**Lab 4 Methods**

**977-210 Object-Oriented Programming**

Objective: able to write different type of java methods

Declare class Shape as below with overload methods to calculate area of different shapes.

class Shape {  
 String type;  
 private String name;  
 String color;  
  
  
 public double calculateArea( int radius){  
 return 0.0;  
  
 }  
 public int calculateArea(int width, int length){  
 return 0;  
 }  
 public void calculateArea(int side1, int side2, int side3){  
  
 }  
}

* Add a constructor of class Shape which get a string parameter for setting value to variable “type”
* Add getter/setter method for variable “name”
* Write the code to calculate area of circle, rectangle, and triangle, respectively.
* Write a java program to select shape, get shape name, color, and other value for area calculation.
* Call calculateArea() method in class shape to calculate area
* Print object variables and area of the Shape object
* Create menu for user to select shape. When user enters “4”, the program will be terminated.

\*\*\* Program: Area calculation \*\*\*

Select menu

1 : Circle

2 : Rectangle

3 : Triangle

4 : Exit

Select menu: 1

Create circle object...

Enter name of shape: **C9**

Enter color: **blue**

Enter radius: **5**

Circle name:C9 color = blue

Area = 78.53981633974483

\*\*\* Program: Area calculation \*\*\*

Select menu

1 : Circle

2 : Rectangle

3 : Triangle

4 : Exit

Select menu: **4**