

COMP 1409 Introduction to Software Development 1 Quiz #1 Sample Solution

1. Explain the difference between “class” and “object”. (2 points)

A class is the definition of some category; a combination of data and behaviors that define the category. For example, the class `BankAccount` would have data such as “balance in dollars”, and behaviors such as “transfer”, “withdraw”, and “deposit”.

An object is a specific, actual instance of a class. For example, MY bank account, or yours, or Donald Trump’s.

2. Explain what is meant by the “default value” of a variable. Give two examples. (2 points)

The default value is the value that Java gives to an instance variable if the programmer does not assign a specific value. For example, the default value for an `int` variable is zero. The default value for a `boolean` variable is `false`.

3. For each of the values below, show the data type. (4 points)

56.0 data type: double

false data type: boolean

“hello” data type: String

2 data type: int

'2' data type: char

“true” data type: String

-97 data type: int

'@' data type: char

4. Write the Java code to create a `Student` class. This class has two instance variables, one to store the student's first name and one to store the student's year of birth. Use proper data types and good naming / indentation conventions. (4 points)

```
class Student // uppercase “S” for the class name
{
    String firstName; // uppercase “N” for a second word
    int yearOfBirth; // specific, not just “year”
}
```