CSC 1351: Quiz Ex: Exceptions

Name and Last Digit of Student ID: ________________________________

0.1

Does the following code compile? If it does not, how can it be fixed? If it does, what is its output? Does it throw an exception? If so, how can it be fixed?

```java
public class Oops {
    static void foo(int[] a, int n) {
        int i = a[n];
        System.out.println("i=\"+i);
        foo(a, i);
    }
    public static void main(String[] args) {
        try {
            try {
                foo(new int[]{2, 3, 6, 4, -1}, 0);
                System.out.println("zero");
            } catch(Exception e) {
                foo(null, 0);
                System.out.println("one");
            } finally {
                System.out.println("two");
            }
            System.out.println("three");
            try {
                foo(new int[]{2, 3, 6, 4, -1}, 0);
                System.out.println("zero");
            } catch(Exception e2) {
                foo(null, 0);
                System.out.println("one");
            } finally {
                System.out.println("two");
            }
        } catch(Exception e2) {
            System.out.println("three");
        } finally {
            System.out.println("four");
        }
    }
}
```

```
i=2
i=6
two
three
four
```

0.2

It’s so hard to say goodbye. Does the following code compile? If it does not, how can it be fixed? If it does, what is its output? Does it throw an exception? If so, how can it be fixed?

```java
public class Code {
    public static void main(String[] args) {
        try {
            try {
                System.out.println("Hello Alice");
                if (true) throw new NullPointerException("The End");
                System.out.println("Goodbye Alice");
            } catch(Exception e) {
                foo(null, 0);
                System.out.println("one");
            } finally {
                System.out.println("two");
            }
            System.out.println("three");
            try {
                System.out.println("Hello Bob");
            } finally {
                System.out.println("two");
            }
            catch(NullPointerException npe) {} 
        } 
    }
}
```
0.3
When is an infinite loop not infinite? Does the following code compile? If it does not, how can it be fixed? If it does, what is its output? Does it throw an exception? If so, how can it be fixed?

```java
public class Code {
    public static void main(String[] args) {
        int sum = 0, count = 0;
        int[] arr = new int[]{1,2,3,2,1};
        try {
            int n = 0;
            while(true) {
                sum += arr[n++];
                count++;
            }
        } catch(ArrayIndexOutOfBoundsException ex) {}  
        System.out.println("sum = "+sum);
    }
}
sum = 9
```

0.4
Fill in the missing code. The number of lines corresponds to the answer key. Your code may vary.

```java
public class Npe {
    public static void main(String[] args) {
        Integer a = null;
        try {
            int b = a + 3;
        } catch(NullPointerException npe) {
            npe.printStackTrace();
            ---------------------
        }
    }
}
// output:
java.lang.NullPointerException
    at Npe.main(Npe.java:5)
```