CSE 1321 Lecture Test 3A

Fall 2019

1. **DO NOT OPEN YOUR TEST UNTIL TOLD TO DO SO.**
2. Nothing may be on your desk except the exam, your photo ID (REQUIRED), and your writing utensil(s).
3. **THERE ARE FIVE (5) QUESTIONS AND AN EXTRA CREDIT QUESTION ON THIS TEST. CHECK EACH PAGE TO MAKE SURE YOU HAVE ALL QUESTIONS!**
4. Student has 45 minutes to complete the exam
5. Student MAY NOT use notes or books
6. **Please make sure to check the corresponding language box for each question:**
   1. Pseudocode answers should be clearly explained enough that a reader could take the answer and turn it into source code with minimal interpretation.
   2. Source code must be exact source code (include all required symbols, syntax, and indentation). It should be written to where a compiler would allow that code to run without any changes from the reader.
7. Student is not allowed any electronic devices (including but not limited to: earbuds, headphones, cell phones, tablets, laptops, watches, etc.) that can be used to look up or store answers.
8. If you’re wearing a hat with a brim, turn it backwards or remove it. You may not wear a hood.
9. All answers are to be your own, without the assistance of others
10. Partial credit will be given where appropriate
11. **You must put your KSU ID# (and only KSU ID#) on every page of the test after this cover page.**

Student Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student KSU ID#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student NetID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Junkyard Wars** - You are participating on a gameshow where your team must build a functioning car from junkyard scrap. You are tasked with creating a class for one of the car’s components. **(50 points)** You must (no need to close class out):

1. Create an **Odometer** Class with a secure **Mileage** attribute.
2. Create a default Constructor with no parameters that assigns a default value for the variable.
3. Create an overloaded Constructor (with a parameter for the variable).
4. Create two methods (one that increases current mileage reading by 1 and a second method that returns current value of mileage attribute). NOTE: these methods must not print anything.

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝

**CLASS NAME & VARIABLE:**

**DEFAULT CONSTRUCTOR:**

**OVERLOADED CONSTRUCTOR:**

**1st CLASS METHOD (increases attribute):**

**2nd CLASS METHOD (returns attribute):**

**Question 2) IT’S ALIVE!** – Create a new object of the class you just created using the overloaded constructor (send in any value you choose). **(10 points)**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝

**Object Creation:**

**Question 3) CALL ME MAYBE** - For your new object, call the method that increases the attribute then print out the attribute’s current value by calling the method that returns its value. **(20 points)**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝

**Method Calls:**

**Question Extra Credit)** Draw a picture or tell us a joke **(1 point)**

**Question 4) Classroom Disarray Part 1** – Imagine you have an array of an unknown number of student grades called **StudentGrades**. Your task is to complete the following update for your boss as proof you can work with the data. **(10 points)**

**The value in the 72nd cell/slot is incorrect!  Write the code to change its value to 86.**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝

**Question 5) Classroom Disarray Part 2** – Imagine you have an array of an arbitrary number of student grades called **StudentGrades**. Your task is to complete the following update for your boss as proof you can work with the data (C++ answers can hardcode the array size to be 100). **(10 points)**

**Write the code to sum the elements stored in the odd indices in the array of grades. After processing the array, print the sum with a descriptive message.**

Answer is in: Pseudocode ⃝ C# ⃝ Java ⃝ C++ ⃝