CS164: Worksheet Week 8 – Review 2

Name(s):_____

1. Which of these are not valid?

```
public static void question1() {
    char bill = "bill";
    char rory = 57;
    char amy = 'p';
    char f, z;
}
```

2. What is printed?

```
public static String formatterC(String str, int d) {
    return String.format("%" + d + "s", str);
}

public static void main(String[] args) {
    System.out.println(formatterC("Monkey", 10));   // line 1
    System.out.println(formatterC("Monkey", 3));   // line 2

}
```

3. Consider the following code to answer the following questions:
    a. How many times does loop 1 execute?
    b. What is printed from the line marked question 2?
    c. How many times does loop 2 execute?

```
int pug = 10;
int corgi = 2;
while(corgi <= pug){ // loop 1
    pug -= corgi;
}
System.out.println(pug); // question 2

for(int i = 10; i > 0; i -= 3){ // loop 2
    System.out.println("It must be a hardware problem.");
}
```

4. What is printed?

```
public static String branchingCheck(int valOne, int valTwo, int valThree) {
    double pi = 3.14;
    String hasPie = "I like pie";
    String morePie = "I need more pie";
    String actualPie = "π";

    if (valOne > valTwo) {
        if (valOne > pi) {
           return hasPie;
        }
    } else if (valTwo >= valThree) {
        return morePie;
    } else {
        if (valThree < 3.14) {
            return actualPie;
        }
        return "The value of pi is: " + pi;
    }
    return "no pie";
}
public static void main(String[] args) {
    System.out.println(branchingCheck(10,9,8));
    System.out.println(branchingCheck(0, 0, 0));
    System.out.println(branchingCheck(3, 0, 1));
}
```

5. Given the following program, what is printed?

```
 public static void doSomething(String msg) {
                  System.out.println(msg);
    }

    public static void main(String[] args) {
        try {
            Scanner fileHandler = new Scanner(new File("file.txt"));
            while(fileHandler.hasNext()) {
                doSomething(fileHandler.nextLine());
            }
        }catch(IOException io) {
        // what happens if the file is not there??
        }
  }
```

Contents of file.txt are:

Lecture Review for

Exam 2 – Good

Luck!

6. Consider method overloading concept and write “valid” or “invalid” for each option below:

```
a.  float add(int a, float b);
b.  float add(int a, float b, int c);
c.  float add(float a, float b);
d.  int abc(int num);
e.  float abc(int num);
```

7. Consider the classes presented below and analyze the statements about inheritance, indicating if they are true or false and why.

```
public class Vehicle {
  private String make;
  private String color;
  private int year;
  private String model;
  public Vehicle(String make, String color, int year, String model) {
    this.make = make;
    this.color = color;
    this.year = year;
    this.model = model;
  }
 public void printDetails() {
    System.out.println("Manufacturer: " + make);
    System.out.println("Color: " + color);
    System.out.println("Year: " + year);
    System.out.println("Model: " + model);
  }
}
```

```
public class Car extends Vehicle {
  private String bodyStyle;
  public Car(String make, String color, int year, String model, String bodyStyle) {
    super(make, color, year, model);
    this.bodyStyle = bodyStyle;
  }

  public void printDetails() {
    super.printDetails();
    System.out.println("Body Style: " + bodyStyle);
  }
}

public class Main {
  public static void main(String[] args) {
    Car elantraSedan = new Car("Hyundai", "Red", 2019, "Elantra", "Sedan");
    elantraSedan.printDetails();
  }
}
```

a. Car is a superclass.
b. Vehicle is a subclass.
c. printDetails method is being override in Car class.
d. Vehicle v1 = new Vehicle("Hyundai", "Black", 2020, "Elantra");
e. Vehicle v2 = new Car("Hyundai", "White", 2023, "Elantra", “Sedan”);
f. Car c1 = new Vehicle("Hyundai", "Blue", 2018, "Elantra");

8. Given the following output: order the options presented below to build the code to match this output.

```
Print 1: [Blue, Red]
Print 2: [Blue]
Print 3: [Blue, Green]
Print 4: [Blue, Orange, Green, Black]
```

Order the code below:

```
list.add("Green");
list.add("Blue");
System.out.println("Print 1: " + list);
list.add("Red");
ArrayList<String> list = new ArrayList<>();
list.remove(1);
list.add(1,“Orange”);
list.add(“Black”);
System.out.println("Print 2: " + list);
System.out.println("Print 4: " + list);
System.out.println("Print 3: " + list);
```

9. Given the following String:

```
foco = "Fort Collins;40°35'6.936\"N;105°5'3.9228\"W"
```

Write the value returned for the following options.

- `foco.substring(foco.indexOf(";")+1,foco.lastIndexOf(";"))`
- `foco.substring(0, foco.indexOf(";"))`
- `foco.substring(foco.lastIndexOf(";")+1)`

10. Given the following code, what is printed? HINT: write out the value of tmp, and count the characters.

```
public static void simpleLoop(int total) {
    String tmp = "";
    for (int x = 0; x < total; x++) {
        tmp += (x + ",");
    }
    System.out.println(tmp.length());
}

public static void main(String[] args) {
   simpleLoop(4);
}
```

11. What is the exact output of the method below?

```
public static void checkOne() {

 int i = 9;
 do {
     System.out.println("Line: " + i);
 } while (i++ < 10);
 System.out.println("end");
}
```