the case of compiler or runtime errors.

(A) NodeList <String> list1 = new NodeList <String> ()

```
System.out.println(list1.method2());
```

ANSWER for (A): null

(B) NodeList <String> list1 = new NodeList <String> ();

```
list1.method1("S");
list1.method1("L");
list1.method1("K");
list1.method1("R");
System.out.println(list1.method2());
```

ANSWER for (B): s

(C) NodeList <String> list1= new NodeList <String> ();

```
s1.method1("S");
s1.method2();
s1.method1("L");
s1.method1("K");
s1.method1("R");
s1.method2();
System.out.println(list1.method2());
```

ANSWER for (C): error

MacBook Air

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...utes, 22 seconds.

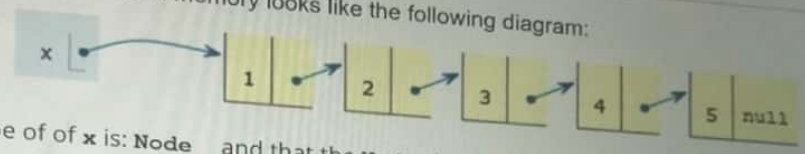
Question Completion Status:

Less than half of the time remaining

Question 7

3 points

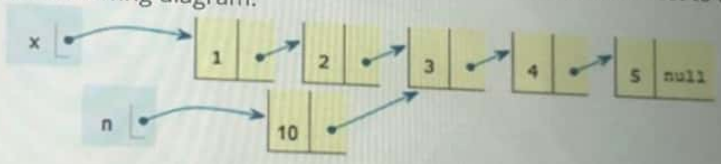
You have a linked list (x) which in memory looks like the following diagram:



Assuming the type of of **x** is: **Node** and that the **Node** class is defined as:

```
class Node<T>   {
    public T value;     //value at the node
    public Node<T>  next;  //next node
    public Node(T v, Node<T>    n) { value = v; next = n; }
}
```

a) Write a ***single line*** of code to create a node n with value 10 and the "next" node set to the node containing 3 in **x** such as shown in the following diagram:



hint: Remember the node is generic!

ANSWER: Node<Integer> L=new Noc

b) Write the ***next single line*** of code which will finish inserting the value 10 into x between 2 and 3.

ANSWER: n.next=null;

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...utes, 09 seconds.

Question Completion Status:

Less than half of the time remains.

Moving to another question will save this response.

Question 15

Question 15 of 35

2 points Saved

Given the node class below, write the code for public static method called **countOccurances()** which accepts the head of a linked list of nodes and a value and return the number of occurrences of the integer value in the linked list (or -1 if the value is not found). You ***may not*** write any additional methods or classes and you ***may not*** accept any additional parameters. You may assume the linked list is not null.

```
class Node { public int value; public Node next; }

        public static int countOccurences(Node n, int v) {

              // your code here

                }

    }
```

Arial 3 (12pt)

```
if(n.next==null){

if(n.value==v){

return 1;}

return -1;}

if(n.value==v)
```

Words:11

Path: p

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Description

King Saud University

College of Computer and Information Sciences
Computer Science Department
CSC113 - Computer Programming 2

FINAL EXAM

Instructions	This is an open book exam.
Timed Test	This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 10 minutes, 34 seconds.

Question Completion Status:

Less than half of the time remains.

Moving to another question will save this response.

Question 13

Question 13 of 35

0.25 points

The declaration of the following generic class is considered legal.

```
public class Box<T, S> {...}
```

- True
- False

Moving to another question will save this response.

Question 13 of 35

Scanned with Car

```
    public int area() { return width * height; }
    public String toString() { return "rectangle"; }
}

public class Square extends Rectangle implements Shape {
    private static int count = 0;

    public Square(int size) {
        super(size, size);
        count++;
    }
    public String toString() { return "square"; }
}
```

D. ▾ `Square s = new Square(3);`
`System.out.println(s.toString());`

G. ▾ `Shape p = new Square(3);`
`System.out.println(p.toString());`

C. ▾ `Rectangle r = new Rectangle(3, 3);`
`System.out.println(r.area());`

C. ▾ `Rectangle r = new Square(3);`
`System.out.println(r.area());`

G. ▾ `Shape p = new Shape(3, 3);`
`System.out.println(p.area());`

A. 3
B. 6
C. 9
D. square
E. rectangle
F. square rectangle
G. Compilation error.

Question 31 of 35

⚠ Moving to another question will save this response.

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```
}
```

determine the output of each of the following code statements, write "null" in the case of printing null and write "ERROR" in the case of compiler or runtime errors.

(A)
```
NodeList <String> list1 = new NodeList <String> ();
System.out.println(list1.method2());
```

ANSWER for (A): null

(B)
```
NodeList <String> list1 = new NodeList <String> ();
list1.method1("S");
list1.method1("L");
list1.method1("K");
list1.method1("R");
System.out.println(list1.method2());
```

ANSWER for (B): R

(C)
```
NodeList <String> list1= new NodeList <String> ();
s1.method1("S");
s1.method2();
s1.method1("L");
s1.method1("K");
s1.method1("R");
s1.method2();
System.out.println(list1.method2());
```

ANSWER for (C): ERROR

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Less than half of the time remains.

Question 27

1.5 points

Given the following definitions:

```
class Node<T> {
    T data;
    Node<T> next;
    }

class NodeList<T> {
    Node<T> firstNode;

public void method1(T value) {
    Node<T> temp = new Node<T>();
    temp.data = value;
    temp.next = firstNode;
    firstNode = temp;
    }

public T method2() {
    if(firstNode == null) { return null; }
    T temp = firstNode.data;
    firstNode = firstNode.next;

    return temp;
    }
}
```

determine the output of each of the following code statements, write "null" in the case of printing null and write "ERROR" in the case of compiler or runtime errors.

(A) `NodeList <String> list1 = new NodeList <String> ();`

```
System.out.println(list1.method2());
```

ANSWER for (A): null

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b Exam

Programming 2

FINAL EXAM

Instructions	This is an open book exam.
Timed Test	This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 08 minutes, 23 seconds.

Less than half of the time remains.

Question Completion Status:

Moving to another question will save this response.

Question 23

Question 23 of 35

0.5 points

What methods should be used when implementing **Queue** using a linked list? **(select all that apply)**

- [ ] `insertAtFront()` and `removeFromBack()`
- [ ] `insertAtFront()` and `removeFromFront()`
- [ ] `insertAtBack()` and `removeFromBack()`
- [x] `insertAtBack()` and `removeFromFront()`

Moving to another question will save this response.

Question 23 of 35

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can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 07 minutes, 35 seconds.

Question Completion Status:

Less than half of the time remains

Moving to another question will save this response.

Question 28

Question 28 of 35

0.75 points

Consider the following iterative binary search method:

```
int binarySearch(A, int K) { // A in an array of integer
    int left=0; right=n-1;
    while left ≤ right do
        int middle=floor((left+right)/2)
        if  (K == element at index 'middle' in A)
            return middle
        else if  (K < element at index 'middle' in A)
            right = middle-1
        else left = middle+1
    return -1
}
```

Fill in the blanks in the following **method algorithm** to convert the above method into a **recursive one:**

```
int recBinarySearch(A, int left          , int right          , int K) {
    if ( left>right          ) return-1;
    middle = floor((left+right)/2)
    if ( K==elemnt at index 'midc ) return  middle;
    else if  (K  < element at index 'middle' in A)
        return recBinarySearch(A, left          , right-1          , K);
    else
        return recBinarySearch(A, left+1          , right          , K);
```

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Question 28

0.75 points

Consider the following iterative binary search method:

```
int binarySearch(A, int K) { // A in an array of integer
    int left=0; right=n-1;
    while left ≤ right do
        int middle=floor((left+right)/2)
        if   (K == element at index 'middle' in A)
             return middle
        else if  (K < element at index 'middle' in A)
             right = middle-1
        else left = middle+1
    return -1
}
```

Fill in the blanks in the following **method algorithm** to convert the above method into a **recursive one:**

```
int recBinarySearch(A, int left          , int right          , int K) {
    if ( left>right          ) return-1;
    middle= floor((left+right)/2)
    if ( K==elemnt at index 'midc ) return   middle;
    else if   (K  < element at index 'middle' in A)
        return recBinarySearch(A, left          , right-1          , K);
    else
        return recBinarySearch(A, left+1          , right          , K);
}
```

NOTE: Array is arranged in ascending order

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seconds.

Question Completion Status:

Less than half of the time remains.

Question 1

2 points Saved

Match each of the following statements with the appropriate data structure, note that you may pick only **one** choice from the provided options. choice can be applied on several options

A. Stack.

B. Queue

C. Linked list.

A. The data structure maintains a Last-In-First-Out order.

C. The data structure in which we *must* keep track of two links.

A. The data structure in which we *must* add and delete items from the same end.

B. The data structure that is typically used to implement a waiting mechanism for a set of processes sharing the same resource, such that the first process added would be the first to access the resource.

C. The data structure which provides the same functionality as an array.

C. The data structure which you can traverse.

B. A linear list of elements in which deletion can be done from one end (front) and insertion can take place only at the other end.

B. The data structure used to store and restore a recursive method and its arguments during the implementation of a recursive call.

Moving to another question will save this response.

Question 1 of 35

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Remaining Time: 12 minutes, 20 seconds.

Question Completion Status:

Click **Submit** to complete this assessment.

Question 35

After inserting the following elements in a stack: 5, 1, 3, 9, 7. The element at the top of the stack will be [B1]

7

0.25 points

Click **Submit** to complete this assessment.

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...g time: 07 minutes, 10 seconds.

Question Completion Status:

Less than half of the time remains.

Moving to another question will save this response.

Question 29

Question 29 of 35

0.25 points

Given the following class hierarchy :

```
public abstract class A {...}
public class AB extends A {...}
public class BC extends AB {...}
```

If we declare the following array in a test class:

```
A[] array = new A[100];
```

The array can store:

- Instances of class A and AB.
- T he array initialization is incorrect
- Instances of class AB and BC.
- Instances of class A only.

Moving to another question will save this response.

Question 29 of 35

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Exam

Computer Science Department
CSC113 - Computer Programming 2

FINAL EXAM

Instructions	This is an open book exam.
Timed Test	This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 08 minutes, 28 seconds.

Less than half of the time remains.

Question Completion Status:

Moving to another question will save this response.

Question 22

Question 22 of 35

0.25 points

The declaration of the following generic class is considered legal.

```
public class Box<Integer, String> {...}
```

- True
- False

Moving to another question will save this response.

Question 22 of 35

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Question Completion Status:

Less than half of the time remains

Moving to another question will save this response.

Question 16

Question 16 of 35

0.75 points

1. Consider the following recursive method:

```
public static boolean p(String s, int i, int f){
    if (i < f) {
        if (s.charAt(i) == s.charAt(f)) {
            return p(s, i+1, f-1);
        } else {
            return false;
        }
    } else {
        return true;
    }
}
```

What is the output for each of the following statements?

1. `System.out.println(p("ABDBA", 0, 4));`	true
2. `System.out.println(p("ABCA",0, 3));`	false
3. `System.out.println(p("AAA",0, 2));`	true

Moving to another question will save this response.

Question 16 of 35

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Computer Programming 2

FINAL EXAM

Instructions	This is an open book exam.
Timed Test	This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 11 minutes, 32 seconds.

Less than half of the time remains.

Question Completion Status:

Moving to another question will save this response.

Question 6

Question **6** of **35**

0.5 points Saved

Usage of java **`super`** Keyword (choose all that apply)

- [x] super can be used to invoke the constructor of an immediate parent class
- [ ] super can be used to invoke the constructor of any grandparent class
- [ ] super can be used to access instance members (variables/methods) in a grandparent class
- [x] super can be used to access instance members (variables/methods) in an immediate parent class

Moving to another question will save this response.

Question **6** of **35**

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...ve saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 10 minutes, 44 seconds.

Less than half of the time remains.

Question Completion Status:

Moving to another question will save this response.

Question 11

Question **11** of **35**

1 points Saved

Match each of the following terms with its definition:

A. Abstraction

B. Polymorphism

C. Inheritance

D. Encapsulation

A. The use of only a public interface of a class in order to represent its methods to other classes; to represent a class only by its external behavior.

B. The ability of an object to take on the form of different classes depending on how it is used, especially in the instance of a subclass standing in for an instance of its parent class. It also refers to the ability to adapt the behaviors of a class as it descends from other classes

C. The ability of new classes to be created by taking all existing data and behaviors of an existing class and extending it with new methods and data.

D. The combining of data and the behaviors which act on it into a single unified data structure, such that they can behave as a self-sufficient object and so that implementation details can be hidden away from the user.

Moving to another question will save this response.

Question **11** of **35**

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Remaining Time: 08 minutes, 43 seconds.

Question Completion Status:

Less than half of the time remains

Moving to another question will save this response.

Question 20

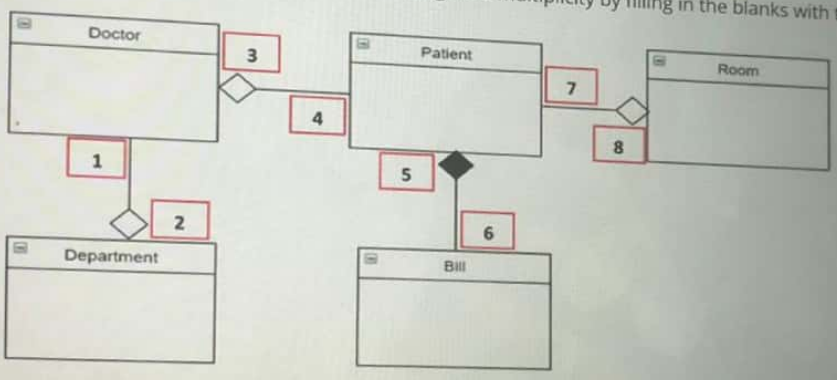
Question 20 of 35

2 points

We like to define a hospital system hierarchy. This hierarchy is composed of following classes:

1) Patient : patient can be admitted in one room , patient can have many bills to pay.
2) Doctor : can treat from 5 to 15 patients
3) Department: have up to 20 doctors.
4) Room : can hold up to 3 patients .

Using this information , complete the following UML multiplicity by filling in the blanks with the appropriate values.



- The value in box#1 should be: 1..20
- The value in box#2 should be: 1
- The value in box#3 should be: 1
- The value in box#4 should be: 5..15
- The value in box#5 should be: 1

Scanned with Car

```
int a=10;
if (a == 100) return 1;
return example2(n-1) + 1/n; }
```

D. ▾

```
// call from main: example3(8);
int example3(int n) {
int a;
if (n<=0) return 1;
else {
a = (example3(n-2) + 3*example3(n/2) + 5);
return a;
}
}
```

G. ▾

```
// call from main: example4(6);
int example4(int n) {
int a=10;
return example4(n-1) + 1;
if (n == 0) return 1;
}
```

...e case does not approach the base case.

G. Improper placement of the base case.

⚠ Moving to another question will save this response.

Question 14 of 35

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This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.

Multiple Attempts Not allowed. This test can only be taken once.

Force Completion This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 10 minutes, 39 seconds.

Question Completion Status:

Less than half of the time remains.

Moving to another question will save this response.

Question 12

Question 12 of 35

0.25 points

Given the following definitions:

```
class Vehicle <T>{}
class Car <T>extends Vehicle<T> {}
```

which of the following assignments is legal?

- `Vehicle <Object> b = new Vehicle <String> ();`
- `Vehicle <Object> b = new Car <String> ();`
- `Vehicle <String> b = new Car <String> ();`
- None of the above.

Moving to another question will save this response.

Question 12 of 35

Scanned with Car

Remaining Time: 09 minutes, 04 seconds.

Question Completion Status:

Less than half of the time remains.

Moving to another question will save this response.

Question 19

Question 19 of 35

0.75 points

Given the following definitions:

```
public interface X {
        public void m1();}
public interface Y extends X {
        public void m2();
        public void m3();}
public abstract class Myclass implements Y {
        public void m2() {...}
        public abstract void m4();}
```

And the following concrete class header :

```
public class Sub extends  Myclass
```

Which methods does the `Sub` class need to implement? (select all that apply)

- [x] m1()
- [ ] m2()
- [x] m3()
- [x] m4()

Moving to another question will save this response.

Question 19 of 35

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FINAL EXAM

Instructions	This is an open book exam.
Timed Test	This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 11 minutes, 51 seconds.

Less than half of the time remains.

Question Completion Status:

Moving to another question will save this response.

Question 4

Question 4 of 35

0.25 points

Which of the following is not supported in Java:

- Multiple inheritance using classes.
- Multiple inheritance using interfaces.
- Multilevel inheritance.
- Single-level inheritance.

Moving to another question will save this response.

Question 4 of 35

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Remaining Time: 09 minutes, 18 seconds.

Question Completion Status:

Less than half of the time remains.

Question 17

2 points

Given the node class below, write the code for public static method called **indexOf()** which accepts the head of a linked list of nodes and a value to search for.

This method returns the first *index* where the value is found (or -1 if the value is not found). You ***may not*** write any additional methods or classes and you ***may not*** accept any additional parameters.

You may assume the linked list is not null and first element has index **Zero**.

```
class Node { public int value; public Node next; }

        public static int indexOf(Node n, int v) {

            // your code here

                }

    }
```

Arial 3 (12pt)

```
if(n.next==null)

return -1;

if(n.value==v)

return n.value;

return indexOf(n.next,v);
```

Path: p

Words: 8

Moving to another question will save this response.

Question 17 of 35

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Question Completion Status:

Less than half of the time remains.

Given the following class definitions:

```
public class A {
    public String m() { return "A' s m" ; }
  }
public class B extends A {
    public String n() { return "B' s n" ; }
  }
public class C extends B {
    public String m( ) { return "C' s m" ; }
  }
public class D extends A {
    public String m( ) { return "D' s m" ; }
}
```

What is returned by the following? Choose the correct answer for each of the following code segments.

A. ▾
```
B b = new B() ;
b.m();
```

F. ▾
```
B b = new B() ;
b.n();
```

C. ▾
```
B b = new C() ;
b.m();
```

D. ▾
```
D d = new D() ;
d.m();
```

A. A's m

B. B's m

C. C's m

D. D's m

E. A's n

F. B's n

G. C's n

H. D's n

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Lab Exam

Time: 08 minutes, 13 seconds.

Question Completion Status:

Less than half of the time remains

Moving to another question will save this response.

Question 24

Question 24 of 35

0.25 points

After performing the following statements on a list of integers:

```
List myList=new List();
myList.insertAtFront(2);
myList.insertAtFront(6);
myList.insertAtFront(0);
int n=myList.removeFromBack();
myList.insertAtBack(7)
int n=myList.removeFromFront();
```

The content of the list is:

- (•) 6 7
- ( ) 7 6
- ( ) 0 2
- ( ) 2 6 7

Moving to another question will save this response.

Question 24 of 35

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...160355_1&content_id=_1989253_1&question_num_14.x=0&toggle_state=q...

Remaining Time: **10 minutes, 23 seconds.**

Less than half of the time remains.

Question Completion Status:

This is a matching question: for each of the following recursive methods, identify the problem with the recursion, if any, by matching it with a **single** issue from the provided list:

F.
```
// call from main: example1(5);
int example1(int n) {
 int a=10;
 if (n==0) return 0;
 return example1(n+1);
 }
```

C.
```
// call from main: example2(10);
int example2(int n) {
 int a=10;
 if (a == 100) return 1;
 return example2(n-1) + 1/n; }
```

D.
```
// call from main: example3(8);
int example3(int n) {
 int a;
 if (n<=0) return 1;
 else {
 a = (example3(n-2) + 3*example3(n/2) + 5);
 return a;
 }
 }
```

G.
```
// call from main: example4(6);
int example4(int n) {
 int a=10;
 return example4(n-1) + 1;
```

A. Too many base cases.

B. No issues, recursion is correct.

C. The base case is missing.

D. Too many recursive cases.

E. Missing recursive case.

F. The recursive case does not approach the base case.

G. Improper placement of the base case.

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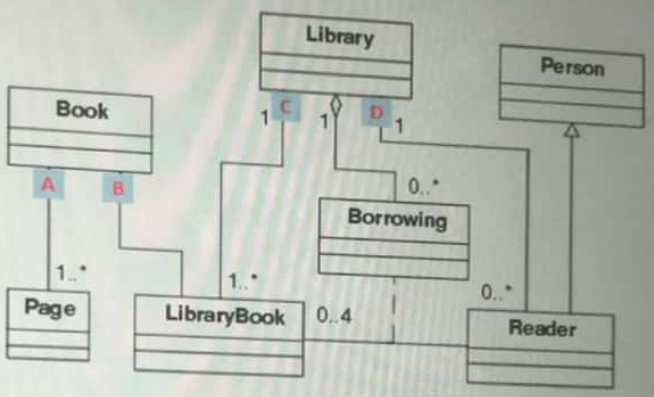
...utes, 56 seconds.

Question Completion Status:

Less than half of the time remains.

Given the following altered UML diagram:



Decide the type of relationship that should appear between the classes of the following UML diagram:, by choosing the correct relation type:

2. A
1. B
4. C
3. D

1. Association
2. Composition
3. Aggregation
4. Inheritance
5.

Moving to another question will save this response.

Question 3 of 35

Scanned with Car

...time, **5 minutes**, **1 minute**, and **30 seconds** remain. ... when time expires, and you may continue or submit.

Force Completion This test can only be taken once. ... Not allowed. This test can only be taken once.

This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 11 minutes, 07 seconds.

Question Completion Status:

Less than half of the time remains.

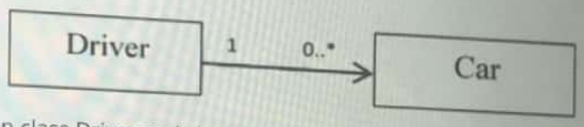
Moving to another question will save this response.

Question 9

Question **9** of 35

0.25 points

Given the following diagram:



What is the relationship between class Driver and class Car

- Association
- Composition
- Aggregation
- Inheritance

Moving to another question will save this response.

Question **9** of 35

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Time: 08 minutes, 04 seconds.

Question Completion Status:

Less than half of the time remains.

Given the following definitions:

```
1 class A {
2     void m1() { }
3     void m2() { }
4 }
5 class B extends A  {
6     void m1() { }
7     void m3() { }
8 }
9 class C extends B {
10    void m4() { }
11 }
12 class App {
13    public static void main (String [] args) {
14       B obj1 = new C();
15       ((A)obj1).m2();
16
17       A obj2 = new C();
18       ((C)obj2).m4();
19
20       A obj3 = new B();
21       ((B)obj2).m1();
22    }
23 }
```

Which of the following casting operations are **NOT necessary**? Pick from the following and note the number is referring to the line number of the statement.

- 15, 18
- 18, 21
- 15, 21
- All are necessary.

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Attempts Not allowed. This test can only be taken once.
Force Completion This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 11 minutes, 41 seconds.

Less than half of the time remains.

Question Completion Status:

Moving to another question will save this response.

Question 5

Question 5 of 35

0.5 points

What is the output produced as a result of the call to `mystery(1, 4)` for the following method:

```
public static void mystery(int x, int y) {
    if (x > y) {
        System.out.print("*");
    } else if (x == y) {
        System.out.print(y);
    } else {
        System.out.print(y + " ");
        mystery(x + 1, y - 1);
        System.out.print(" " + x);
    }
}
```

Arial 3 (12pt)

4 3 * 2 1

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Question Completion Status:

Question 31

1.25 points Saved

Note: choice can be matched with several options

Consider the following definitions:

```
public interface Shape {
    public int area();
    }
public abstract class Rectangle implements Shape {
    private int width, height;

    public Rectangle(int width, int height) {
        this.width = width;
        this.height = height;
    }
    public int area() { return width * height; }
    public String toString() { return "rectangle"; }
    }

public class Square extends Rectangle implements Shape {
    private static int count = 0;

    public Square(int size) {
        super(size, size);
        count++;
    }
    public String toString() { return "square"; }
    }
```

D. `Square s = new Square(3);`
`System.out.println(s.toString());`

G. `Shape p = new Square(3);`

A. 3

B. 6

C. 9

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Remaining Time: 12 minutes, 03 seconds.

Question Completion Status:

Less than half of the time remains.

Question 2

1.5 points Saved

Note: choice can be matched with several options

Assume the following definitions:

```
public interface Fillable { /* . . . */}
public interface BoxFillable extends Fillable  { /* . . . */ }
public class Storage implements Fillable { /* . . . */}
public class Drawer extends Storage implements BoxFillable { /* . . . */ }

Object obj = new Object( ) ;
Storage storage = new Storage( ) ;
Drawer drawer = new Drawer( ) ;
Storage s_drawer = new Drawer( ) ;
```

For each of the following, decide whether the assignment is LEGAL or ILLEGAL:

A. `Object obj_drawer = drawer;`

B. `Drawer d_storage = storage;`

A. `Drawer d_obj = (Drawer)obj;`

A. `Fillable fillable = drawer;`

B. `BoxFillable bfillable = s_drawer;`

B. `Drawer d_s_d = s_drawer;`

A. Legal

B. Illegal

Moving to another question will save this response.

Question 2 of 35

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Question Completion Status:

Less than half of the time remains.

Moving to another question will save this response.

Question 33

Question 33 of 35

0.25 points

Given the following two recursive methods:

```
public static void print1 (int val) {
        if (val ==0) return;
        System.out.print(val + " ");
        print1 ( val -1);
    }

public static void print2 (int val){
        if (val ==0) return;
        print2 ( val -1);
        System.out.print(val + " ");
    }
```

The following method calls will result in the same output.

```
print1(10);
print2 (10);
```

- True
- False

Moving to another question will save this response.

Question 33 of 35

Scanned with Car

This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit.
Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.

Multiple Attempts Not allowed. This test can only be taken once.

Force Completion This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 12 minutes, 32 seconds.

Question Completion Status:

Less than half of the time remains

Moving to another question will save this response.

Question 34

Question 34 of 35

0.25 points

When an object is dependent on another object for its existence, this is called :

- Aggregation
- Composition
- Inheritance
- Polymorphism

Moving to another question will save this response.

Question 34 of 35

Scanned with Car

This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit.
Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.

Multiple Attempts Not allowed. This test can only be taken once.

Force Completion This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 10 minutes, 55 seconds.

Question Completion Status:

Less than half of the time remains.

Moving to another question will save this response.

Question 10

Question **10** of **35**

0.25 points Save

Given the following definitions:

```
public class Box implements Packable {}
public class SuperBox extends Box{}
```

Which of the following assignments is **NOT** valid?

- `Object box = new SuperBox();`
- `Packable box = new Box();`
- `SuperBox box = new Box();`
- `Packable box = new SuperBox();`

Moving to another question will save this response.

Question **10** of **35**

Scanned with Car

Lecture Slides
Tutorial
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Assessments

Final Lab Exam

Programming 2

FINAL EXAM

Instructions	This is an open book exam.
Timed Test	This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 08 minutes, 35 seconds.

Less than half of the time remains.

Question Completion Status:

Moving to another question will save this response.

Question 21

Question 21 of 35

0.25 points

Which of the following statement are true in a java program

- An interface can implement only one interface.
- An interface can extend many interfaces
- An interface can implement many interfaces.
- A class can extend only one class and implement one interfaces.

Moving to another question will save this response.

Question 21 of 35

Scanned with Car

Remaining Time: 11 minutes, 13 seconds.

Question Completion Status:

Less than half of the time remains.

Moving to another question will save this response.

Question 8

Question 8 of 35

0.25 points

Given the following method declaration:

```
public static int f( int x, int y ) {
    if( x == 0 )
        return y;
    else return f( x - 1, y + 1 );
    }
```

what value is returned as the result of the `call f (3,9)`?

- 12
- 0
- 1
- The recursion is incorrect

Moving to another question will save this response.

Question 8 of 35

Scanned with Car

CSC113 - Computer Programming 2

FINAL EXAM

Instructions	This is an open book exam.
Timed Test	This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 13 minutes, 00 seconds.

Less than half of the time remains

Question Completion Status:

Moving to another question will save this response.

Question 32

Question 32 of 35

0.5 points

Infinite recursion occurs when: (choose all that apply)

- [x] the base case is never reached by the recursive step.
- [x] the algorithm contains no base case.
- [ ] when the recursive case is never reached by the base case.
- [ ] the method contains two or more base cases.

Moving to another question will save this response.

Question 32 of 35

Scanned with Car

FINAL EXAM

Instructions	This is an open book exam.
Timed Test	This test has a time limit of 3 hours.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

Remaining Time: 09 minutes, 13 seconds.

Less than half of the time remains.

Question Completion Status:

Moving to another question will save this response.

Question 18

Question **18** of **35**

0.5 points Saved

Suppose `Edible` is an interface and classes `Salad` and `Fruit` both implement `Edible`. Which of the following is a valid statement? (select all that apply)

- [ ] `Edible food = new Edible();`
- [x] `Edible salad = new Salad();`
- [ ] `Object food = new Edible();`
- [ ] `Fruit fruit = new Edible();`

Moving to another question will save this response.

Question **18** of **35**

Scanned with Car