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*;  
}

1. 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  
   
}

1. Consider the following code to answer the following questions:
   1. How many times does loop 1 execute?
   2. What is printed from the line marked question 2?
   3. 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.");  
}

1. 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));  
}

1. 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!

1. Consider method overloading concept and write “valid” or “invalid” for each option below:
   1. float add(int a, float b);
   2. float add(int a, float b, int c);
   3. float add(float a, float b);
   4. int abc(int num);
   5. float abc(int num);
2. 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();

  }

}

* 1. Car is a superclass.
  2. Vehicle is a subclass.
  3. printDetails method is being override in Car class.
  4. Vehicle v1 = new Vehicle("Hyundai", "Black", 2020, "Elantra");
  5. Vehicle v2 = new Car("Hyundai", "White", 2023, "Elantra", “Sedan”);
  6. Car c1 = new Vehicle("Hyundai", "Blue", 2018, "Elantra");

1. 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);

1. 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)

1. 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);  
 }

1. 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");

}