**CIS 181 - Lab 6**

**Java Exception: Out of Bounds and Machine Inspection**

## ****Objectives****

* To gain a better understanding of Java exception by catching and throwing it.
* To gain a better understanding of Java exception through designing, coding and debugging a small program.
* To become familiar with Java application by coding machine inspection used in some public safety places such as airport security.

## ****Description****

You are given a working program with five files: ExceptionTest.java, DangerException.java, Machine.java, Goods.java, and Test.java. All those five files are belonged to two packages: domain and danger. The descriptions of these files can be found below.

ExceptionTest.java: a very tiny program for you to experience Java keywords “try”, “catch”, and “finally”. Put this java file in a package “domain”, and you can run it independently from other 4 java files. You don’t need to change any code in this file. It is used for studying Java exception.

**Exercises**

1. Download the following code

* ExceptionTest.java
* DangerException.java
* Machine.java
* Goods.java
* Test.java

1. In Eclipse, create a new Java project called "Lab 6", and import the above 5 files into two packages: domain and danger, respectively.
2. Compile and run the program of ExceptionTest.java. Make sure it works. Experience how to use keywords: try, catch, and finally.
3. Let’s focus on danger package. For DangerException class, you don’t need to change any code. This class will be used in Machine class, when an good is detected as dangerous item.
4. For Goods class, please fill out two functions: setName and getName. You need to add code in Goods.java.

* **public** **void** setName(String name)

Set name of a good. This function will be used in Machine class.

* **public** String getName()

Get name of a good. This function will be used in Machine class.

1. For Machine class, isDanger function is given to you without modification. There are 4 types of dangerous items: "bomb", "poison", "knife", and "gun" at airport security screening here. Assume any other item are safe here. You need to complete the function checkBag. You need to add code in Machine.java.

* **void** checkBag(Goods g)

To complete this function, please use try and catch here. You can reference the java file ExceptionTest.java above. A DangerException will be threw out if one of four dangerous items is detected.

1. You should write your program that uses Java exception with keywords try, catch, or finally; otherwise, you may lose points accordingly.
2. Complete the following test cases and write down inputs and outputs into a word file for submission.

Testcase1: poison

Testcase2: pant

Testcase3: hat

Testcase4: knife

Testcase5: hat

Testcase6: jacket

Testcase7: laptop

Testcase8: bomb

Testcase9: shirt

Testcase10: book

1. Submit your completed program (Goods.java, Machine.java, and testcase file) to the myCourses!

Outputs













