A copier at a university

Requirements

Functional requirements

It must receive and use paper sheets to print on it, with the following size: Letter (8.5in x 11 in), Legal (8.5 in x 14 in) or Tabloid (11 in x 17 in).

It must allow user to choose how many copies want to obtain from the source document.

It must allow user to choose if the copy will be black and white or in color.

It must allow user to choose the size of the copy document if it will be Letter (8.5in x 11 in), Legal (8.5 in x 14 in) or Tabloid (11 in x 17 in).

It must return a document that is a copy of the source document, and this could have variations on the size and color according to the previous configurations.

Nonfunctional requirements

It should be available during university hours.

Use Cases

Title: Insert paper sheets.

Primary actor: Worker who handle the copier.

Success scenario: The worker places the amount of paper sheets with the size needed to print the source document according to the number of copies and size required.

Title: Configure the characteristics of the copy.

Primary actor: Worker who handle the copier.

Success scenario: The worker sets the number of copies needed, the worker sets the color needed and the worker sets the size of the copy.

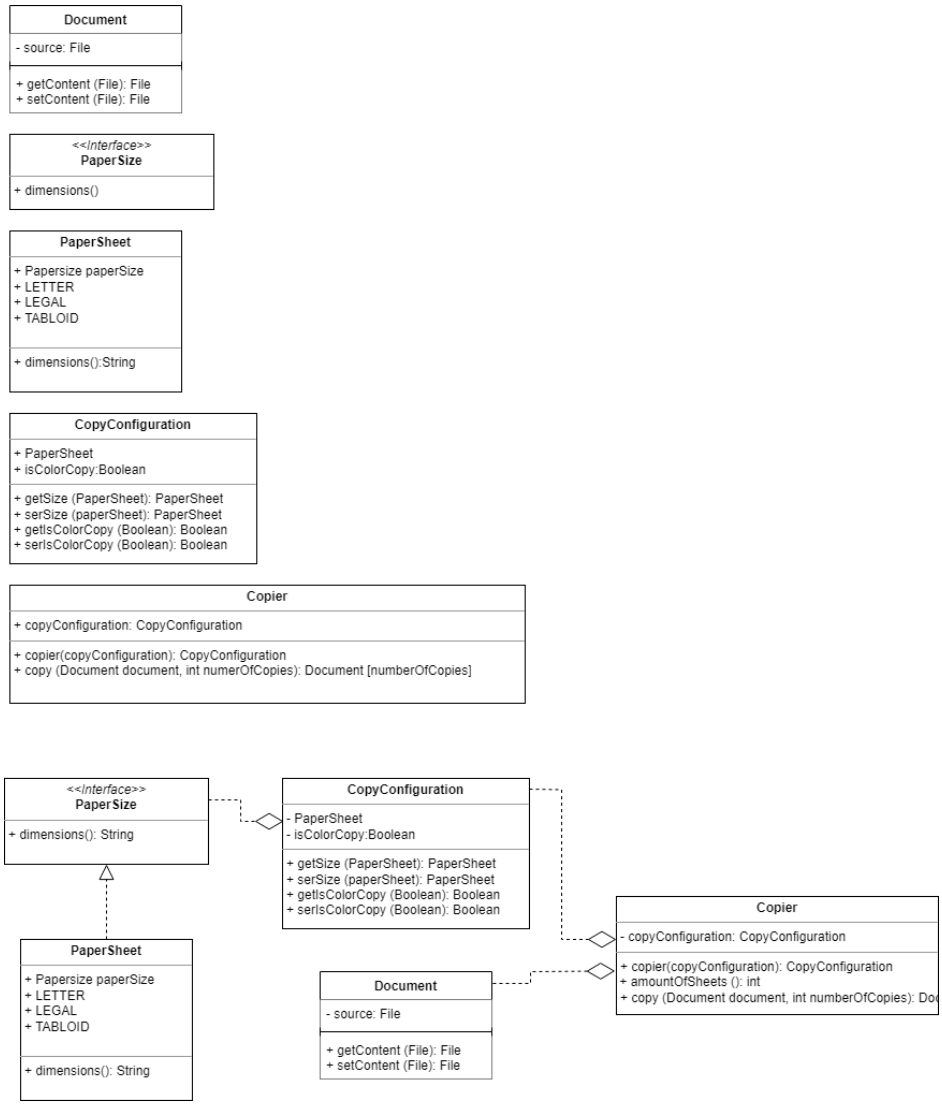
Title: Copy the source document.

Primary actor: Worker who handle the copier.

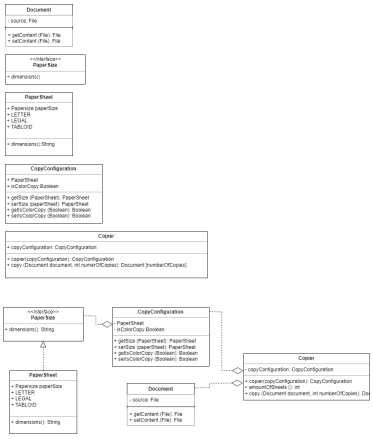
Success scenario: The worker inserts the source document, and the copier copies the source document on the paper sheets according to the configurations.

Secondary actors: University students, teachers or other employs who need to copy their source documents.

Class diagrams



UML class diagrams


Document
- source: File
+ getContent (File): File
+ setContent (File): File
<<Interface>>
PaperSize
+ dimensions()
PaperSheet
+ Papersize paperSize
+ LETTER
+ LEGAL
+ TABLOID
+ dimensions(): String
CopyConfiguration
+ PaperSheet
+ isColorCopy: Boolean
+ getSize (PaperSheet): PaperSheet
+ setSize (paperSheet): PaperSheet
+ getIsColorCopy (Boolean): Boolean
+ setIsColorCopy (Boolean): Boolean
Copier
+ copyConfiguration: CopyConfiguration
+ copier(copyConfiguration): CopyConfiguration
+ copy (Document document, int numberOfCopies): Document [numberOfCopies]
<<Interface>>
PaperSize
+ dimensions(): String
CopyConfiguration
- PaperSheet
- isColorCopy Boolean
+ getSize (PaperSheet): PaperSheet
+ setSize (paperSheet): PaperSheet
+ getIsColorCopy (Boolean): Boolean
+ setIsColorCopy (Boolean): Boolean
Copier
- copyConfiguration: CopyConfiguration
+ copier(copyConfiguration): Copy.Configuration
+ amountOfSheets (): int
+ copy (Document document, int numberOfCopies): Do
PaperSheet
+ Papersize paperSize
+ LETTER
+ LEGAL
+ TABLOID
+ dimensions(): String
Document
- source: File
+ getContent (File): File
+ setContent (File): File