Log of changes made to initial Simple Note pad Application code.

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| Line Number | Smell | Fix |
| 1-22 | Bloaters-Too many imports | Optimized imported libraries by using .\* and removing un used libraries |
| 24-34 | Dispensable- class variable names were too short to have significant meaning | Changed class variable names to meaningful names, increasing readability. |
| 24-34 | Object Orientation Abuser- class variable didn’t have access modifiers, the were accessible from any class in the package | Made most class variables have private access modifiers |
| 32 | Dispensable- the variable “undo” was never used | Got rid of the variable declaration and initialization |
| 36-62 (Inside constructor) | Bloaters- the constructor had too many initializations for file menu and edit | -Broke menu bar initialization into a method of its own.  -Created file and edit menu using custom class  -Created file and edit’s submenu’s using custom class.  The custom classes have methods that help work easier with adding Jmenu and Jmenu Items. |
| 64-66 | Object Orientaion Abuser-main method was within the object class | Extracted main method to a new drive class |
| 66-97(actionPerformed method) | Bloaters-class was too long. Also variable names too short and uninformative. | -Extracted each behavior; new, save,copy,paste, print,open file, open recent,replace into methods of their own. Called the methods instead of running the code based on received input. Change variable names to more meaningful names.  - Open recent feature had more than 1 command, the command sent in was being interpreted within a method rather than the if else statements |
| Method Inside print method | Lazy code- method call on printable object was hard to read | Made the method a lambda function, since it was called only once, allowing us to immediately call it. |
| 99 | Duplicate code, function called was already returning Boolean. No need of saying ==false | Simplified test condition |
| Past and replace feature | Dispensible-Duplicate code | 2 features were doing the same work, converted the method into a general method called fromClipboard that works for both replace and paste |
| Whole code | Dispensable, missing comments | Added comments for most parts and new implemented features |

**Summary**

The major changes that were made to the SimpleNotePad class

1. Menu Item class- we were repeatedly creating menus, File, Edit and Open recent ( a sub menu). So I thought it would be better to have that as a class of its own. This also allows us to extended our code in the future. Every new feature being added to SNP, will often be added through the menu bar, so having menu items as object ready to use will be advantageous to us when we scale this app.
2. SubMenu item, since we have Menu items, there is a very high chance we will need some sub menus, again, for the same reasons as point 2 above, having this as a class will have us scale our app in the future.
3. For each feature the app has, I created methods for all that each feature does. This allows us to have a much cleaner actionPerfoemed(ActionEvent e) class.
4. Driver class, this class contains the main method, which calls the SimpleNotePad application.
5. Overall, I also added some comments to the code as that makes it easier for a reader to follow through what it actually happening in the code.
6. I also changed quiet a few variable names into more meaningful names.