Java Midterm Part A

Due Mar 7 at 3pm

Points 600

Questions 73

Time Limit 50 Minutes

Instructions

Exam Instructions: TIME LIMITED, AUTO-SUBMIT, AUTO-GRADING YOUR VIDEO MUST BE ON IF ONLINE!

READ CAREFULLY AND ANSWER EACH QUESTION ONE AT A TIME! NO GOING BACK!!!

CANVAS IS SIMPLE: FILL IN BLANK WITHOUT ANY EXTRA CHARACTERS OR SPACES and CORRECT spelling.

Read each question carefully and select the best choice or choices which answer that question. Answer all questions within the time allotted.

Some questions have more than one correct answer. There is no credit for a partially answered question.

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Taking this exam outside of these parameters will result in disqualification and a grade of zero.

Answer all questions.

EXAM WILL AUTO SUBMIT AFTER ALLOTTED TIME EXPIRES.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	24 minutes	526.67 out of 600

Score for this quiz: 526.67 out of 600

Submitted Mar 7 at 2:24pm

This attempt took 24 minutes.

Question 1 20 / 20 pts

/**

*

* CAREFULLY EXAMINE the code fragment given below (where **Electronics** implements **ItemAPI**) for CORRECT Object Oriented Design,

then Fill IN THE BLANK with EITHER:

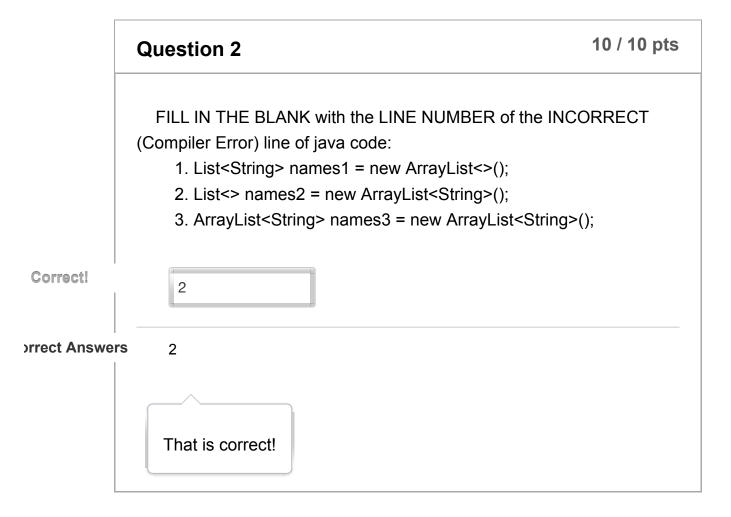
the LINE NUMBER of the java statement which needs to be corrected

OR the words:

NO ERRORS:

```
1
         List < ItemAPI > list = new ArrayList<>(
2
             Arrays.asList(
3
                 new Electronics(1,"Sharp HDTV",999.99),
4
                new Electronics(2,"HP Laptop",399.99),
                new Electronics(3,"Apple iPad mini", 499.99)
5
6
        ));
7
        System.out.println(list.size() + " Electronic items in list.");
8
        for (Electronics e : list) {
           System.out.print(e +" ");
9
10
         System.out.println();
11
```

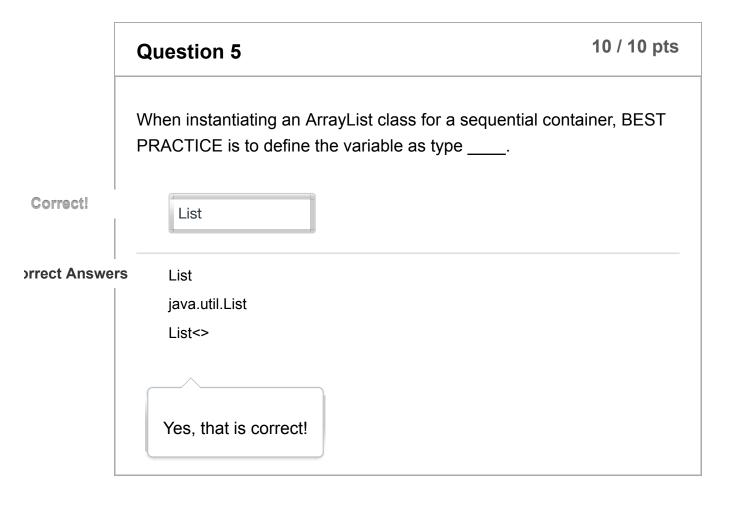




0 / 10 pts **Question 3** Select the answer which best describes the following three lines of java code: 1. List<> numbers1 = new ArrayList<>(); 2. List<double> numbers2 = new ArrayList<>(); 3. ArrayList<> numbers3 = new ArrayList<double>(); **orrect Answer** None of the three Java statements are correct. Java statement 1 is correct. ou Answered Java statement 2 is correct. Java statement 3 is correct. All three Java statements are correct. No, that is not correct. 10 / 10 nts

	Question 4
	When instantiating a HashMap class for an associative container, BEST PRACTICE is to define the variable as type
Correct!	Мар

java.util.Map Map<> Yes, that is correct!



Question 6 5 / 5 pts

A Java interface specifies one or more methods and instance variables to be used in your class.

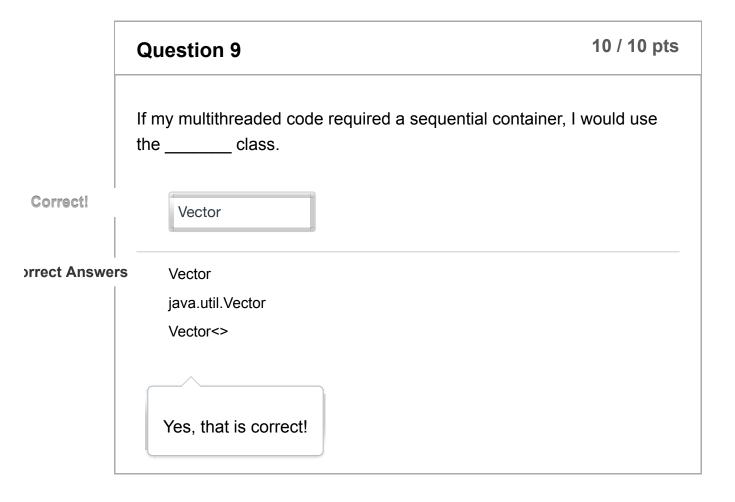
	O True
Correct!	False
	Yes, that is correct!

	Question 7 7.5 / 10 pts
	In Java, you accomplish abstraction (i.e. data and functionality hiding to hide design details) by use of:
Correct!	✓ Abstract class
orrect Answe	Singleton Design Pattern
Correct!	
Correct!	✓ factory method design pattern
	none of these are correct.

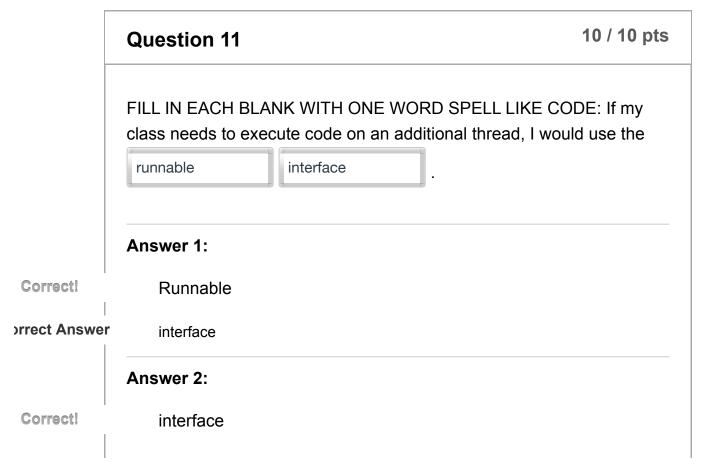
Question 8 10 / 10 pts

In Java, you accomplish abstraction (i.e. data and functionality hiding to hide design details) by use of:

Correct!	✓ Interface
Correct!	✓ Factory Design Pattern
Correct!	✓ Superclass
	none of these are correct.
	Yes, that is correct.!



PILL IN BLANK WITH ONE WORD SPELL LIKE CODE: What is never required for polymorphism but should always be in the derived class implementing polymorphism? Correctl @Override Yes, you are correct!



Yes, that is correct!

	Question 12	10 / 10 pts
	What is another name for class method?	
Correct!	✓ operation	
Correct!	✓ function	
	Charateristic	
	script	
	That is correct!	

Question 13 10 / 10 pts

In Java, you accomplish abstraction (i.e. data and functionality hiding to hide design details) by use of:

Correct!	✓ Interface
Correct!	✓ private helper member functions
Correct!	
	none of these answers are correct.
	Yes, that is correct1

	Question 14	10 / 10 pts
	In a class, What comprises the API for using that class?	
	All data in class	
	All methods in class.	
	All static methods in class.	
Correct!	None of these answers are correct.	
	Yes, that is correct!	

	Question 15	10 / 10 pts
	What another name used for class data?	
Correct!	✓ Field	
Correct!	✓ Attribute	
	form	
	□ text	
	all of these	
	That is correct!	

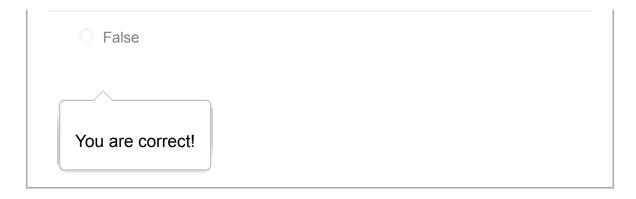
	Question 16	10 / 10 pts
	In UML, another term for Inheritance is	
Correct!	Generalization	
orrect Answei	rs Generalization	

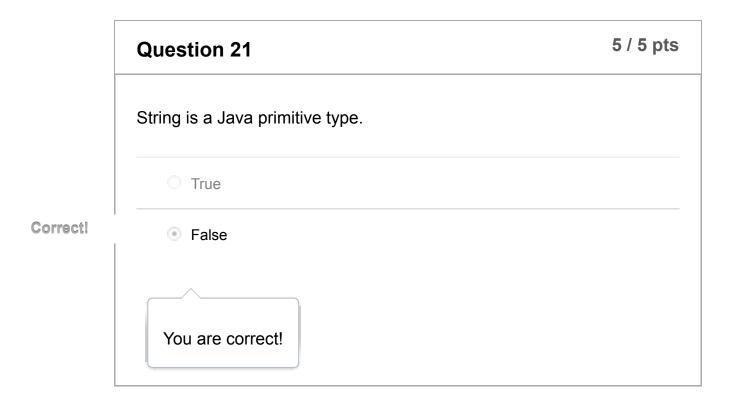
Yes, that is correct!

	Question 17	10 / 10 pts
	What is another name for Superclass?	
Correct!	✓ Parent class	
Correct!	✓ Base class	
	☐ General class	
	all of these.	
	That is correct!	

	Question 18	10 / 10 pts
	What is another name for subclass?	
Correct!	☑ Child class	
Correct!	✓ Derived class	

	general class	
	all of these	
	That is correct!	
	Question 19	5 / 5 pts
	field is a Java primitive type.	
	O True	
Correct!	False	
	You are correct!	
	Question 20	5 / 5 pts
	int is a Java primitive type.	
Correct!	True	





Dyte is a Java primitive type.

True

True

False

Sorry, you are not correct.

	Question 23	5 / 5 pts
	boolean is a Java primitive type.	
Correct!	True	
	O False	
	You are correct!	

	Question 24	5 / 5 pts
	float is a Java primitive type.	
Correct!	True	
	O False	

	Question 25	5 / 5 pts
	double is a Java primitive type.	
Correct!	True	
	O False	
	You are correct!	

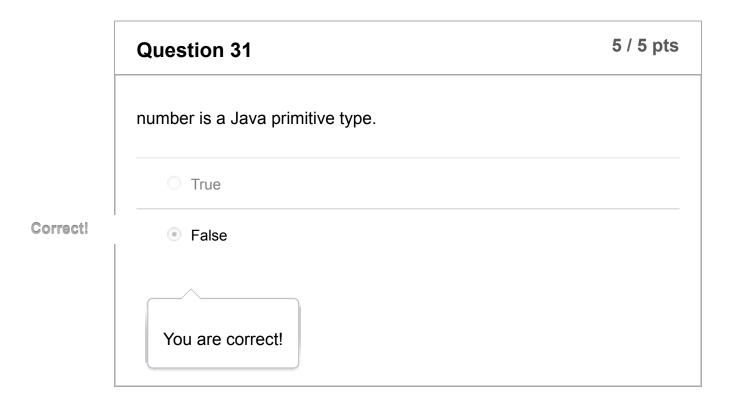
	Question 26	5 / 5 pts
	Integer is a Java primitive type.	
	O True	
Correct!	False	

	Question 27	5 / 5 pts
	long is a Java primitive type.	
correct!	True	
	O False	
	You are correct!	

	Question 28	5 / 5 pts
	bit is a Java primitive type.	
	O True	
Correct!	False	

	Question 29	5 / 5 pts
	short is a Java primitive type.	
Correct!	True	
	O False	
	You are correct!	

A Java class is like a complete blueprint and is used to instantiate a Java object. Correct! False



A Java interface is like a complete blueprint and is used to instantiate a Java object. True True False

Sorry, that is not correct.

A Java class essentially consists of data and the methods that operate on that data. Correcti True False You are correct!

	Question 34	5 / 5 pts
	A Java abstract class is like a complete blueprint and is used to instantiate a Java object.	0
	O True	
Correct!	• False	

	Question 35	0 / 5 pts
	A Java interface contains abstract methods.	
rrect Answer	O True	
ou Answered	False	
	Sorry, that is not correct.	

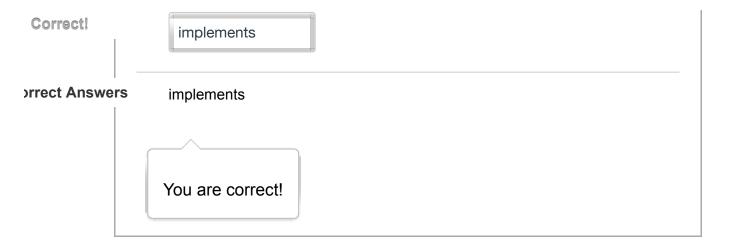
	Question 36	5 / 5 pts
	A Java interface in another name for an abstract class.	
	O True	
Correct!	False	

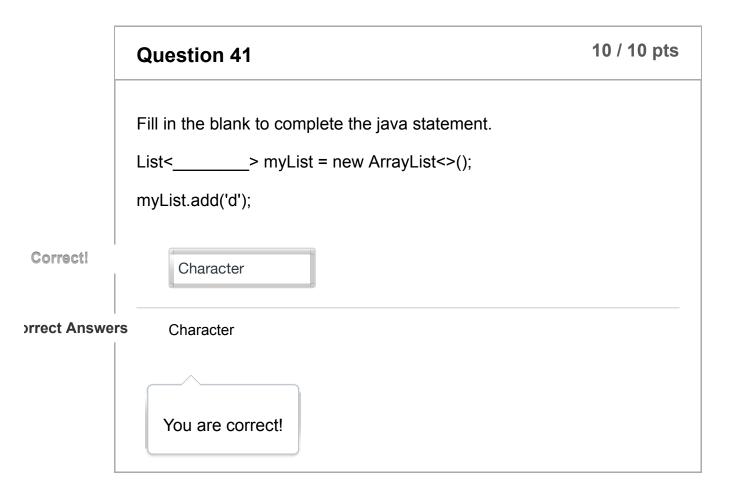
	Question 37	5 / 5 pts
	There are only eight (8) Java primitive types.	
Correct!	True	
	○ False	
	You are correct!	

	Question 38	5 / 5 pts
	A Java abstract class may contains both abstract and concrete methods.	9
Correct!	True	
	O False	

	Question 39	/ 10 pts
	Fill in the blank.	
	If we want our Policeman class to inherit from our Person class would code the Policeman class as follows:	we
	public class Policeman Person {	
Correct!	extends	
rrect Answe	ers extends	
	You are correct!	

Pill in the blank. If we want our LectureRoom class to conform to our ClassRoomAPI interface we would code the LectureRoom class as follows: public class LectureRoom _____ ClassRoomAPI { ...

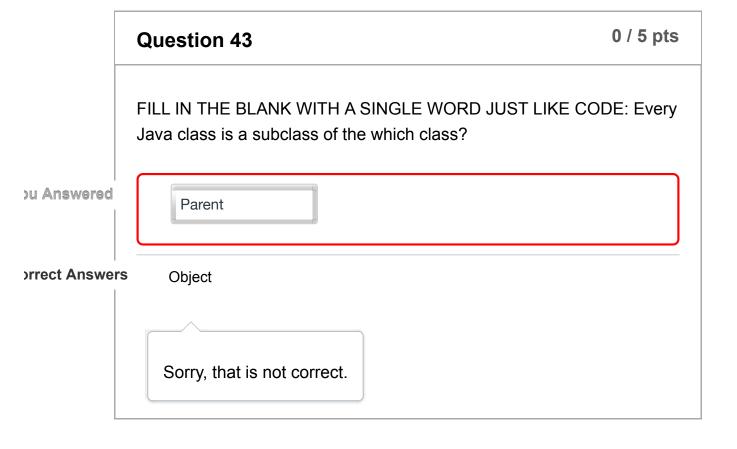




Question 42

How can a Java class provide for data encapsulation?

Correct!	✓ make class data private		
Correct!	provide public class methods to operate on class data.		
	declare abstract methods		
	all of these		
	That is correct!		



Question 44

10 / 10 pts

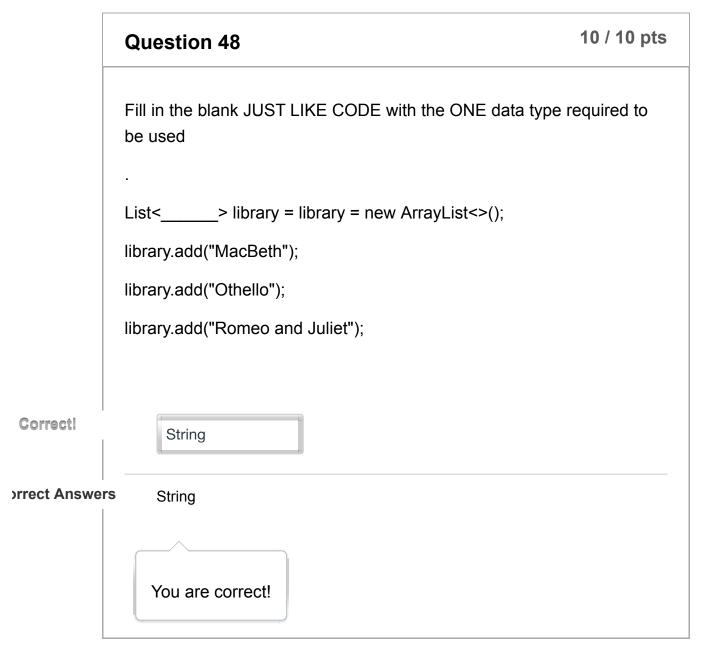
FILL IN THE BLANK JUST LIKE CODE: The DEFAULT class constructor method for our Policeman class is		
Policeman()		
rs Policeman()		
You are correct!		

	Question 45	10 / 10 pts
	Fill in the blank.	
	Declare a collection to contain the last names of all our clas	ssmates.
	List<> names = new ArrayList<>();	
Correct!	String	
rrect Answe	rs String	
	List <string> names = new ArrayList<string>()</string></string>	
	String and String	
	String, String	
	String, String	

	Question 46	10 / 10 pts
	Advantages of using an Object Oriented design include:	
Correct!	✓ modularity	
Correct!	☑ code re-use	
	improved performance	
	all of these	
	That is correct!	

Question 47 Fill in the blank JUST LIKE CODE. TO Declare a collection to contain whole numbers like 1, 2, 3, 4, etc. WE MUST CODE A PARAMETERIZED TYPE OF? e.g., List<_____> numbers = null;





Every Java Library class is a subclass of the Object class. Classes we create ourselves are not a subclass of the Object class. True False You are correct!

	Question 50	10 / 10 pts
	Overriding the Object toString() method is an example of polymorphisim.	
Correct!	• True	
	O False	
	You are correct!	

	Question 51	10 pts
	What is the advantage of using an ArrayList collection class over a array to hold items?	an
Correct!	 ✓ ArrayList can grow in size 	
Correct!	✓ ArrayList can shrink in size	
	ArrayList has a smaller memory footprint.	
	all of these	
	That is correct!	

	Question 52	5 / 10 pts
	To instantiate a collection object you must:	
Correct!	✓ Declare the type of the collection	
Correct!	☑ Declare the type of the collection contents	
ou Answered	✓ Declare the size of the collection.	
	all of these.	

	Question 53	10 / 10 pts
	What is the advantage of using an array over an ArrayList class to hold items?	collection
	array can grow in size	
	array can shrink in size	
Correct!	✓ array has a smaller memory footprint.	
	all of these	
	That is correct!	

	Question 54	10 / 10 pts
	To instantiate an object you must:	
Correct!	✓ Use the class constructor	
Correct!	✓ Use the "new" keyword	
	code the class constructor	

all of these.		
That is correct!		

What is function overriding? If a subclass provides its own specific implementation of an identical method provided by the parent class, it is known as method overriding. If a subclass provides its own specific implementation (including additional parameters) of a method provided by the parent class, it is known as method overriding. all of these.

Question 56 5 / 5 pts

When programming in Java, using Object Oriented Programming is supported but not required.

Correct!

	O True
Correct!	False
	That is correct!

	Question 57	10 / 10 pts
	To use a Java class in your program, you must:	
	Use the keyword 'new'	
	Use the class constructor	
	all of these	
Correct!	none of these.	
	That is correct!	

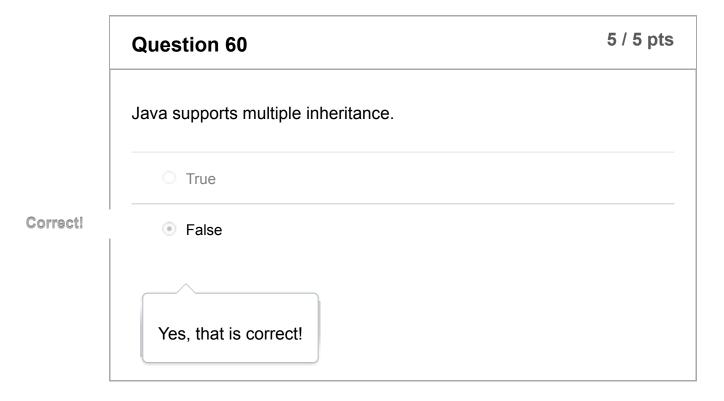
Question 58

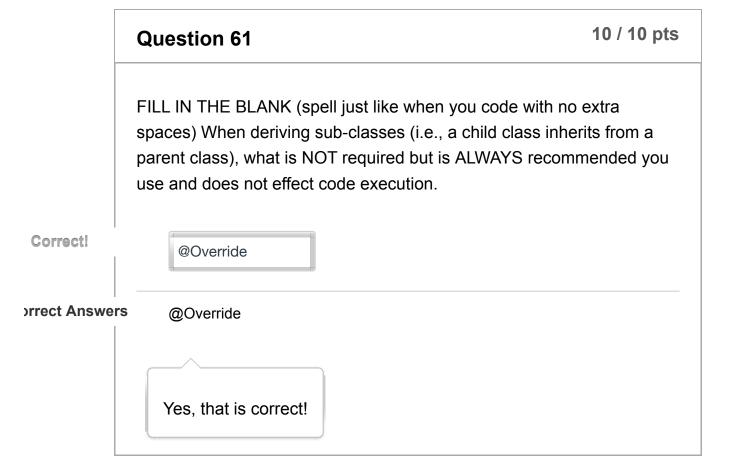
6.67 / 10 pts

Which of the following is true about the super class:

Variables, methods and constructors which are declared private can be accessed only by the members of the super class. Correct! Variables, methods and constructors which are declared protected can be accessed by any subclass of the super class. Variables, methods and constructors which are declared public in the superclass can be accessed by any class.

	Question 59	5 / 5 pts
	Because of its byte codes, Java is an interpreted language jus JavaScript.	st like
	O True	
Correct!	False	
	Yes, that is correct!	





	Question 62	10 / 10 pts
	Select the TRUE statements. The GoF Singleton design part ALWAYS implemented with:	ttern is
Correct!	static method	
	o no constructor	
	implicit compiler provided default class constructor	
	one single design pattern	
	Yes, that is correct!	

	Question 63 10 / 10 pts
	To use an API, you MUST use the following Object Oriented Principles
Correct!	abstraction
	encapsulation
Correct!	☑ inheritance
Correct!	✓ polymorphism

Yes, that is correct!

	Question 64	10 / 10 pts
	To implement loose coupling you MUST use the following Oriented principles:	Object
Correct!	✓ abstraction	
	encapsulation	
Correct!	☑ inheritance	
Correct!	✓ polymorphism	
	Yes, that is correct!	

Question 65 The Simple factory pattern BREAKS which S.O.L.I.D. design principles. Correct! Open Closed principle

Co	rre	ct!

Single Responsibility principle	
☐ Interface Segregation principle	
Dependency Inversion principle	
Yes, that is correct!	

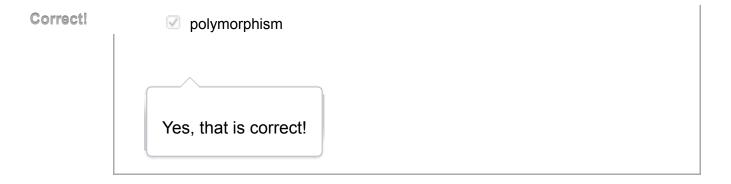
	Question 66	5 / 5 pts
	The Singleton design pattern is a:	
Correct!	✓ creational pattern	
	behavioral pattern	
	structural pattern	
	organizational pattern	
	Yes, that is correct!	

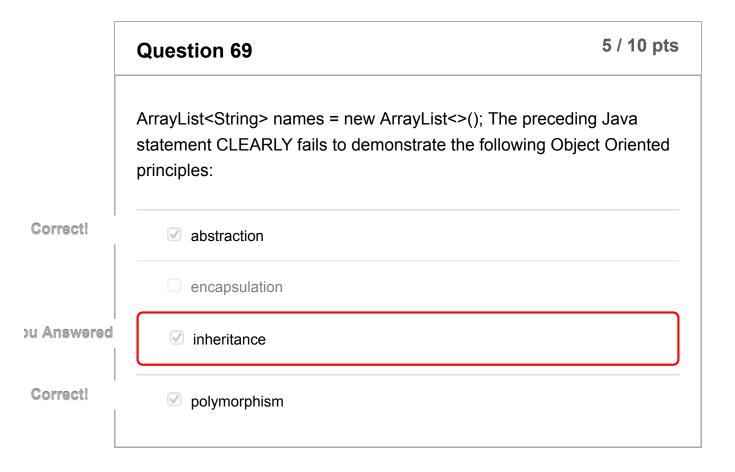
Question 67

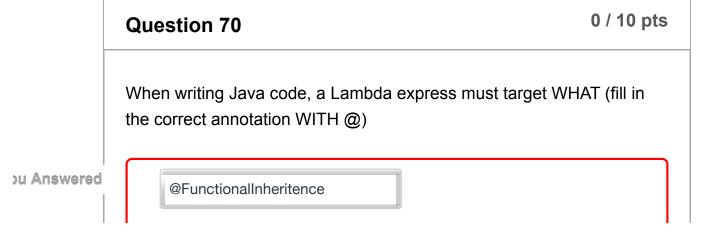
5 / 5 pts

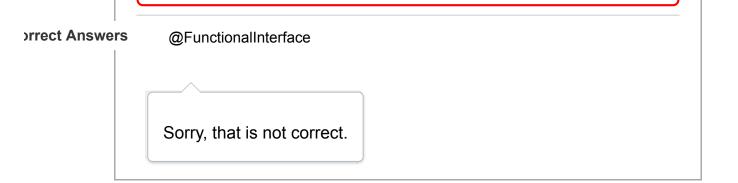
	Using Design Patterns in your software design:
Correct!	improves code readability
Correct!	
	increases software development costs to reduce software development time
	lengthens code development cycles as more lines of code must be written
	Yes, that is correct!

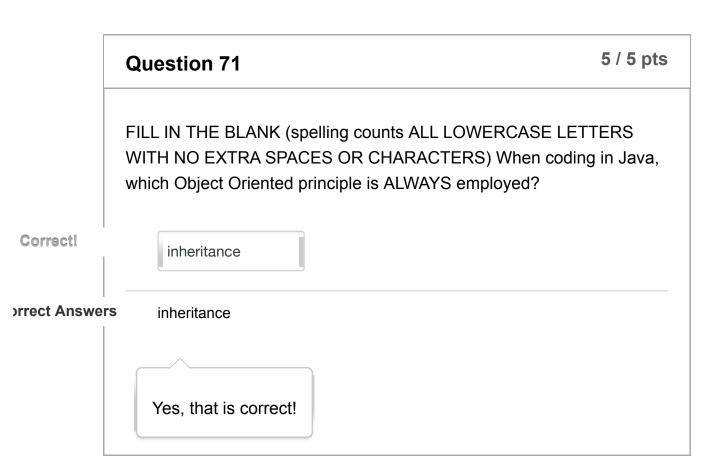
	Question 68 10 / 10 pts	
	List <string> names = new ArrayList<>(); The preceding Java statement CLEARLY implements the following Object Oriented principles:</string>	
Correct!	✓ Abstraction	
Correct!	✓ inheritance	
	encapsulation	











Given the following Java statement CODED WITH BEST PRACTICES, SELECT ALL SELECTIONS WHICH ARE TRUE: Person dan = Factory.getInstance().getObject();

Correct!	getInstance() is a static method
	getObject() is a static method
Correct!	We are using a Singleton
Correct!	We have an implementation of the factory Method pattern
orrect Answei	□ Dan is NOT assigned a reference to a Person object

	Question 73	0 / 10 pts
	Select ALL CORRECT ANSWERS. Given the following Java of what is the data type of the reference variable names? List <string> names = new ArrayList<>();</string>	ode,
Correct!	✓ List	
ou Answered	☑ ArrayList	
ou Answered	✓ Object	
	Collections	
	None of these are correct answers	

Sorry, that is not correct.

Quiz Score: 526.67 out of 600

Midterm interview

Due Mar 7 at 3pm Points 100 Questions 5 Time Limit 10 Minutes

Instructions

READ CAREFULLY and Answer ALL questions within the allotted time as exam auto-submit and selfgrade upon time expiring.

SINGLE ATTEMPT ONLY NO GOING BACK.

Attempt History

	mpt	Time	Score
LATEST Atter	<u>mpt 1</u>	4 minutes	40 out of 100

(!) Correct answers are hidden.

Score for this quiz: 40 out of 100

Submitted Mar 7 at 2:30pm This attempt took 4 minutes.

Incorrect

FILL IN THE BLANK (spell just like when you code with NO EXTRA SPACES OR CHARACTERS). If you want to design your class to use WITHOUT CREATING AN OBJECT, what keyword MUST you use? InstanceOf static

Sorry, that is not correct.

Question 2 20 / 20 pts

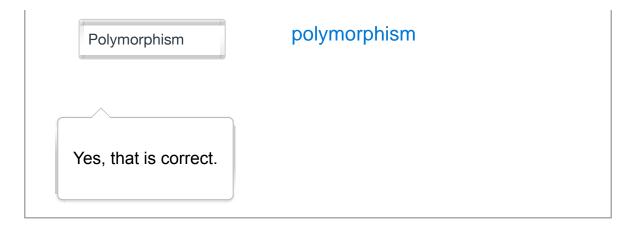
FILL IN THE BLANK (ALL LOWERCASE, spell just like when you code with NO EXTRA SPACES OR CHARACTERS). Fill in the name of the **Object Oriented Principle** which explains why I can *assign* a reference variable **type Object** with a reference to a **Driver** object, e.g., **Object obj = new Driver()**;

inheritance

Yes, that is correct.

Question 3 20 / 20 pts

FILL IN THE BLANK (ALL LOWERCASE, spell just like when you code with NO EXTRA SPACES OR CHARACTERS). Fill in the name of the Object Oriented Principle which explains why I can execute Driver's implementation of toString() when using a reference variable type Object assigned with a reference to a Driver object, e.g., Object obj = new Driver();



Incorrect

In Java, When is a class constructor called? When an object is referenced When an object created from a class using the keyword new only this correct When using the class keyword to define a class When an object created from a class Sorry, that is not correct.

Incorrect

Question 5 0 / 20 pts

To reduce software development costs and increase useful lifetime

which Object Oriented Principles must you heavily leverage in your		
design?	all options are correct	
abstraction		
□ in		
✓ encapsulation		
Sorry, that is not correct.		

Quiz Score: 40 out of 100

Stream Quiz

Due Apr 4 at 3:35pm **Time Limit** 5 Minutes

Points 100

Questions 2

. .

Instructions

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Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	5 minutes	100 out of 100

Score for this quiz: 100 out of 100

Submitted Apr 4 at 3:26pm

This attempt took 5 minutes.

50 / 50 pts **Question 1** List<Integer> nList = new ArrayList<>(Arrays.asList(3,5,1,4,2)); // SCALE x 10 ODD numbers, show on console ONE LINE, comma separated, DESCENDING order (50, 30, 10,) ... nList.Stream .filter .sorted .map .forEach FOR THE PRECEDING CODE SEGMENT TO OUTPUT DATA AS SPECIFIED IN CODE COMMENT, Set up a Stream API pipeline by MATCHING Stream operation with it's argument: LEFT SIDE RIGHT SIDE e.g., .foreEach System.out::println Correct! .forEach (e) -> System.out.print(∈ ♦ Correct! .filter e -> e%2 == 1 Correct! .map e -> e*10 Correct! .sorted Comparator.reverseOrd

Other Incorrect Match Options:

- (e) -> e%2 == 2
- Comparator.reverseOrder(null)
- System.out.println()
- System.out::println
- () -> 10
- (e) -> e/2 == 1
- null
- () -> e*10
- $e \rightarrow e/2 = 1$
- $e \rightarrow e\%2 = 1$
- Comparator.comparing(null)
- Comparator.reverse
- Comparator.comparing(reverse)
- No argument
- System.out::print

Yes, that is correct!

Question 2 50 / 50 pts

List<Integer> nList = new ArrayList<>(Arrays.asList(3,5,1,4,2));

// SCALE x 101 EVEN numbers, show on console ONE LINE, comma separated , ASCENDING order (202, 404,) ...

nList.Stream

- .filter
- .sorted

.map

.forEach

FOR THE PRECEDING CODE SEGMENT TO OUTPUT DATA AS SPECIFIED IN CODE COMMENT, Set up a Stream API pipeline by MATCHING Stream operation with it's argument:

e.g., LEFT SIDE RIGHT SIDE

.foreEach System.out::println

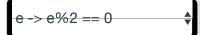
Correct!

.forEach

(e) -> System.out.print(ε :

Correct!

.filter



Correct!

.map



Correct!

.sorted



Other Incorrect Match Options:

- (e) -> e/2 == 2
- () -> 101
- Comparator.reverse
- System.out::println
- Comparator.reverseOrder(null)
- e -> e%2 = 1
- Comparator.comparing(null)
- System.out.println()
- Comparator.comparing(reverse)
- System.out::print
- (e) -> e%2 == 2
- () -> e*101

- null
- Comparator.reverseOrder()
- $e \rightarrow e/2 = 2$

Yes, that is correct!

Quiz Score: 100 out of 100

Java Final Part A-1

Due Apr 25 at 2:30pm

Points 190

Questions 19

Time Limit 20 Minutes

Instructions

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Answer all questions.

EXAM WILL AUTO SUBMIT AFTER ALLOTTED TIME EXPIRES.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	11 minutes	121.67 out of 190

Score for this quiz: 121.67 out of 190

Submitted May 2 at 2:37pm
This attempt took 11 minutes.

	Question 1	10 / 10 pts
	Which of the following are object-oriented principles?	
Correct!	Encapsulation	
	Overload	
	Overwrite	
Correct!	✓ Inheritance	
	That is correct!	

	Question 2	0 / 10 pts
	The scope of access modifiers from largest to smallest is:	
	private-protected-default-public	
l ou Answered	private-default-protected-public	

	public-default-protected-private
orrect Answer	public-protected-default-private
	No, that is not correct.

	Question 3	0 / 10 pts
	Exceptions defined by the Error class cannot be caught.	
ا orrect Answer 	O True	
ou Answered	False	
	No, that is not correct.	

Question 4 O / 10 pts In Java Swing, ____ class works like the main window where components like labels, buttons, textfields are added to create a GUI.



Question 5	10 / 10 pts
<pre>Which of the following can be added to ComputerBook wit class Book{ protected int getPrice(){ return 30; } public class ComputerBook extends Book{ }</pre>	thout error?
protected float getPrice(){}	
protected int getPrice(int page){}	
int getPrice(){}	
public int getPrice(){return 10;}	

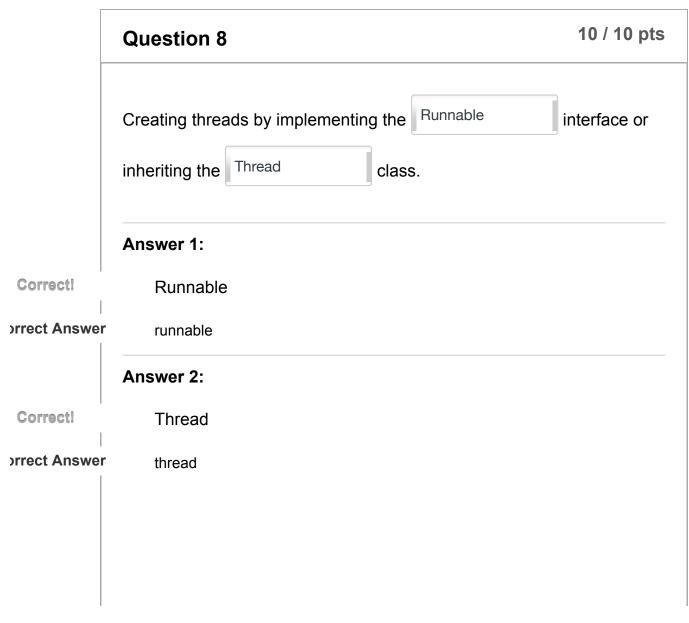
Correct!

Yes, that is correct!

	Question 6	10 / 10 pts
	Which of the following identifier(s) is/are illegal?	
Correct!	✓ new	
	SUsdollars	
Correct!	☑ 1234	
Correct!	☑ car.taxi	
	Yes, that is correct!	

Question 7 The output result is: ____. Integer x=23456; System.out.println(x.toString().substring(2,4));





Yes, that is correct!

	Question 9 5 / 10 pts	
	Which of the following description(s) of network communication is/are correct?	
	TCP/IP is unreliable	
rrect Answei	UDP is unreliable	
Correct!	✓ TCP is reliable	
	UDP is reliable	

Question 10 1.class Student{ 2. private String name; private int age; 3. public Student(){} 4. public void setName(String name){ this.name=name; } 5. void setAge(int age){ this.age= age; } 6.}

	<pre>7.public class StudentTest{</pre>
	<pre>8. public void static main(String[] args){</pre>
	9. Student s = new Student();
	10. s.name = "Hellen";
	11. s.setAge(20);
	12. }
	13.}
	Which two lines are incorrect? 3
	(answer in order)
	Answer 1:
u Answered	3
rrect Answei	8
	Answer 2:
	Allswei 2.
u Answered	5
ا rrect Answei	10
	No, that is not correct.

	Question 11	10 / 10 pts
	Another name for Lambda is :	
Correct!	closure	
orrect Answers	Closure	
	Question 12	0 / 10 pts
	Recursion cannot be employed instead of loops to a True/False	void mutable data:
ou Answered	True	
orrect Answer	O False	
L		
	Question 13	10 / 10 pts
	In Java, Multiple inheritance supported ONLY for Inte	erfaces: True/False
Correct!	True	
	O False	

	Question 14	10 / 10 pts
	Select all the functions that falls under the QUEUE API :	
Correct!	✓ Size	
	Push	
Correct!	☑ isEmpty	
	Рор	
Correct!	✓ Peek	
	Question 15	6.67 / 10 pts
	Select all the correct answers, how do threads communica	ite with each

orrect Answer

Correct!

Correct!

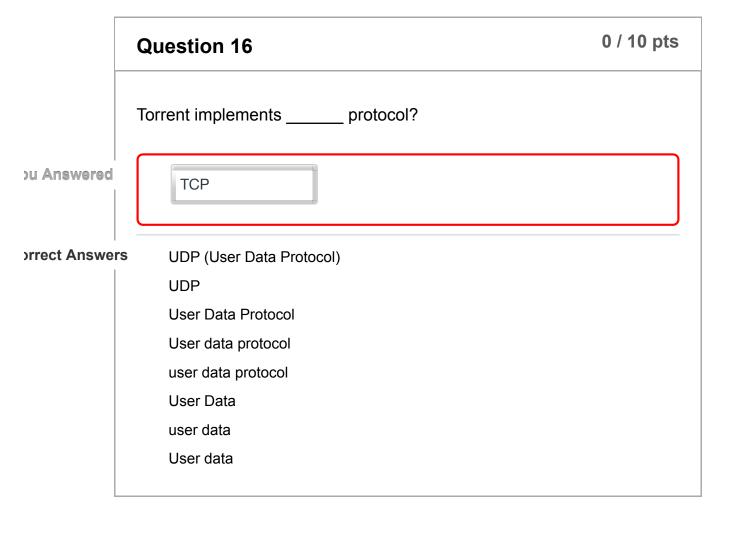
notify()

wait()

■ Notifyall()

✓ notifyAll()

other?



```
public class LambdaDemo {
    @FunctionalInterface
    public interface GreatDivide {
      float divide(int t1, int t2);
    }
    public static void simpleLambda() {
      GreatDivide intDivide = (int x, int y) -> x / y;
      System.out.println(intDivide.divide (44, 8));
    }
    public static void main(String[] args) {
```

	simpleLambda(); } }
Correct!	5.0
	O 5
	Runtime Error
	Compile Error

Question 19 10 / 10 pts

	Select all the correct OSI (Open Systems Interconnect) layers :
Correct!	Application
Correct!	✓ Session
	Internet
Correct!	✓ Network

Quiz Score: 121.67 out of 190

Java Final Interview

Due May 2 at 2:10pm

Points 100

Questions 8

Time Limit 5 Minutes

Instructions

Exam Instructions: 5 MINUTE TIME LIMIT, ONE QUESTION AT A TIME, NO GOING BACK

Read each question carefully and select the best choice or choices which answer that question. Answer all questions within the time allotted.

Some questions have more than one correct answer. There is no credit for a partially answered question.

You may use your Eclipse IDE (or other instructor approved IDE).

You may not use any other materials or have any discussions with anyone except the instructor.

Taking this exam outside of these parameters will result in disqualification and a grade of zero.

Answer all questions.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	4 minutes	100 out of 100

Score for this quiz: 100 out of 100

Submitted May 2 at 2:05pm This attempt took 4 minutes.

Question 1

20 / 20 pts

Choose the answer which is the BEST description for the following code:

```
package edu.neu.csye6200;
public class Driver {
  public static void main(String[] args) {
     System.out.println(this);
  }
}
    Calls Driver.toString();
    Bad code.
      That is correct!

    Good code.

    Calls Object.toString();
   Yes, this is bad code because the this pointer is not available in
   static methods.
```

Question 2 10 / 10 pts

Choose the selection with the code WITH an OBVIOUS coding ERROR?

Correct!

Correct!

List<> names = new ArrayList<String>();

That is correct!

ArrayList<String> names = new ArrayList<String>();

List<String> names = new ArrayList<>();

List<String> names = new ArrayList<String>();

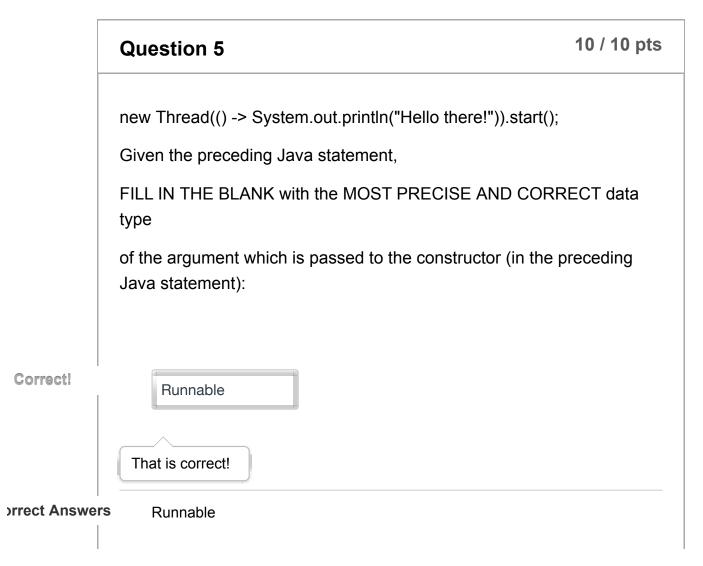
When programming in Java, which of the Object Oriented Design Principles is ALWAYS used? Object Oriented Inheritance principle That is correct! Object Oriented Encapsulation principle Object Oriented Abstraction principle

Question 4 15 / 15 pts

Choose the CHOICE which is the BEST description the following code:

Correct!

Correct! List<String> names = new ArrayList<>(); Code demonstrates Object Oriented Inheritance principle. Code demonstrates Object Oriented Abstraction principle. All the choices are BEST. Tthat is correct! Code demonstrates Object Oriented Polymorphism principle.



the class constructor for the Thread class accepts an argument of data type Runnable

	Question 6 10 / 10 pts	
	Given the following code fragment:	
	List <string> names = new ArrayList<>();</string>	
	Choose, from the following, the most appropriate answer or answers.	
	SELECT WHICH S.O.L.I.D. design principles this java code statement CLEARLY AND OBVIOUSLY demonstrates.	
Correct!	✓ Liskov substitution principle	
	☐ Interface Segregation Principle	
Correct!	✓ Open Closed principle;	
Correct!	✓ Dependency Inversion principle	
	Sole Responsibility Principle	
	Yes, that is correct!	

15 / 15 pts **Question 7** Which Solid Design principles does the Simple Factory Pattern, not the Gang of Four Factory (GoF) design pattern), CLEARLY violate? Interface Segregation Principle Correct! Liskov Substitution principle Correct! Sole Responsibility Principle Correct! Dependency Inversion principle Correct! Open Closed principle Yes, that is correct! The Simple Factory design pattern differs from the GoF Factory design pattern in that it one class is responsible for the creation of more than one derived class. The GoF Factory design pattern uses one class for the creation of only one derived class.

```
Question 8

package edu.neu.csye6200;

public class Driver {

public static void main(String[] args) {
```

	System.out.println(new Driver()); }
	}
	Given the above Driver class, which Object Oriented Design principle is most clearly and OBVIOUSLY demonstrated?
	Polymorphism
	Encapsulation
	Abstraction
orrect!	☑ Inheritance
	Yes, that is correct!

Quiz Score: 100 out of 100

API

Due No due date	Points 100	Questions 7	Time Limit 20 Minutes

Instructions

- READ CAREFULLY AND ANSWER EACH QUESTION ONE AT A TIME!
- THERE IS NO GOING BACK TO PREVIOUS QUESTIONS!
- EXAM WILL SUBMIT AUTOMATICALLY AND GRADE, AFTER ALLOTTED TIME EXPIRES.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	6 minutes	100 out of 100

Score for this quiz: 100 out of 100

Submitted Feb 28 at 4:19pm

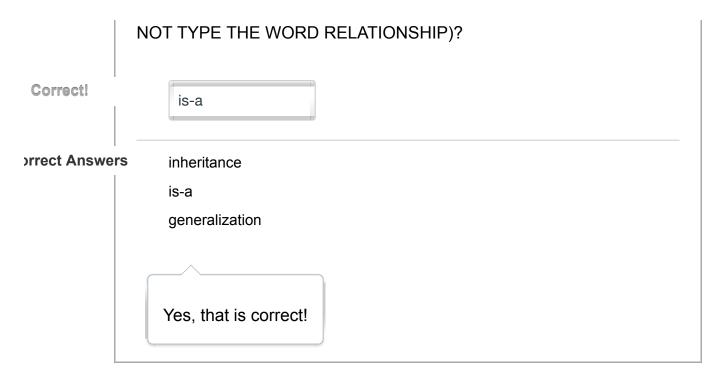
This attempt took 6 minutes.

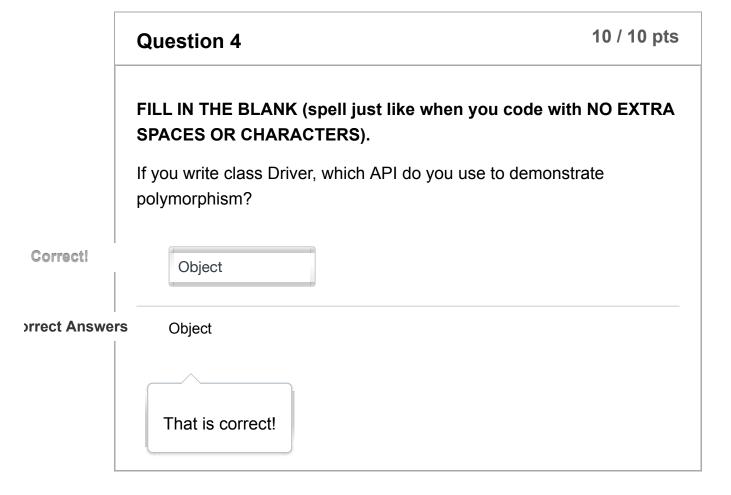
PILL IN THE BLANK (spell just like when you code with NO EXTRA SPACES OR CHARACTERS) Generally, what do you use to implement an API in Java which will restrict your implementation the very least? Correct! interface interface

	Question 2	10 / 10 pts
	In Java how many fundamentally different ways can you improductive API?	plement a
	O 1	
	O 2	
orrect!	3	
	O 4	
	O 5	
	That is correct!	

Question 3 10 / 10 pts

FILL IN THE BLANK (ALL LOWERCASE with NO EXTRA SPACES OR CHARACTERS). When implementing any productive API, what is the relationship between the API and the class implementing it (AND DO





Question 5 FILL IN THE BLANK (spell just like when you code with NO EXTRA SPACES OR CHARACTERS). If you write class Driver, which method can you override to demonstrate polymorphism? Correct! toString() That is correct!

	Question 6	30 / 30 pts
	When implementing any productive API, which Object Orienton principles are required to be used?	ed
Correct!	✓ Inheritance	
Correct!	✓ Abstraction	
	☐ Encapsulation	
Correct!	✓ Polymorphism	

□ API	
All of these are correct answers	
None of these are correct answers	
That is correct!	

Parent Parent Question 7 FILL IN THE BLANK (spell just like when you code with NO EXTRA SPACES OR CHARACTERS). If class Child inherits from class Parent and overrides Parent's whoAmI() method, what is the datatype of the productive (just like in commercial software) API for executing the child version of the method whoAmI()? Parent Parent That is correct!

Quiz Score: 100 out of 100

Exam 2

Due No due datePoints 100Questions 7Time Limit 30 Minutes

Instructions

READ CAREFULLY AND **ANSWER EACH QUESTION ONE AT A TIME!**THERE IS **NO GOING BACK** TO PREVIOUS QUESTIONS!
EXAM WILL AUTO SUBMIT AFTER ALLOTTED TIME EXPIRES.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	3 minutes	100 out of 100

(!) Correct answers are hidden.

Score for this quiz: 100 out of 100

Submitted Apr 11 at 3:58pm This attempt took 3 minutes.

Question 1

10 / 10 pts

FILL IN THE BLANK (spell just like when you code with NO EXTRA SPACES OR CHARACTERS)

When executing any Java program, which method is ALWAYS executed (DO NOT TYPE THE PARENTHESIS "()", JUST TYPE THE METHOD NAME)?



FILL IN THE BLANK (spell just like when you code with NO EXTRA SPACES OR CHARACTERS) In Java code, which Class is ALWAYS included?

Yes, that is correct!

Object

Question 3 10 / 10 pts

5. FILL IN THE BLANK (SPELL CORRECTLY using all LOWERCASE characters and NO OTHER ADDITIONAL CHARACTERS OR SPACES)

Which Object Oriented Principle is ALWAYS used in Java?

20 / 20 pts **Question 4** FILL IN THE BLANKS (SPELL CORRECTLY using all LOWERCASE characters and NO OTHER ADDITIONAL CHARACTERS OR SPACES) When creating an object in Java, what is typically required? constructor new **Answer 1:** new Answer 2: constructor Yes, that is correct!

Question 5 15 / 15 pts

FILL IN THE BLANK (spelling counts ALL LOWERCASE LETTERS WITH NO EXTRA SPACES OR CHARACTERS) When coding in Java, which Object Oriented principle is (by default) ALWAYS completely and totally available to be employed but is initially restricted in another Object Oriented Language?

polymorphism

Yes, that is correct!

Question 6 15 / 15 pts

FILL IN THE BLANK (spelling counts ALL LOWERCASE LETTERS WITH NO EXTRA SPACES OR CHARACTERS)

When coding in Java, the use of which Object Oriented principle is deliberately restricted when compared to another Object Oriented Language?

inheritance

Yes, that is correct!

Question 7	20 / 20 pts		
Given the following Java statement (which is coded using best practices), SELECT ALL SELECTIONS WHICH ARE MOST LIKELY TRUE:			
List <string names="Factory.getInstance().getObject();</td"><td></td></string>			
✓ We have an implementation of the factory Method pattern			
getObject() is a static method			
we are assigning a reference to an ArayList <string></string>			
We are using a Singleton			
getInstance() is a static method			
Yes, that is correct!			

Quiz Score: 100 out of 100

(!) This quiz has been regraded; your score was affected.

Exam₁

Due No due date **Points** 100 **Questions** 10

Time Limit 30 Minutes

Instructions

Answer correctly and completely within the allotted time.

Attempt History

	Attempt	Time	Score	Regraded
LATEST	Attempt 1	20 minutes	96.67 out of 100	100 out of 100

(!) Correct answers are hidden.

Score for this quiz: 100 out of 100

Submitted Apr 11 at 3:53pm

This attempt took 20 minutes.

Question 1

10 / 10 pts

3. FILL IN THE BLANK (spell just like when you code) When deriving sub-classes (i.e., child class inherits from parent class), what is NOT required but is ALWAYS recommended you use and does not effect code execution.



Question 2	10 / 10 pts
Select the TRUE statements. The GoF Singleton design ALWAYS implemented with:	gn pattern is
static method	
no constructor	
implicit compiler provided default class constructor	
one single design pattern	
Yes, that is correct!	

Question 3	10 / 10 pts
To use an API, you MUST use the following Object Oriente	ed Principles:
abstraction	

encapsulation		
inheritance		
polymorphism		
Yes, that is correct!		

Question 4	10 / 10 pts
To implement loose coupling, you MUST use the following Oriented Principles:	ng Object
abstraction	
encapsulation	
✓ inheritance	
✓ polymorphism	
Yes, that is correct!	

Question 5 10 / 10 pts

Γhe sim	nple factory pattern breaks which S.O.L.I.D. design principles:
	Dependency Inversion principle
✓	Open Closed principle;
	Interface Segregation Principle
✓	Sole Responsibility Principle
Yes	, that is correct!

Question 6	10 / 10 pts
List <string> names = new ArrayList<>();</string>	
The preceding Java statement CLEARLY implements the Object Oriented principles:	he following
✓ abstraction	
encapsulation	
✓ inheritance	
✓ polymorphism	

Question 7	10 / 10 pts
The Singleton design pattern is a:	
creational pattern	
structural pattern	
behavioral pattern	
organizational pattern	
Yes, that is correct!	

Question 8	10 / 10 pts
Using design patterns in your software design:	
✓ improves code readability	

time	ses software development costs to reduce software development
✓ imp	proves code testability
lengthe written	ens code development cycles as more lines of code must be
Yes, th	nat is correct!

Question 9 Original Score: 6.67 / 10 pts Regraded Score: 10 / 10 pts ① This question has been regraded. ArrayList<String> names = new ArrayList<>(); The preceding Java statement CLEARLY fails to demonstrate the of the following Object Oriented principles: ② abstraction □ encapsulation

inheritance



Question 10 FILL IN THE BLANK (SPELL CORRECTLY using all LOWERCASE characters and NO OTHER ADDITIONAL CHARACTERS OR SPACES) What Object Oriented Principle is ALWAYS used in Java? Inheritance Yes, that is correct!

Quiz Score: 100 out of 100

Exceptions

Due No due date **Points** 100 **Questions** 10

Time Limit 20 Minutes

Instructions

READ CAREFULLY and Answer ALL questions within the allotted time as exam auto-submit and selfgrade upon time expiring.

SINGLE ATTEMPT ONLY.

Attempt History

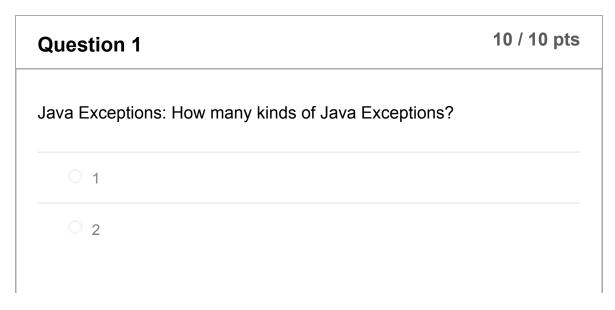
Att	tempt	Time	Score
LATEST Att	tempt 1	10 minutes	100 out of 100

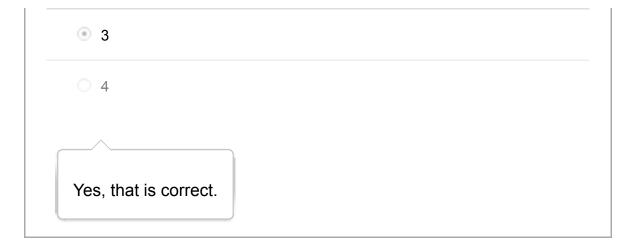
(!) Correct answers are hidden.

Score for this quiz: 100 out of 100

Submitted Feb 28 at 4:30pm

This attempt took 10 minutes.





Java Exceptions: FILL IN THE BLANK (ALL LOWERCASE SPELLING COUNTS with NO EXTRA SPACES OR CHARACTERS) What kind (category) of Java Exception *must* be managed by your code? Checked Exception

Question 3 10 / 10 pts

Java Exceptions:

FILL IN THE BLANK (ALL LOWERCASE SPELLING COUNTS with NO EXTRA SPACES OR CHARACTERS)

When you **MUST** manage an exception with your code, how must you manage such an exception?

(YOUR ANSWER MUST BE ** TWO WORDS ** with the word OR, like 'black or white')

caught or specified

Yes, that is correct.

Question 4 10 / 10 pts

FILL IN THE BLANK (ALL LOWERCASE SPELLING COUNTS with NO EXTRA SPACES OR CHARACTERS)

Java will ALWAYS manage one shared resource of your computing platform: name that resource.

(YOUR ANSWER MUST BE ** ONE WORD **, like 'electricity')

memory

Yes, that is correct.

Question 5 10 / 10 pts

FILL IN THE BLANK (ALL LOWERCASE SPELLING COUNTS with NO EXTRA SPACES OR CHARACTERS)

How does Java ALWAYS manage one shared resource of your computing platform, name that specific facility.

(YOUR ANSWER MUST BE ** A SINGLE TWO LETTER

ABBREVIATION **, like we use the two letter abbreviation 'ac' for air conditioning)

gc

Yes, that is correct.

Question 6 10 / 10 pts

Java Exceptions:

FILL IN THE BLANK (ALL LOWERCASE SPELLING COUNTS with NO EXTRA SPACES OR CHARACTERS)

If you do not manage an exception with your code (that MUST be managed), what will be the result?

(YOUR ANSWER MUST BE ** TWO WORDS **, like 'bad news')

Java Exceptions: FILL IN THE BLANK (ALL LOWERCASE SPELLING COUNTS with NO EXTRA SPACES OR CHARACTERS) When you java code needs to create an exception, an absolute requirement is ... (NAME WHAT YOU NEED) NOTE: YOUR ANSWER MUST BE ** TWO WORDS **, like 'bad news') throwable object

Question 8 10 / 10 pts

Yes, that is correct.

FILL IN THE BLANK (spell just like when you code with NO EXTRA SPACES OR CHARACTERS)

When you java code needs to create an exception, you must use which keyword?

throw

Yes, that is correct.

Question 9 10 / 10 pts

Java Exceptions:

FILL IN THE BLANK (spell just like when you code with NO EXTRA SPACES OR CHARACTERS)

When you java code needs an exception specified, you must use which keyword?

throws

Yes, that is correct.

Java Exceptions: FILL IN THE BLANK (spell just like when you code with NO EXTRA SPACES OR CHARACTERS) When you java code needs to catch an exception, you must use which keywords (YOUR ANSWER MUST BE COMMA SEPARATED NO SPACES, like 'one,two,three,four,five,six') try,catch,finally Yes, that is correct.

Quiz Score: 100 out of 100

Q₁

Due No due date Points 1	Questions 1	Time Limit 10 Minutes	
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Instructions

This Quiz is a measure of your attendance and class participation. Answers were covered in today's lecture

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	less than 1 minute	1 out of 1

Score for this quiz: 1 out of 1 Submitted Jan 27 at 10:06pm

This attempt took less than 1 minute.

	Question 1	1 / 1 pts
	Select all true statements about UML:	
Correct!	☑ a picture language	
Correct!	useful for documentation	
Correct!	can be detailed in it's specification	
Correct!	useful to generate code	

Quiz Score: 1 out of 1

Q2

Due No due date	Points 5	Questions 3	Time Limit 10 Minutes
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Instructions

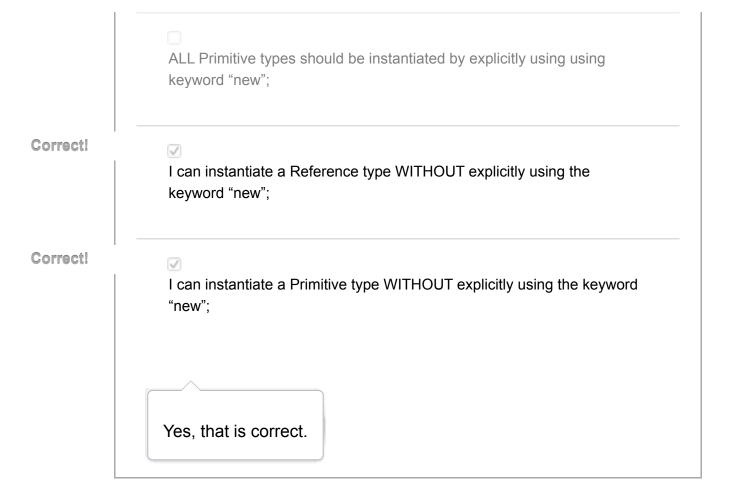
This Quiz is a measure of your attendance and class participation. Answers were covered in today's lecture. Answer correctly and completely within the allotted time.

Attempt History

A	Attempt	Time	Score
LATEST A	ttempt 1	6 minutes	5 out of 5

Score for this quiz: **5** out of 5 Submitted Jan 31 at 3:18pm This attempt took 6 minutes.

	Question 1	3 / 3 pts
	Select ALL statements which are TRUE:	
Correct!	Reference types are instantiated by explicitly using keyword "ne	'W";
	Primitive types are instantiated by explicitly using keyword "new	³⁷ .
	ALL Reference types should be instantiated by explicitly using using keyword "new";	g



FILL IN THE BLANK JUST LIKE IN CODE (spelling and capitalization must be correct) WITH NO EXTRA CHARACTERS OR SPACES. If i want my class to have a data member created BEFORE PROGRAM EXECUTION BEGINS, I MUST declare that data member with Correct! static static

	Question 3 1 / 1 pts
	FILL IN THE BLANK JUST LIKE IN CODE (spelling and capitalization must be correct) WITH NO EXTRA CHARACTERS OR SPACES. If i want my class to have a READ-ONLY data member (CANNOT BE WRITTEN OR CHANGED), I MUST declare that data member with
Correct!	final
rrect Answe	rs final
	Yes, that is correct!

Quiz Score: 5 out of 5

Q3

Due No due date Points 1	Questions 1	Time Limit 10 Minutes
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Instructions

This Quiz is a measure of your attendance and class participation. Answers were covered in today's lecture. Answer correctly and completely within the allotted time.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	1 minute	1 out of 1

Score for this quiz: **1** out of 1 Submitted Feb 7 at 3:15pm This attempt took 1 minute.

PILL IN THE BLANK (spell just like when you code) When deriving subclasses (I.e. child class inherits from parent class), what is NOT required but is ALWAYS recommended you use and does not effect code execution. Correct! @Override @Override

Quiz Score: 1 out of 1

Q4

Due No due date	Points 2	Questions 2	Time Limit 5 Minutes	
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Instructions

This Quiz is a measure of your attendance and class participation. Answers were covered in today's lecture. Answer correctly and completely within the allotted time.

Attempt History

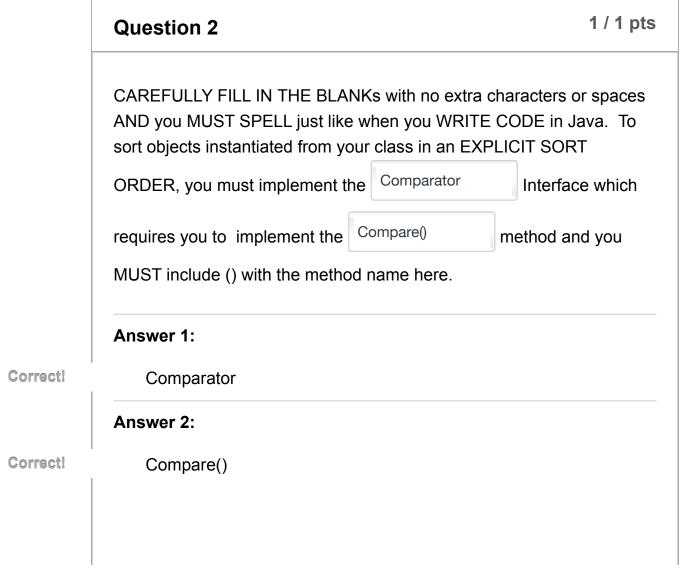
	Attempt	Time	Score
LATEST	Attempt 1	less than 1 minute	2 out of 2

Score for this quiz: **2** out of 2 Submitted Feb 14 at 3:59pm

This attempt took less than 1 minute.

CAREFULLY FILL IN THE BLANKs with no extra characters or spaces AND you MUST SPELL just like when you WRITE CODE in Java. To give objects instantiated from your class a DEFAULT SORT ORDER, you class must implement the Comparable Interface which requires you to implement the compareTo() method and you MUST include () with the method name here. Answer 1:

Correct!	Comparable
orrect Answer	Comparable <t></t>
	Answer 2:
Correct!	compareTo()
	Yes, that is correct!



Quiz Score: 2 out of 2

Q5

Due No due date	Points 1	Questions 1	Time Limit 10 Minutes

Instructions

This Quiz is a measure of your attendance and class participation. Answers were covered in today's lecture. Answer correctly and completely within the allotted time.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	less than 1 minute	1 out of 1

Score for this quiz: 1 out of 1 Submitted Feb 21 at 6:18pm

This attempt took less than 1 minute.

	Question 1	1 / 1 pts
	Select ALL TRUE statements about Java Exceptions:	
	all Exceptions MUST BE Specified	
Correct!	An Error Exception is difficult to anticipate	
	all Exceptions require an exception handler	
Correct!	A Runtime Exception is difficult to anticipate	
	☐ ALL Checked Exceptions MUST BE CAUGHT	

Yes, that is correct!

Sorry, that is not correct.

Quiz Score: 1 out of 1

Qds

Due No due date	Points 2	Questions 2	Time Limit 2 Minutes	

Instructions

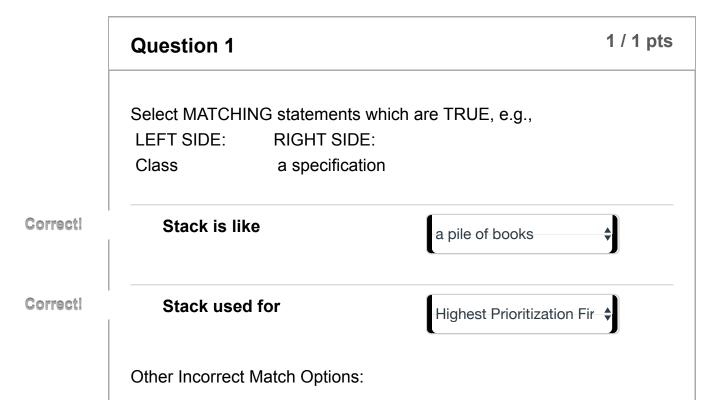
This Quiz is a measure of your attendance and class participation. Answers were covered in today's lecture. Answer correctly and completely within the allotted time.

Attempt History

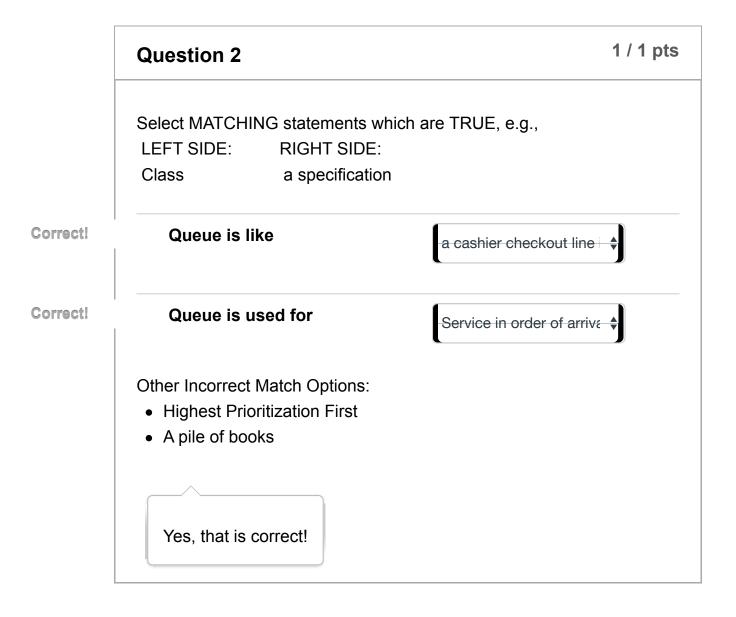
	Attempt	Time	Score
LATEST	Attempt 1	less than 1 minute	2 out of 2

Score for this quiz: **2** out of 2 Submitted Apr 4 at 3:01pm

This attempt took less than 1 minute.



- Managing the cashier checkout line in a store
- Service in order of arrival



Quiz Score: 2 out of 2

QL

Due No due date	Points 3	Questions 3	Time Limit 10 Minutes	

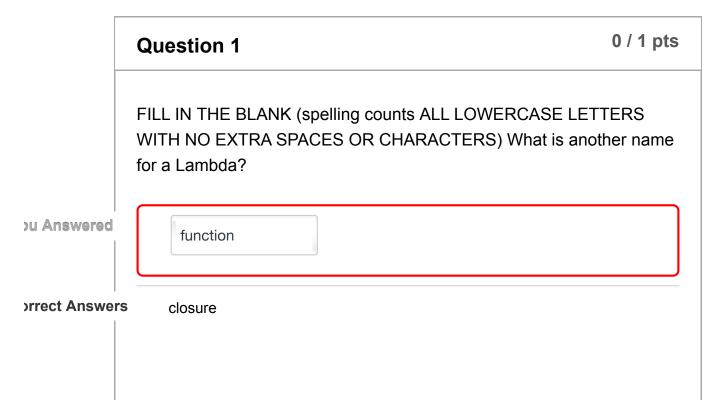
Instructions

This Quiz is a measure of your attendance and class participation. Answers were covered in today's lecture. Answer correctly and completely within the allotted time.

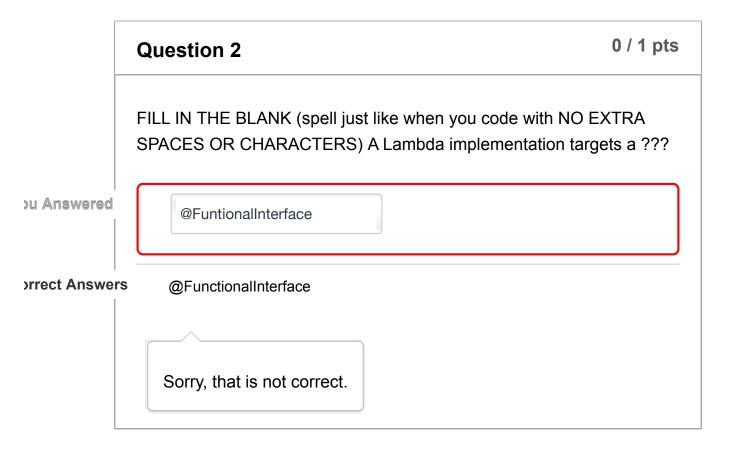
Attempt History

LATEST Attempt 1 9 minutes 0 out of 3		Attempt	Time	Score
	LATEST	Attempt 1	9 minutes	0 out of 3

Score for this quiz: **0** out of 3 Submitted Mar 28 at 2:59pm This attempt took 9 minutes.



Sorry, that is not correct.



Question 3	0 / 1 pts
	LANKs (spelling counts ALL LOWERCASE LETTERS A SPACES OR CHARACTERS) A Stream
API	is a more compact special purpose Lambda
expression.	
Answer 1:	

ou Answered	Stream
orrect Answer	method
	Answer 2:
ou Answered	API
orrect Answer	reference
	Sorry, that is not correct.

Quiz Score: 0 out of 3

Qsw

Due No due date	Points 2	Questions 2	Time Limit 2 Minutes	
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Instructions

This Quiz is a measure of your attendance and class participation. Answers were covered in today's lecture. Answer correctly and completely within the allotted time.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	less than 1 minute	2 out of 2

Score for this quiz: **2** out of 2 Submitted Apr 11 at 2:58pm

This attempt took less than 1 minute.

Question 1 13. FILL IN THE BLANK (SPELL just like when you code WITH NO OTHER ADDITIONAL CHARACTERS OR SPACES) When you write a Swing GUI program and a user clicks on a button on your form, what is the name for your code which executes in response to that user action? Correct! ActionListener ActionListener

	Question 2 1 / 1 pts	
	FILL IN THE BLANK (ALL UPPERCASE) WITH INITIALS ONLY, NOT THE FULL NAME When you write a Swing GUI program and a user clicks on a button on your form, what is the name for the THREAD (INITIALS ONLY) on which your code will execute in response to that user action?	
Correct!	EDT	
orrect Answe	rs EDT	
	Yes, that is correct!	

Quiz Score: 2 out of 2

Qth

Due No due date	Points 1	Questions 1	Time Limit 2 Minutes	
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Instructions

This Quiz is a measure of your attendance and class participation. Answers were covered in today's lecture. Answer correctly and completely within the allotted time.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	1 minute	1 out of 1

Score for this quiz: **1** out of 1 Submitted Apr 25 at 4pm This attempt took 1 minute.

	Question 1 1 / 1 pts	
	Select the BEST selection (or multiple selections): When creating a new Thread, it is best to:	
Correct!	✓ Use a Runnable	
	☐ Inherit from Thread class	
Correct!	✓ Use executor thread pools	
	Use multiple processes	

	write single thr	eaded code		
	^			
Ye	s, that is corre	ect!		

Quiz Score: 1 out of 1