

SKIP2103 Advanced Programming

Exercises – Collection: List

1. What are the differences between ArrayList and LinkedList? Which list should you use to insert and delete elements at the beginning of a list?
2. How do you create a list from an array of objects? How do you traverse a list in both directions?
3. Suppose list1 is a list that contains the strings red, yellow, and green, and list2 is another list that contains the strings red, yellow, and blue. Answer the following questions:
 - a. What are list1 and list2 after executing list1.addAll(list2)?
 - b. What are list1 and list2 after executing list1.removeAll(list2)?
 - c. What are list1 and list2 after executing list1.retainAll(list2)?
 - d. What is list1 after executing list1.clear()?
4. Write a program that uses a Java List to store Book objects, where each Book object represents a book with a title, author, and year of publication. The program should allow the user to add, delete, and search for books in the catalog. When searching for books, the program should allow the user to search an exact book (match the title, author and year) or search by title.