

Documentation on Offline of File Explorer

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1 Description of Classes

There are in total ten classes in my offline. Short description of the classes is given below.

1.1 Main Class

It is the main class of my offline. There is a bunch of functions in this class. Name of the functions and their operation is given below.

1. **Start(),main():** Start sets the stage of the UI and initializes all the variables. Main is the main function.
2. **buildWholeTree():** It sets the root of the treeView and adds the root files in the tree.
3. **getChildrenOfTreeItem(TreeElement,Treeitem):** It returns the children of given treeItem and inserts them in the tree.
4. **makeChild(VBox,TreeItem):** It sets the VBox as the child of the treeItem.
5. **creteTilePane(TableElement toShow):** adds the children of the Element "toShow" to the tilepane to show in the pane.
6. **selectChoiceBox(),selectTreeItem(),selectTile(),selectTableItem()** performs the work of actionListener of the corresponding element.
7. **showPage(),showTilePane(),showTablePane()** respectively shows the UI of whole page, tileView, TableView.
8. **createTableColumn()** creates the columns (Icon, Name, Size, ModifyDate) of tableView.
9. **getFileListForTable()** gets the children of selected item to show in the tableView.

1.2 Controller

Its just for rearranging the grids of grid pane of the whole page and controls the sample.fxml file.It has no function.

1.3 ElementToTile

The purpose of the class is to create a single tile for inserting in the tile pane.It's single function **getSingleTile()** gets a tableItem as input and returns a tile to the caller.

1.4 FactoryFile

The one and only purpose of this class is to return two different objects of different classes inheriting a common class depending on the input.It has Two functions.**getFactoryForTree(File)** takes a file as input and returns a folder or file item for tree depending on if the file is a directory or not .**getFactoryForTable(File)** does the same for tableView.

1.5 TableElement

It is an abstract class for single table element containing abstract method **setChildren()**.and other functions are **getChildren()** and setters, getters for **Name,Image,Size,ModifyDate**.

1.6 TableFile

This class is for file tableItem.It extends TableElement and implements method **setChildren()** and assign children to null.

1.7 TableFolder

This class is for folder tableItem.It extends TableElement and implements method **setChildren()** and assign children files to the folder.

1.8 TreeElement

It is an abstract class for single treeItem containing abstract methods **setChildren()**,**setIconImage()**.and other functions are **getChildren()** and **getItemTree()** which returns the elements in HBox.

1.9 TreeItemFolder

This class is for file treeItem.It extends TreeElement and implements the methods **setChildren()**,**setIconImage()** sets the children of folder and the icon-Image of a folder.

1.10 TreeItemFile

This class is for folder treeItem. It extends TreeElement and implements the methods **setChildren()**, **setIconImage()** sets the children to null and the icon-Image of a file.

2 Used Design Pattern

I used three design patterns in my offline. The names of the patterns and the corresponding classes are given below

- **Factory Pattern:** FactoryFile.
- **Composite Pattern:** Java File Class, TreeElement, TableElement.
- **Adapter Pattern:** ElementToTile.

These classes implement the three above mentioned design patterns covered in our class.