Name: ________________________________

Collaboration Statement: (Read the syllabus if you are unsure what to write here.)

Signature: ________________________________

This homework consists of three parts, one written and two electronic (java programs); all portions are due by 4pm Tuesday Feb 17. The written portion and can be turned in in class, or to the bin on Dr. Swenson’s office door. The java programs (PrintBirthday.java and WeightedAverage.java, described in this document) will be submitted via Blackboard. You are welcome to submit as many attempts as you would like up to the deadline, but both programs must be submitted as attachments to the same submission.

1. The Java Language Documentation (written portion of homework 2, 20 points):
   Access the Java API documentation from the class website. It is linked in the left hand sidebar. In the Java docs, look up in the top left corner of the page for a list of packages. For each package listed below, write down the first sentence of the package description, and report how many classes it contains. (Count only classes, not interfaces, exceptions, etc.)
   Example: javax.crypto: “Provides the classes and interfaces for cryptographic operations.” 17 classes.
   
   (a) java.math

   (b) java.lang

   (c) java.util.regex

   (d) javax.imageio

   (e) java.security.cert
2. Printing your birthday (40 points): Write a program, `PrintBirthday.java`, that prints the following, tabbed over once with one blank line between each.

- Your name
- A 50-character-width ASCII art image displaying the day of the month on which you were born, using the digits of the month in which you were born. The image should be at least 15 lines, but no more than 25 lines.

Sample run (for Dr. Swenson, who was born on the second day of the twelfth month); note indentation:

```
Shel Swenson

..................................................
...........111111111...........222222222..........
..........11111111111.........22222222222.........
.........1111111111111.......2222222222222........
........111111...111111.....222222...222222.......
.......111111.....111111...222222.....222222......
......111111.......111111..222222.....222222......
......111111.......111111...........222222........
......111111.......111111.........222222..........
.......111111.....111111........222222............
........111111...111111.......222222..............
.........1111111111111......2222222...............
..........11111111111.....2222222222222222222....
...........111111111......2222222222222222222....
..................................................
```

3. Calculating a weighted average based on the syllabus for this course (40 points): Write a program, `WeightedAverage.java` that prompts the user to enter their average quiz score (out of 15), average homework score (out of 100), average lab score (out of 30), average midterm exam score (out of 100), and final exam score (out of 100) and computes and prints the weighted average based on the syllabus given on the course website.

For this assignment, you should assume the quiz average input by the user was calculated after dropping the lowest quiz score(s). The weighted average should be printed with exactly two decimal places.

Be sure to check for valid input (that the input is within the expected range). If the input is not in the expected range, you should prompt the user to try again until a valid score is given.

For both Java programs, you must follow these Style Guidelines:

- Only one statement or code structure per line. (For example, the class declaration cannot be on the same line as the main method declaration.)
• No lines (including comments) over 80 characters.

• Write a block coment after the honorcode statement describing the programs purpose.

Honor Code:
You must abide by the Emory honor code as well as the course-specific honor requirements for assignments when completing this homework. Make sure to include (in each file) the statement of collaboration and adherence to the honor code acknowledging that you understand and have abided by the honor code.