## **Assignment4**



### What's the different between final, finally? What is finalize()?

- Java final keyword is used to indicate that a variable holds a constant value. It is
  used with a variable. It is used to restrict the user from updating the value of the
  variable.
- Java finally keyword indicates a block of code in a try-catch structure. This block is always executed whether an exception is handled or not.
- Finalize is a protected method of the Object class, which is called by the Java
   Virtual Machine (JVM) just before an object is garbage collected.

### What's the different between throw and throws?

• The throw keyword is used to explicitly raise a exception within the program. On the contrary, the throws clause is used to indicate those exceptions that are not handled by a method. Each method must explicitly specify which exceptions does not handle, so the callers of that method can guard against possible exceptions.

### What are the two types of exception?

Checked exception and Unchecked exception.

### What is error in java?

 Error is a class that inherit throwable and defines exceptions that are not excepted to be caught by the user program.

### **Exception is object, true or false?**

• False, it is a class.

### Can a finally block exist with a try block but without catch?

Yes

### From java 1.7, give an example of the try-resource feature.

```
try (InputStream in = new FileInputStream(filename)){
} catch (FileNotfoundException e) {
}
```

# What will happen to the Exception object after exception handling?

• The Exception object will be garbage collected in the next garbage collection.

### Can we use String as a condition in switch(str){} clause?

• Yes, the switch statement works with byte, short, int, long, enum types, String and some wrapper class such as Byte, Short, Integer, and Long.

### What's the difference between ArrayList, LinkedList, and vector?

 LinkedList use pointer to point at the next node, it is not stored continuously in the memory. ArrayList works like array but can dynamically increase or decrease the size. It store continuously in the memory. Vector is almost identical to arraylist, and the difference is that vector is synchronized.

### What's the difference between hashTable and hashMap?

- Hashtable is synchronized, whereas HashMap is not. This makes HashMap better for non-threaded application.
- Hashtable does not allow null keys or values. HashMap allows one null key and any number of null value.

### What is static import?

• The static import feature of Java 5 facilitate the java programmer to access any static member of a class directly. There is no need to qualify it by the class name.

#### What is static block?

• The **static block** is a block of statement inside a Java class that will be executed when a class is first loaded into the JVM. A **static block helps to initialize the static data members**, just like constructors help to initialize instance members.

### **Explain the keywords:**

- default
  - Java default keyword is used to specify the default block of code in a switch statement.
- break
  - Java break keyword is used to break the loop or switch statement. It breaks the current flow of the program at specified conditions.
- continue
  - Java continue keyword is used to continue the loop. It continues the current flow of the program and skips the remaining code at the specified condition.
- · synchronized
  - Java synchronized keyword is used to specify the critical sections or methods in multithreaded code.
- strictfp
  - Java strictfp is used to restrict the floating-point calculations to ensure portability.
- transient
  - Java transient keyword is used in serialization. If you define any data member as transient, it will not be serialized.
- volatile
  - Java volatile keyword is used to indicate that a variable may change asynchronously.
- instanceOf

 Java instanceof keyword is used to test whether the object is an instance of the specified class or implements an interface.