Image Album Project

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How to run the project: just compile and run the Controller.java

***ImageIO package***

Handles pictures, albums and JSON I/O

Album class

It has Album class which aggregates Pictures. It can add tags, remove and get tags to itself. It can add parent albums and remove child albums. Album can add, get and remove Picture objects.

JSONReader and JSONWriter manage readins and writing to json file which holds data about images.

Picture class represents a picture. Each picture has its tag list and those tags can be added or removed. Also each picture has a list of all parent albums. The picture has its name, id and filepath.

***AlterCommands package***

AlterCommand interface is a layout for the editing commands. Each command class implements this interface, so it has to implement execute and undo methods. This is command pattern. The commands and corresponding classes are: Crop, Flip, Mirror, Resize, Rotate and Search.

***UndoRedo package***

BasicUndoRedoStack has a undo and redo stacks which store the commands which represent the changes made to the picture. It has undoPicture and redoPicture methods.

***GUI package***

The main class is GUI which holds and manages all the components of the graphical user interface. It stores the picture which is currenty being edited, so it retains a reference of the Picture class.

For each element on the GUI there is a class that is a Listener which performs the corresponding action when the user clicks that element. For example the class CropAction, it retains a reference to the GUI and It instantiates the Crop class and calls its execute method on the picutre that is currenty being edited which is stored in the GUI class. Then it notifies the Observers to let them know that a change happend and it adds the crop to the undo/redo stack. This is Observer pattern. So in this case the Picture is Observable and the GUI is the Observer because it needs to update the screen when a change happens to a picture.