*Consider the following specification about a printing management system.*

PrintMode abstract class contains the following fields - number of pages, page size, orientation, color intensity and cost per page. It also contains the following abstract methods apart from the getter and setter methods - saveToner, savePage and boost. Three classes namely TonerSaveMode, PageSaveMode and BoosterMode extend the PrintMode abstract class. TonerSaveMode additionally contains a field named tonerSavingLevel. In the saveToner method, if tonerSavingLevel is set high, color intensity is reduced by following a well-known standard algorithm. Similarly, if tonerSavingLevel is medium and low, two different algorithms are used to reduce color intensity. In the PageSaveMode, a single algorithm is used to adjust page size and orientation in a way that the number of pages required is reduced. The PageSaveMode contains another method called renderPreview that shows a preview of the updated document. The BoosterMode increases the color intensity up to a maximum acceptable level that is set via its intensityThreshold field.

PrintJob class holds a queue of PrintRequest Objects that contains the reference of the Document class and the reference of the TonerSaveMode, PageSaveMode and BoosterMode classes. PrintJob class also holds an object of the PrioritySetting class. The two methods in PrintJob class namely pullJob and changePriority help to send a specific job to production based on the priority setting and change the priority of a job respectively.

Now, based on the aforementioned specification, redesign the system so that it abides by the SOLID principles and implement your solution in source code format. You may add, modify and reorganize any of the aforementioned elements in the scenario as needed. However, you cannot delete any element. In your source code, whenever you address a SOLID principle, write which one you have addressed and why as a comment. Also note that, you do not need to implement the actual algorithm to handle print jobs, rather implement a simulated version of it according to the specification.