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1: // J.J. Collins
2: // CS4125 / CS5121 / CS5721
3:
4: // Name: progl_a-interfaces.java
5: // Intent: (a) move towards a realisation of the importance of "Program to
    Interfaces, NOT Implementation"
6: //          (b) a person has an address
7: // Note: 2 problems
8: //          (a) fails LSP
9: //          (b) visibility of attributes, should use setter methods, why?
10:
11: import java.util.*;
12: /*****
13: class address
14: {
15:     // attributes
16:     public int tel;
17:
18:     // operations / methods
19:     public void set_tel_no(int number) {tel = number;}
20:     public void display_tel_no() { System.out.println(" Telephone number is: " + tel)
        ;}
21: };
22: *****/
23: // class person (subclass) inherits from class address (superclass).
24:
25: class person extends address
26: {
27:     public int dob;
28:     public void set_dob(int date) { dob = date;}
29:     public void display_dob() { System.out.println(" Date of birth is: " + dob);}
30: }
31: /*****/
32: // The main procedure/method is where execution begins and ends
33:
34: class client {
35:
36:     public static void main(String args[]) {
37:
38:         // create p, an object that is an instance of class person
39:         person p = new person();
40:
41:         // invoke some operations on p
42:         p.set_tel_no(12345);
43:         p.set_dob(121212);
44:         p.display_tel_no();
45:         p.display_dob();
46:
47:         // the following would be legal
48:         p.tel = 789;
49:         p.display_tel_no();
50:
51:     }
52: }
53: /*****/
54:
```