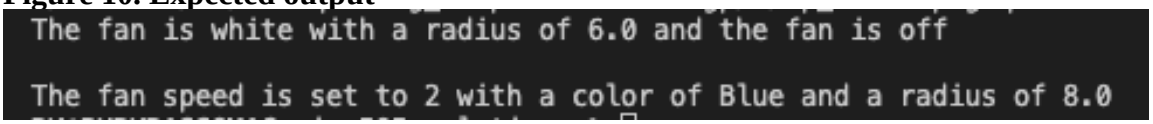
Instructions for Assignment 1.3

Write a program with a class titled Fan. This class is to contain:

1. Four constants named STOPPED, SLOW, MEDIUM, and FAST with values 0, 1, 2, and 3 to represent the fans speed.
2. A private **int** data field named speed that specifies the speed of the fan. Use the constants and set the default speed to STOPPED.
3. A private **boolean** data field named on that specifies whether the fan is on or off. The default is off (i.e., false).
4. A private **double** data field named radius that specifies the radius of the fan. The default is 6.
5. A private **string** data field named color that specifies the color of the fan. The default is white.
6. Accessor and mutator methods for all four data fields.
7. A no-argument constructor that creates a default fan (set all fields to their default values).
8. An argument constructor that creates a fan using the four fields as arguments.
9. Override the toString method. Return a string description for the fan. If the fan is on, the method returns the fan speed, color, and radius in a combined string. If the fan is not on, the method returns the fan color, radius, and a message of "fan is off" in a combined string.
10. Create a new file named TestFanApp with a main() method to test the Fan class. Create two instances of the Fan class, one using the default constructor and the other using the argument constructor. For the second argument constructor, use the classes constants to set the speed. Display the objects by invoking the classes toString() method.

Figure 10. Expected output



Save the solution under a folder named FanApp in your repositories Module_1 folder.