

A Color–Changing Lamp

1. Write a class to model a Lamp with the following methods:
 - a) TurnOn — turn ON the lamp
 - b) TurnOff — turn OFF the lamp
 - c) ShowCurrentColor — outputs current color of lamp
2. Each time the lamp is turned ON, it shows a different color. The changing color–sequence is Red, Green, Blue, then loops back to Red and so on.
3. The state of the lamp is initially OFF. When the lamp is turned ON for the first time, its color should be Red.
4. Note that the lamp cannot be turned ON if it is already ON. Its state needs to be OFF before a call to TurnOn() has any effect.
5. Create any required attributes in your class to manage the states (e.g. the current color, the current ON/OFF status) of your object(s).
6. In your Main program, create a Color–Changing Lamp object. Test its correctness by turning it ON and OFF 10 times.

7. A correct output should be:

```
Color: red
Color: green
Color: blue
Color: red
Color: green
Color: blue
Color: red
Color: green
Color: blue
Color: red
```