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//Unit Five Objects Coding Test

class Plant {

private String type;

private int height;

private String colour;

private boolean edible;

private boolean perennial;

// CONSTRUCTOR METHODS

Plant(String t, int h, String c, boolean e, boolean p)

{

this.type=t;

this.height=h;

this.colour=c;

this.edible=e;

this.perennial=p;

}

Plant(String t, String c)

{

this.type=t;

this.height=0;

this.colour=c;

this.edible=false;

this.perennial=true;

}

Plant(String t, boolean e, boolean p)

{

this.type=t;

this.height=0;

this.colour="green";

this.edible=e;

this.perennial=p;

}

// INSTANCE METHODS

public void grow(int mod)

{

this.height+=mod;

}

public void printInfo()

{

System.out.println("The " + this.type + " plant is a " + this.height + "cm tall, " + colour + " plant.\nEdible: " + edible + " Perennial: " + perennial);

}

public void eat()

{

if(this.edible)

System.out.println("Eat " + this.type);

else

System.out.println("Don't eat " + this.type);

}

// CLASS METHODS

public static Plant taller(Plant a, Plant b)

{

if(a.height>b.height)

return a;

else if(a.height<b.height)

return b;

else

{

System.out.println("Error: The two plants are the same height.\nThe first plant was returned by default.");

return a;

}

}

public static boolean colourMatch(Plant a, Plant b)

{

if(a.colour.equalsIgnoreCase(b.colour))

return true;

else

return false;

}

// ACCESSOR METHODS

public String getType()

{

return type;

}

public int getHeight()

{

return height;

}

public String getColour()

{

return colour;

}

public boolean isEdible()

{

return edible;

}

public boolean isPerennial()

{

return perennial;

}

// MUTATOR METHODS

public void setType(String type)

{

this.type = type;

}

public void setHeight(int height)

{

this.height = height;

}

public void setColour(String colour)

{

this.colour = colour;

}

public void setEdible(boolean edible)

{

this.edible = edible;

}

public void setPerennial(boolean perennial)

{

this.perennial = perennial;

}

}