Lee Moriarity

Professor Kelly

CIS 112 ONL01

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Lab #5

  Do Exercises #6, #15, #19, #28  at the end of Chapter  5  (p. 343 ) .

Exercise #6:

6. Show the values contained in the instance variables elements and numElements

of the sample collection after the following sequence of operations:

ArrayCollection<String> sample = new ArrayCollection<String>;

sample.add("A");  **// Add A to sample ArrayCollection [“A”] numElements=1**

sample.add("B");  **// Add B to sample ArrayCollection [“A”, “B”] numElements=2**

sample.add("C");  **// Add B to sample ArrayCollection [“A”, “B”, “C”] numElements=3**

sample.add("D"); **// Add D to sample ArrayCollection [“A”, “B”, “C”, “D”] numElements=4**

sample.remove("B"); **// Remove B from sample ArrayCollection [“A”, “C”, “D”] numElements=3**

Exercise #15:

15. Based on the equals method for Circle objects defined in Section 5.4, “Comparing Objects Revisited,” what is the output of the following code sequence?

Circle c1 = new Circle(5); **// creates c1 new circle (5)**

Circle c2 = new Circle(5); **// creates c2 new circle (5)**

Circle c3 = new Circle(15); **// creates c3 new circle (15)**

Circle c4 = null; **// creates c4 null new circle**

System.out.println(c1 == c1); **// prints true**

System.out.println(c1 == c2); **// prints false**

System.out.println(c1 == c3); **// prints false**

System.out.println(c1 == c4); **// prints false**

System.out.println(c1.equals(c1)); **// prints true**

System.out.println(c1.equals(c2)); **// prints true**

System.out.println(c1.equals(c3)); **// prints false**

System.out.println(c1.equals(c4)); **// prints false**

Exercise #19:

19. Based on the compare to method for FamousPerson objects defined in Section 5.4,

“Comparing Objects Revisited,” what is the output of the following code sequence.

Answers may include phrases such as “a negative integer.”

FamousPerson f1 = new FamousPerson("Peter","Parker",1962,"Spiderman");

FamousPerson f2 = new FamousPerson("Bonnie","Parker",1910,"Criminal");

FamousPerson f3 = new FamousPerson("Clark","Kent",1938,"Superman");

FamousPerson f4 = new FamousPerson("Clark","Kent",1938,"Reporter");

System.out.println(f1.compareTo(f1)); **// 0**

System.out.println(f1.compareTo(f2)); **// 14**

System.out.println(f2.compareTo(f1)); **// -14**

System.out.println(f1.compareTo(f3)); **// 5**

System.out.println(f3.compareTo(f4)); **// 0**

System.out.println(f4.compareTo(f3)); **// 0**

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Exercise #28:

28. Show the values contained in the instance variables head and numElements of the

sample collection after the following sequence of operations:

LinkedCollection<String> sample = new LinkedCollection<String>;

sample.add("A"); **// Add A to sample LinkedCollection [“A”] numElements = 1**

sample.add("B"); **// Add B to sample LinkedCollection [“A”, “B”] numElements = 2**

sample.add("C"); // **Add C to sample LinkedCollection [“A”, “B”, “C”] numElements = 3**

sample.add("D"); **// Add D to sample LinkedCollection [“A”, “B”, “C”, “D”] numElements = 4**

sample.remove("B"); **// Remove B from sample LinkedCollection [“A”. “C”, “D”] numElements = 3**