CSCI 145 -- In-Class Exercise 3

| Group Members | Contribution (0 to 10) 0 – no contribution, 10 -- most |
| --- | --- |
| Kevin Bai | 10 |
| Ivan Leung | 10 |
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Name of note taker (responsible to collect information and submit it):   
Kevin Bai

**Question 1:**  Do at least 3 review questions/exercises from the Review Sheet.

1. Set up a simple recursive method to print a string in reverse order; trace a recursive method such as factorial or summing values from 1 to n

public static void printBackwards(String s)

{

    if(s.length()>0)

    {

        System.out.print(s.charAt(s.length()-1));

        printBackwards(s.substring(0, s.length()-1));

    }

}

}

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1. How is method overloading different from method overriding?

Method overloading: multiple methods share the same name with different number of parameters and/or different data type of parameters.

Method overriding: create a new method in a subclass that replaces the method with the same name in the superclass.

       5. What is a constructor and how do you set one up?

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the constructor name must match the class name, and the constructor does not need the type for example, public, static, private ect.

**Question 2**:  Each person in the group must ask one reasonable question about the upcoming exam.

What are the check and unchecked exceptions?

Will file processing be covered in the final exam?

how to use the Comparable interface?

**Question 3**:  Design a solution for a method that accepts an int array of 5 values that holds the values when rolling 5 dice and it returns an integer value based on the following requirements.  You can provide pseudocode or actual Java code.

* Return 5 when all 5 values are the same.
* Return 4 when 4 values are the same.
* Return 3 when 3 values are the same.
* Return 2 when 2 values are the same.
* Return 1 when values are in a consecutive sequence (1, 2, 3, 4, 5) or (2, 3, 4, 5, 6).
* Return 0 for none of the above.

function rolling 5 dice ( array of 5 values)

frequency: array of integers of size 7

for each value in diceValues do

        frequency[value] += 1 //record times of the value appear.

find the largest value in the  frequency[],

if largest = 5 return 5,

else if largest = 4 return 4,

elseif largest = 3 return 3,

else if largest = 2 return 2,

else if it is an inorder sorted list return 1,

else return 0;

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function isSorted(list: array of integers): boolean

    n = length of list

    for i from 0 to n-2 do

        if list[i] > list[i+1] then

            return false

    return true