

In this lab work, you will implement the **MenuItem** example we have discussed in the class. You will have two different Document type: Excel or Word and two operations: Copy and Paste. Before starting your implementation, map the problem participants to Command Pattern participants. Also, do not forget to check CommandPattern.java example. You will implement your code by getting help from it.

Command and Concrete Commands: You have two different commands per document type: WordCopy, WordPaste, WordDelete, ExcelCopy, ExcelPaste and ExcelDelete.

Document and Concrete Document: You have two different document types: WordFile and ExcelFile. They have a String attribute called "text" initialized to "Default". *Copy* command causes setting of "text" attribute to a value of your choice and *Paste* command prints it on the screen. *Delete* command empties the "text" attribute.

MenuItem: Accepts a "click" so that the operation (Copy or Paste) is performed on the document. Also, provides "Undo" operation for rolling back the "delete" command.

Framework: This is responsible for creating "Document", "MenuItem" and "Command" objects. Implement a method called "void create(String extension, int Op)" to create the necessary objects. "extension" could be either "doc" or "xls" and depending on its value, appropriate "Document" objects are created. "Op", could be either "1" (i.e. Copy), "2" (i.e. Paste), "3" (i.e. Delete) or "4" (i.e. Copy and Paste). "Op" is used for creating the proper "Command" objects. Note that (Copy and Paste) will be a Macro Command.

Lastly, implement two methods called "void getUserToClick()" to make **MenuItem** object to perform the requested operations and "void userUndoes()" to make **MenuItem** object to perform Undo.

Write main to test your design by creating a Framework object and ask from the user "extension" and "Op" information. Any unexpected value will cause termination of the program. Having received the user input, call "create" and "getUserToClick" method from the Framework object. Also test your "Delete" and "Undo" by using: Copy, Paste, Delete, Paste, Undo and Paste.