**Exercise 1**  
Inheritance means that any child class has the same properties as its super class (parent class).  
  
Changes to the super class will affect all the child classes but changing a child class will only affect the child class itself.  
  
**Exercise 5**

The main program has a for loop that counts from 0 to 10, and inside the for loop is an int defined named random, and the int is set by calling the method generateRandomInteger.  
  
After that the variable random is printed to the console.

Once the for loop is completed, the program prints a message saying that the random integers are generated.  
  
**Exercise 7**

You can declare a static variable inside a class to make sure that the memory of that variable is only reserved once. Altering a static variable will change the value of every object where it is used.

As an example, if I created a class called cat with a variable called breed, if I created 20 cat objects, I would have to allocate memory for breed 20 times, even though it is the same breed. If you want to change breed you would have to access every cat object separately to change it.

With breed declared as a static variable memory is only allocated once for all 20 objects.  
If the breed is then changed, the change will happen for all objects.