

Tutorial 10

You will be expected to engage with the tutor and discuss solutions to the problems presented here.

1. Describe the `Iterator` interface. Give an example of a class that implements the `Iterator` interface.
2. Write an interface for a CD player. It should have the standard operations (i.e. play, stop, etc.) that usual CD players have.
3. What is polymorphism?
4. How does inheritance relate to polymorphism in Java?
5. Show each step in the sorting of the list below using selection sort:
5 13 45 2 18 0
6. Searching
 - a. Describe binary search. Show each step in searching for the value 8 in the following list:
0 3 7 9 15 23 40 55 57
 - b. How efficient is binary search compared to linear search? Calculate the number of comparisons required for the best and worst cases for a list of length 20.