



CSE 1322 Lecture Test 1A Cover Sheet

Spring 2020

In taking this test you affirm that you have neither given nor received inappropriate help and that the answers you submit are wholly your own.

Print your Name, ID# and NetID on each page.

- 1) **THERE ARE FIVE (5) QUESTIONS AND AN EXTRA CREDIT QUESTION ON THIS TEST. CHECK EACH PAGE TO MAKE SURE YOU HAVE ALL QUESTIONS!**
- 2) Student has 45 minutes to complete the exam
- 3) **Student cannot use any books, notes, electronic devices, calculator, smart watch, ear phone, etc.**
- 4) Your 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.
- 5) Student is not allowed any electronic devices that can be used to look up or store answers.
- 6) All answers are to be your own, without the assistance of others
- 7) Partial credit will be given where appropriate

Student Name (Please write clearly): _____

Student KSU ID# _____

Student NetID (Please write clearly): _____

Student Signature: _____ Date: _____

Please write clearly KSU ID / NetID: _____

1. [20 points] What is the output of the following code segment?

```
int x = 0, y = 0;
for (int i = 0; i < 5; i++)
{
    PRINT("x = " + x++ + "\t");
    PRINTLN("y = " + ++y);
    ++x;
}
```

Output:

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2. [20 points] In details and step-by-step, show how you apply the **Bubble Sort** algorithm on the following list of values. Your answer should show all **inner** and **outer** loops entries in each pass of the sort algorithm (i.e. list all 5 numbers in pass one, then list all 5 numbers in pass two, then list all 5 numbers in pass three... etc.)

19, 18, 25, 17, 27

Answer [No Algorithm /Pseudocode / C# / Java Program needed]

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3. [20 points] Using your choice of C# or Java, (i) declare the main() method with its full signature; (ii) Then declare a **3x4 matrix** named myData and assign its elements with the following 12 data values {1, 4, 7, 4, 2, -7, 4, 5, 6, 7, -3, 6}; (iii) complete the method that searches in the myData to check how many times the target number 7 exists in it. For instance, **“The target value 7 exists 2 times”**; (iv) If the target value 7 does not exist your program will display that **“The target value 7 does not exist”**. No hardcoded output is accepted. You don't need to declare any class.

Answer is in Pseudocode:

C#:

Java:

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4. [20 pts] Given the Car and CarMain classes below and there are 12 correct/incorrect statements (A thru L) in the main() method. In the choice boxes below mention any **Five** statements (e.g., A, B, C, ...) that are **Not-Correct**. Assume that String == string (Java and C#)

Choice 1

Choice 2

Choice 3

Choice 4

Choice 5

```
class Car {
    private String vin;
    public static String make;
    public String model;
    private int mileage;
    public String getVin() { return vin; }
    public void setVin(String carID) { this.vin = carID;}
    public int getMileage() { return mileage;}
    public void setMileage(int m) {this.mileage = m;}
    public static void carDetail() {/*... */}
}
```

```
public class CarMain {
    public static void main(String[] args) {

        Car c1 = new Car();

        /* A) */ Car.model = "CRV";
        /* B) */ c1.setVin("2020S91010");
        /* C) */ c1.setModel();
        /* D) */ c1.vin = 202081010;
        /* E) */ c1.make = "Mustang";
        /* F) */ Car.make = "Mustang";
        /* G) */ Car.setVin();
        /* H) */ c1.getVin();
        /* I) */ c1.getMileage();
        /* J) */ c1.color = "Red";
        /* K) */ Car.carDetail();
        /* L) */ carDetail();
    }
}
```

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5. [20 points] Using your choice of C# or Java, define a class for a Dog. (i) A Dog object should have three attributes: a name, an age, and weight. Your class should have (ii) a constructor that takes three arguments and copies them to the attributes; (iii) setters (mutators) and getter (accessors) or properties (C#) only for one the attributes; (iv) override the toString()/ToString() method to display the Dog's attributes on screen; and (v) a main() method that creates a Dog object, assigns values to its attributes, and displays them by using the PRINT() method.

Answer is in Pseudocode:

C#:

Java:

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Remaining part of the previous question's answer (if needed)

6) [1 point] Extra Credit Question:

$$50 / 5 * (5-0) = ?$$

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