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\* The purpose of this project is to understand recursion by using code to create an image with rectangular shapes, using primarily colors, and more.

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\* **@version** 07/8/2021

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## 10.2 Real-World Recursion Questions

**Que: Explain how you use the principle of recursion to create your image?**

The principle of recursion can be used to create an image by dividing the image into parts. For example, dividing the image into rectangles of unequal size, by using a vertical line (as demonstrated in the lesson). Then, further dividing them into shapes, using a horizontal line is a viable option. By doing this, I was able to see the shapes slowly form. Because I am repetitively splitting the shapes, it demonstrates recursion, by changing the size of the shapes.

**Que: Briefly describe a plan for how you might write a program to produce Mondrian art.**

Firstly, creating a class which indicates the overall rectangle, including the sides, corners, and color, and creating an ArrayList, by utilizing an important java concept, to store the rectangle. Then, further creating various methods that would indicate the creation of vertical and horizontal lines, then making changes to the rectangles stored in the ArrayList, by splitting into more than 1 rectangle. In addition, color is an important factor as well. Therefore, we will need another method to allow us to change color.

**Que: Who should get the copyright credit for a piece of computer art: the CPU, the software, or the programmer? Explain your reasoning.**

Despite the programmer using other software as a base to get their work started, the programmer is the one writing the code to display output. Therefore, it would only make sense for the programmer to receive copyright credit for their work, as they created their work.

**Que: If a computer, with no human intervention, produced Mondrian art indistinguishable from an original masterpiece, would it be a sign of artificial intelligence?**

AI refers to the stimulation of human intervention/intelligence processed by a machine, or, in this case, a computer. Therefore, a computer with no human intervention producing Mondrian art from an original masterpiece would be a sign of AI as it is taking on a task that would normally require human intelligence or interference.

**Que: If a computer, with no human intervention, produced Mondrian art indistinguishable from an original masterpiece, would it diminish the accomplishments of a human?**

Absolutely not! Simply because a computer is capable of producing Mondrian art on "its own", it doesn't diminish the work or quality of work produced by a human. AI has been used for a variety of things, many of which have been taken on by humans. However, regardless of whether a machine is able to accomplish a task or not, the human is still notable for their achievements. The work of a human and the work of AI are unique in their own respective manner.