# Project 1 Part 1: Person class & RandomString

The goal of this project is to become more familiar with creating and using classes and objects in Java. In order to do so, you will create a Person class. Your class will keep track of how many parts are not shown, display the next item when a method is called, and reset. You will also create a small test application to test your new Person class. The objective here is to become more familiar with creating and modifying classes as well as manipulating objects. This is a creative assignment. No two pictures will (or should) be the same.

# Instructions

* Create a new Java project named “Hangman\_uLogin” (where you replace uLogin with **your** uLogin)
* Create a Person class that extends JPanel (start from a simple Picture class and rename it to Person). The Person class should draw a person by implementing the following methods:
* paintComponent – with the same signature/header of the other paintComponent methods we have written. This will draw the person. Make sure the first line is “**super**.paintComponent(page);”
* getNumLeft – returns the number of turns the player has left (e.g. 6 at the beginning assuming head, body, left/right arm/leg). *Hint*: this is named like a getter method for a reason.
* reset – which resets the number of turns left and erases the person so it is not visible (no parameters)
* showNext – progressively causes the next body part to be shown: head, body, left arm, right arm, left leg, right leg (takes no parameters)
* main – a static method used for testing (see Picture). It should display a person object and when you click on it the next body part should show, if all parts are visible, then it should be reset so it is no longer visible. This will be removed for the final game, but will allow you to test each piece as you go, which is a good programming practice. (See the hint below for help with handling the mouse clicking.)
* Create a RandomString class and implement the following:
* Create a file named guess\_phrases.txt in your project that contains phrases to be guessed in your Hangman game. This file will have one guess phrase per line. Make sure this file is in the topmost project folder, ***not*** inside your src folder.
* A constructor that receives the name of a file to get string values from. The constructor should read in the phrases from the file and store them for later use.
* next – a method that returns a random string value from the file; this value shouldn’t be repeated until all guess phrases in the file have been used.
* Create a main method to test that next is working correctly by repeatedly calling next & printing the result – you should not have any repeats, and the phrases should *not* be in the same order as in the file.

# Hints / tips

* While not necessary, you may find it useful to organize your person-drawing code into a separate method for each body part (e.g., drawHead, drawBody, dawLeftLeg, etc…). If you do this, these methods should be private.
* The methods reset & showNext should not take ANY parameters (not even a Graphics object). ALL your drawing should take place in the paintComponent method. Check out the repaint() method (<http://docs.oracle.com/javase/1.5.0/docs/api/java/awt/Component.html#repaint%28%29>) to see how you can force the paintComponent method to be called.
* In order to support showing the next body part when the person is clicked, you will need to add the following code (which you need to complete) in the **constructor** of your Person class:

**this**.addMouseListener(**new** MouseAdapter() {

**public** **void** mouseClicked(MouseEvent e) {

// add code so if not all shown, the next body part

// is shown, otherwise the person is reset

}

});