Objectives: Explore the properties of C++ simple inheritance.
Description: The file lab02.person.h contains a base class Person used at the 3rd Regional Bank of Mason. The bank wants classes for employees and customers. You will create these classes, inheriting them from Person.
Tasks:

1. Create a class Employee that inherits from Person. The class should have a string member variable that stores a job description. Implement a PrintAll() function in Employee that prints the same information as Person’s PrintAll() function and adds an extra line with ”job: ” followed by the Employee’s job description.

2. In main(), create an Employee called ’jane’, with the name ”Jane Doe” and job description ”Teller”. Call the PrintName() function for ’jane’. Since Employee does not have a PrintName() function, why can we do this?

3. Create a class Customer that inherits from Person. The class should have a string member variable that stores an account number. Implement a PrintAll() function in Customer that prints the same information as Person’s PrintAll() function and adds an extra line with the account number.

4. In main(), create a Customer called ’will’, with the name ”Will Smith”, SSN 373483621, and account number 145-13. Call the PrintName() and PrintAll() functions for ’will’.

5. In main(), create an Employee pointer called ’willemp’, and have it point to ’will’. Why did you get the result you did?

6. Comment out the above declaration and assignment. Create a Person pointer called ’willperson’, and have it point to ’will’. Why did you get the result you did?

7. Call the PrintAll() and PrintName() functions for the ’willperson’. What functions are actually called?

8. We now want to modify Employee’s PrintAll() function to print out First Name Last Name, Job Description, ending with a newline. Why can’t you do this? Modify the declaration of Person so that you can, but make sure Person’s data stays as hidden as possible.
9. Add a function to lab02.main.cc called ShowNames that takes two Person references as arguments. This function prints out "Person 1: " and does a PrintAll() for the first argument, then prints out "Person 2: " and does a PrintAll() for the second argument. Call ShowNames from main() passing 'jane' and 'will' as arguments. Why can you do this? Why does ShowNames invoke the member functions it does?