OBJECT-ORIENTED PROGRAMMING - JAVA EXERCISE 2021-22
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(There are explanatory comments throughout the code)

Compilation Command: javac *.java
Execution Command: java mainFile N movement condition

Initially, the project is divided into separate .java files, with each class in its own file. Artifacts are the superclass, masterpieces are a subclass of it, and in turn, the classes paintings and sculptures are subclasses of masterpiece. This forms a three-level class hierarchy. There is a separate class in the file "other.java" where functions are implemented to generate random strings for creator names, generate random numbers within a specified range, and implement the "auction" function. All these functions are declared as static and public to be used throughout the project.

(For cases where the condition might not be given, I have added an extra string value, "empty," in the array of conditions.)

Artifact: Consists of a constructor that initializes its values, the getInfo and getIndex functions, as well as the abstract evaluate function, returning a boolean indicating whether the artifact is acceptable.

Masterpiece: Declared using "extends" to be a subclass of artifact, and using "super" to initialize its values from both artifact and its own. The getInfo function is also implemented to retrieve the required information. The evaluate function is abstract, similar to artifact, to be implemented in its subclasses.

Sculptures/Paintings: Each has a constructor that takes information from both artifact and masterpiece as arguments and initializes values similarly to masterpiece. The getInfo function is also implemented. The evaluate function in the sculptures class initially checks if the condition is equal to the "empty" string, indicating that it hasn't been provided. If it enters the "if" condition, a local variable is set to "excellent," and true/false is returned accordingly. The evaluate function in the paintings class is implemented similarly, with the difference that it returns true if the condition is "excellent" and the condition from the command line is "good."

mainFile: In the main function, I initially store the values from the command line into variables. Then, I create static arrays for the values of materials, techniques, movement, and condition. I declare an array to store the artifacts and in a for loop, if the random function (returning 0 or 1) is equal to 1, then paintings are created; otherwise, sculptures are created. I call the random function as an argument to get a random value within a specified range (ranges are indicative). Finally, I call the "auction" function from the "other.java" file. The auction function calls getInfo and getIndex, and depending on whether the artifact is acceptable or not, it prints the appropriate message.