CONCURRENT PROGRAMMING

// Concurrent Programming Output

run:

Running time for 1 thread and subarray size of 10000: 906758 nanoseconds

Running time for 1 thread and subarray size of 100000: 140929 nanoseconds

Running time for 1 thread and subarray size of 1000000: 65134 nanoseconds

Running time for 2 threads and subarray size of 10000: 2551318 nanoseconds

Running time for 2 threads and subarray size of 100000: 258961 nanoseconds

Running time for 2 threads and subarray size of 1000000: 99874 nanoseconds

Running time for 4 threads and subarray size of 10000: 2659086 nanoseconds

Running time for 4 threads and subarray size of 100000: 208037 nanoseconds

Running time for 4 threads and subarray size of 1000000: 200142 nanoseconds

Running time for 8 threads and subarray size of 10000: 76947704 nanoseconds

Running time for 8 threads and subarray size of 100000: 532923 nanoseconds

Running time for 8 threads and subarray size of 1000000: 403837 nanoseconds

BUILD SUCCESSFUL (total time: 9 seconds)

GENERICS

// Generics Output

run:

Checking if collection of magazines is empty: false

Checking if collection of magazines is empty after using clear method: true

Checking if collection of magazines is empty after using addAll method to add LCMag2 collection into LCMag: false

Checking if collection of magazines contain object: new Magazine("title5", "producer5") :false

Checking collection size of LCMag: 3

Checking if collection of magazines is empty after using removeAll method on LCMag collection: true

Checking collection size of LCMag: 0

Checking for books that are overdue pass the date of 4/12/2017.

title1 is overdue.

title2 is overdue.

Checking for DVDs that are overdue pass the date of 6/1/2016.

title2 is overdue.

BUILD SUCCESSFUL (total time: 0 seconds)

LAMBDA EXPRESSION

// Lambda Expression Output

run:

run:

Print all library items using Consumer:

book title 1

book title 2

DVD title 1

DVD title 2

Mag title 1

Mag title 2

Print all book items using Predicate:

book title 1

book title 2

Print list of library item descriptions using Function:

Book description 1

Book description 2

DVD description 1

DVD description 2

Mag description 1

Mag description 2

Print list of library items that are overdue using Predicate:

The following items are past due: book title 2

The following items are past due: Mag title 1

The following items are past due: Mag title 2

Print list of books that are overdue using Predicate:

The following books are past due: book title 2

BUILD SUCCESSFUL (total time: 0 seconds)

REFLECTION

// Reflection Output

run:

Canonical Name of ConcreteClass: reflection.ConcreteClass

Super class of ConcreteClass: class reflection.BaseClass

Public interface members inherited from super classes and interface members declared by class: interface reflection.BaseInterface

Classes and interfaces declared as members of class: interface reflection.ConcreteClass$ConcreteClassPublicInterface

Classes and interfaces declared as members of class: class reflection.ConcreteClass$ConcreteClassPublicEnum

Classes and interfaces declared as members of class: class reflection.ConcreteClass$ConcreteClassDefaultEnum

Classes and interfaces declared as members of class: class reflection.ConcreteClass$ConcreteClassDefaultClass

Classes and interfaces declared as members of class: class reflection.ConcreteClass$ConcreteClasProtectedclass

Classes and interfaces declared as members of class: class reflection.ConcreteClass$ConcreteClassPrivateClass

Classes and interfaces declared as members of class: class reflection.ConcreteClass$ConcreteClassPublicClass

Modifiers of ConcreteClass's classes: public abstract static interface

Modifiers of ConcreteClass's classes: public static final

Modifiers of ConcreteClass's classes: static final

Modifiers of ConcreteClass's classes:

Modifiers of ConcreteClass's classes: protected

Modifiers of ConcreteClass's classes: private

Modifiers of ConcreteClass's classes: public

Implemented interfaces: interface reflection.BaseInterface

Public methods: public void reflection.ConcreteClass.method1()

Public methods: public int reflection.ConcreteClass.method5(int)

Public methods: public int reflection.ConcreteClass.method2(java.lang.String)

Public methods: public int reflection.ConcreteClass.method4()

Public methods: public static int reflection.BaseClass.method5()

Public methods: public void reflection.BaseClass.method6()

Public methods: public final void java.lang.Object.wait() throws java.lang.InterruptedException

Public methods: public final void java.lang.Object.wait(long,int) throws java.lang.InterruptedException

Public methods: public final native void java.lang.Object.wait(long) throws java.lang.InterruptedException

Public methods: public boolean java.lang.Object.equals(java.lang.Object)

Public methods: public java.lang.String java.lang.Object.toString()

Public methods: public native int java.lang.Object.hashCode()

Public methods: public final native java.lang.Class java.lang.Object.getClass()

Public methods: public final native void java.lang.Object.notify()

Public methods: public final native void java.lang.Object.notifyAll()

Public Constructors: public reflection.ConcreteClass(int)

Public Fields: public int reflection.ConcreteClass.publicInt

Public Fields: public static final int reflection.BaseInterface.interfaceInt

Public Fields: public int reflection.BaseClass.baseInt

Concrete class instanced through reflection: reflection.ConcreteClass@70dea4e

Get set number for publicInt: 3

Get set number for privateString: setstring

Get set boolean for protectedBoolean: true

Get set number for defaultObject: java.lang.Object@5c647e05

Method1 impl.

Method2 impl.

Method4 overriden.

Method5 overridden.

BUILD SUCCESSFUL (total time: 0 seconds)

ANNOTATION

// Annotation Test Output

initialize: STARTING UP PROGRAM

before: TEST STARTING

testMultiply succeeded

after: TEST FINISHED

before: TEST STARTING

testAdd succeeded

after: TEST FINISHED

before: TEST STARTING

testDivide failed

after: TEST FINISHED

before: TEST STARTING

testSubtract succeeded

after: TEST FINISHED

cleanup: CLEANING UP PROGRAM