Lab 2

PhoneBook.java is due at the end of your lab. Click the "Submit" button

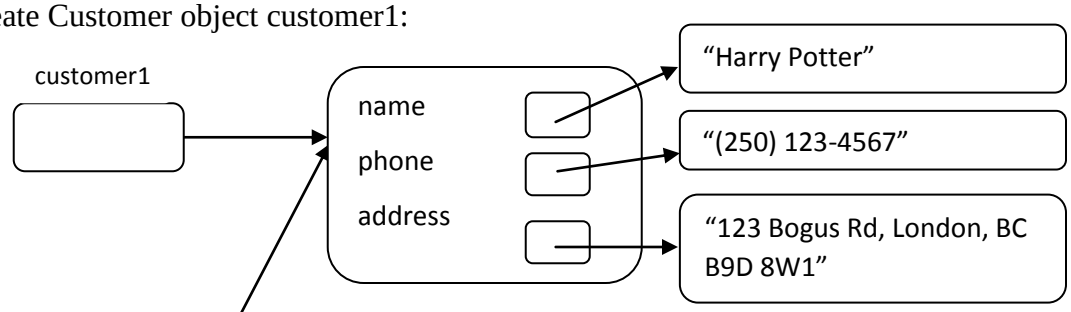
Objectives:

- Create an array of objects from a text file, array manipulation
- Understand how object is stored in memory
- Submit one file: *PhoneBook.java* at the end of the lab. Click the "Submit" button

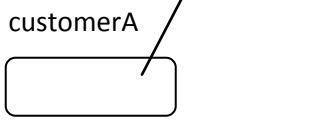
1. Understand how object is stored in memory

```
1  public class ObjectDemo{
2      public static void change(Customer customerA, String newName){
3          customerA.setName(newName);
4          System.out.print("\nIn change(), customerA:\n");
5          System.out.println(customerA);
6      }
7
8      public static void changeOther(Customer customerB, String newName){
9          customerB=new Customer(customerB);
10         customerB.setName(newName);
11         System.out.print("\nIn changeOther(), customerB:\n");
12         System.out.println(customerB);
13     }
14
15     public static void main(String[] args){
16         Customer customer1=new Customer("Harry Potter", "(250) 123-4567", "123
           Bogus Rd, London, BC B9D 8W1");
17         System.out.println("In Main, customer1 is:\n"+customer1);
18
19         change(customer1, "Mary Smith");
20         System.out.print("\nIn main, after change(), customer1:\n");
21         System.out.println(customer1);
22
23         changeOther(customer1, "Sorting Hat");
24         System.out.print("\nIn main, after changeOther(), customer1:\n");
25         System.out.println(customer1);
26     }
27 }
```

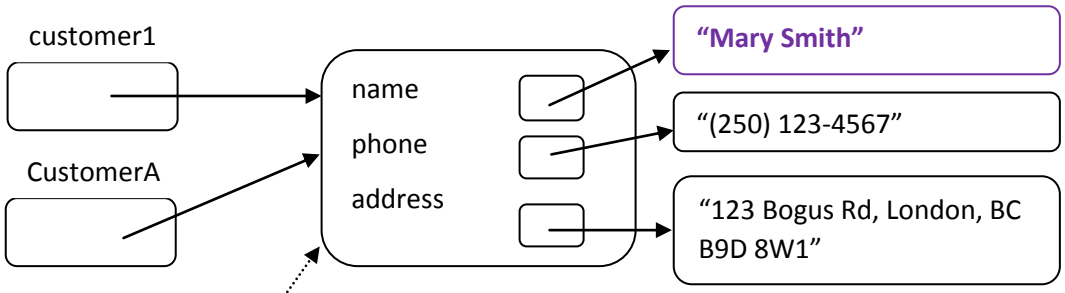
Line 16: create Customer object customer1:



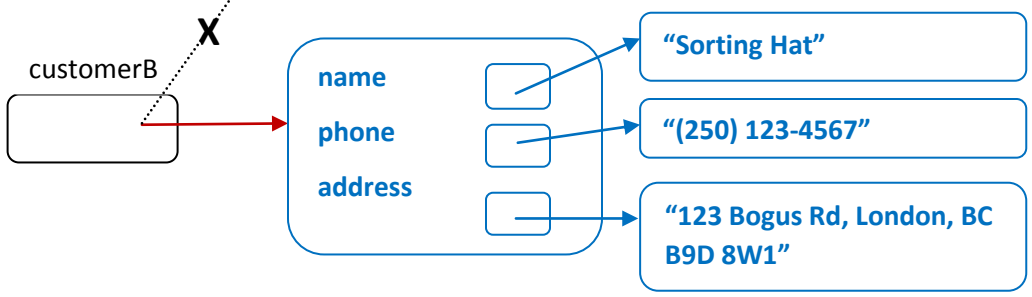
Line 19: method call. (`change(customer1, "Mary Smith");`



Note that the value of name is changed to "Mary Smith". Now the diagram looks like this:



Line 23: method call (`changeOther(customer1, "Sorting Hat");`)



Note that initially “customerB” points to what “customer1” points to, but after line 9, it points to a different Customer object which is a copy of what “customer1” points to. Then the value of the copy is changed but what “customer1” points to is not.

2. PhoneBook.java

Download the PhoneBook.java file. An array of Customer objects are used. An array in Java is an object, so it is declared using the “new” operator. Since it is an object, it has attributes, such as length.

Use Connex to submit one file: *PhoneBook.java* at the end of the lab. Make sure you click the “Submit” button.