happen infrequently. In other words, data is typically added in the order in which the transaction occurs. What kind of data structure would you use, and why?
4. You are building an analytical database. Your requirement is that the database handle queries very quickly, but that the data never changes, i.e., there are no inserts, deletions, or updates. What kind of data structure would you use, and why?
5. You are building a personnel directory, where searches are performed by last name, first name, middle name. What kind of data structure would you use, and why?
6. You are building a username/password database. Your requirement is that updates happen frequently (when users change their passwords) and that searches (to authenticate users) happen extremely quickly. What kind of data structure would you use, and why?
7. What is a *lambda expression*? Give an example. Why would we use a lambda expression?
8. What is the difference between lambda expressions and anonymous methods? What are the advantages of each?