INT204 Assignment 1 (Semester 2020/2)

1. Spring IoC and Dependency Injection with XML Configuration (without Java annotation).
   a. Create an interface named "Injection" in "int204.model" package. This interface has two methods named: "getHead()" (returns String) and "getTail()" (return int).
   b. Create a class (use your first name as the name of the class) in "int204.model" package. This class implements the Injection interface. This class has two instance variables:
      i. The first variable (String type): use your last name as the name of the variable.
      ii. The second variable (int type): use the name of the month that you were born as the name of the variable.
      iii. getHead() should return the value the first variable and getTail() should return the value of the second variable.
      iv. Create a bean named "me" (with prototype scope) and use setter injection to inject your nickname as the value of the first variable and inject the last three digits of your student id as the value of the second variable.
   c. Create a class (use your last name as the name of the class) in "int204.model" package. This class implements the Injection interface. It has one instance variable which is an object of type in b (that is, your first name).
      i. getHead() should return what is returned from the getHead() call to its instance variable.
      ii. getTail() should return the length of the string returned from the getHead() method.
      iii. Create a bean name "mine" (with singleton scope) and use constructor injection to inject "me" as the value of its instance variable.
   d. Create a class (use the name of your father as the name of the class) in "int204.model" package. This class has one instance variable named "myList" of List<Injection> type.
      i. This class has getList() method that returns myList.
      ii. Create a bean named "listBean" and inject "me" and "mine" into the list respectively using constructor injection.
         See: https://www.tutorialspoint.com/spring/spring_injecting_collection.htm
   e. Create a main class (use the name of your mother as the name of the class) in "int204.main" package.
      i. Access "me" bean using Injection interface (name the variable "x") and try getHead() and getTail() methods.
      ii. Access "mine" bean using Inject interface (name the variable "y") and try getHead() and getTail() methods.
      iii. Access "listBean" bean and try getList() method and check if the first element in the list is the same as "x" and check if the second element in the list is the same as "y".