

**COP-2800: Java Programming**

**Assignment 9-8**

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# Document Version Control

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# Technical Specifications

## Purpose of Technical Implementation

9.8 (The Fan class) Design a class named Fan to represent a fan. The class contains:

* Three constants named SLOW, MEDIUM, and FAST with the values 1, 2, and 3 to denote the fan speed.
* A private int data field named speed that specifies the speed of the fan (the default is SLOW).
* A private boolean data field named on that specifies whether the fan is on (the default is false).
* A private double data field named radius that specifies the radius of the fan (the default is 5).
* A string data field named color that specifies the color of the fan (the default is blue).
* The accessor and mutator methods for all four data fields.
* A no-arg constructor that creates a default fan.
* A method named toString() that returns a string description for the fan.
  + If the fan is on, the method returns the fan speed, color, and radius in one combined string.
  + If the fan is not on, the method returns the fan color and radius along with the string “fan is off” in one combined string

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Write a test program that creates two Fan objects.

1. Assign maximum speed, radius 10, color yellow, and turn it on to the first object.
2. Assign medium speed, radius 5, color blue, and turn it off to the second object.
3. Display the objects by invoking their toString method.

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## Psuedocode

START PROGRAM

DEFINE Main method

Declare two fan objects

Set values to fan1

Set values to fan2

Print toString fan method.

END PROGRAM

START CLASS Fan

Define constants slow, medium, fast to 1, 2, 3

Institate int speed to slow

Instiate Boolean on to false

Institate double radius to 5

Instiate string color to blue

Declare an empty constructor

METHOD returns string toString(){

If current object field on is true

String description with speed, radius, and color

Else

Return string fan is off.

Declare setters and getters for fan class fields.

END CLASS Fan

## Screenshot of working code

