**CMIS 242: Java Programming**

Basic program class design

***Example Code for Developing a Class:***

package cmis242.basic.pkgclass.example;

import java.util.Scanner;

public class CMIS242BasicClassExample {

//Declare class for the program

static class box {

//Declare the variables

private double size;

private double area;

private double volume;

//Establish the constructor for the class

public box() {

size = 1;

area = 0.0;

volume = 0.0;

}// end Constructor

//Method of interactive data input

public void input() {

Scanner input = new Scanner(System.in);

String inputString;

System.out.println ("Please enter the box size: ");

size = input.nextDouble();

} // end input

//Method for Area formula

public void Area() {

area = Math.pow(size, 2)\*6;

}// end area calculation

//Method for Volume formula

public void Volume() {

volume = Math.pow(size, 3);

}// end volume calculation

//Method for displaying the results formula

public void displayResult() {

System.out.println ("The box size is: " + size +

"\nwith a Volume of " + volume +

"\nand an Area of "+ area);

}// end displayResult

} // end class box

public static void main(String[] args) {

//Declaring a class instance for the data type box

box boxOne = new box();

//Calling the methods in the class

boxOne.input();

boxOne.Area();

boxOne.Volume();

boxOne.displayResult();

} // end main

} // end public class CMIS242BasicClassExample

For Your Consideration: Review the above code in shortened version below.

**Note**: the various methods do not look like the ones used in regular programming. As an example, this code uses

public void setArea() {

area = Math.pow(size, 2)\*6;

}//end void setArea()

In regular programming you would probably be using

public double setArea(int size) {

double area;

area = Math.pow(size, 2)\*6;

return area;

}// end double setArea(int size)

***Above code shortened:***

package cmis242.basic.pkgclass.example;

import java.util.Scanner;

public class CMIS242BasicClassExample {

//Declare class for the program

static class box {

//Declare the variables

private double size;

private double area;

private double volume;

//Establish the constructor for the class

public box() {

size = 1;

area = 0.0;

volume = 0.0;

}// end Constructor

//Method of processing data

public void Display() {

Scanner input = new Scanner(System.in);

String inputString;

System.out.println ("Please enter the box size: ");

size = input.nextDouble();

//Method for Area formula

area = Math.pow(size, 2)\*6;

//Method for Volume formula

volume = Math.pow(size, 3);

System.out.println ("The box size is: " + size +

"\nwith a Volume of " + volume +

"\nand an Area of "+ area);

} // end Display

} // end class box

public static void main(String[] args) {

//Declaring a class instance for the data type box

box boxOne = new box();

//Calling the methods in the class

boxOne.Display();

} // end main

} // end public class CMIS242BasicClassExamplee