CMSC 131 Quiz 1 Worksheet

The first quiz for the course will be on Wed, Sep 13. The following list provides additional information about the quiz.

- **Do not post any solutions to this worksheet in Piazza.**
- The quiz will be a written quiz (no computer).
- Closed book, closed notes quiz.
- Answers must be neat and legible.

**The following exercises cover the material to be included in this quiz.** Solutions to these exercises will not be provided, but you are welcome to discuss your solutions with the TAs or instructor during office hours. It is recommended that you try these exercises on paper first (without using the computer). For input and output use the Scanner class.

**Exercises**

1. Convert the number 465 to binary.
2. Convert the binary number 01010111 to decimal.
3. Which of the following are valid Java identifiers?
   
   ```
   House  house  #dog  cat%  blue-elephant  12depth  $height
   ```
4. Order the following types based on their relative size.
   
   ```
   short  int  byte
   ```
5. What is the default type (float or double) for the value 4.5?
6. What is an appropriate name (using camel case) for a class representing a computer?
   
   ```
   Computer  computer  COMPUTER
   ```
7. What is an appropriate name (using camel case) for a variable representing tire pressure?
   
   ```
   tirePressure  TirePressure  tire_Pressure  tire_pressure  TIRE_PRESSURE  TIRE_Pressure
   ```
8. Write a Java Program that displays the following message:
   
   ```
   The directory for Thomas "tommy" project is \fs\www\myproject
   ```
9. Define a symbolic constant that represents PI (3.14).
10. Write a program that asks the user for a password value; the expected value is "terps". If the user provides the expected value, the program will print the message "Access Granted"; otherwise the program will print the message "Access Denied."
11. Write a program that reads two integer values (using the Scanner class) and prints "Y" if the first value is divisible by the second, and "N" otherwise.
12. Write a program that decides which kind of parking permit to grant based on the following criteria:
   
   - freshman → "Zone Purple"
   - sophomore → "Zone Red"
   - junior → "Zone Green"
   - senior or age > 40 → "Zone Gold"
13. Write a program that reads three integer values and determines whether they represent an increasing sequence.