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| MainScreen | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| cpObject | CompareProcess |  | Reference to the compare process |
| **Methods** | | | |
| **Method Name** | **registerObjects** | Scope | private |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **show** | Scope | public |
| Return | Return Type | Description | |
| N/A | None | Displays menu option for user interaction | |
| Parameter | Type | Default Value | |
| N/A | None |  | |
| **Method Name** | **btnOpenFolder1ActionPerformed** | Scope | private |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| evt | java.awt.event.ActionEvent |  | |
| **Method Name** | **btnOpenFolder2ActionPerformed** | Scope | private |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| evt | java.awt.event.ActionEvent |  | |
| **Method Name** | **btnCompareActionPerformed** | Scope | private |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| evt | java.awt.event.ActionEvent |  | |
| **Method Name** | **btnCancelActionPerformed** | Scope | private |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| evt | java.awt.event.ActionEvent |  | |
| **Method Name** | **checkTheSameFolders** | Scope | private |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| numFolder | int |  | |

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| CompareProcess | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| rFolder1 | RegisteredFolder |  | Reference to the registered folder |
| rFolder2 | RegisteredFolder |  | Reference to the registered folder |
| finalResult | Result |  | Reference to the  final result |
| cmpT | CompareThread |  | Reference to the compare thread |
| lstObjGUI | Object[] |  | Store the list of object |
| lstKS | HashMap<String,Controller> |  | Reference to the map of <String,Controller> |
| **Methods** | | | |
| **Method Name** | **registerControllers** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| kSObject | Controller | N/A | |
| **Method Name** | **chooseFolder1** | Scope | public |
| Return | Return Type | Description | |
| N/A | boolean |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **chooseFolder2** | Scope | public |
| Return | Return Type | Description | |
| N/A | boolean |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **compare** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **cancelCompare** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **emptyListFilesInFolder** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| num | int | N/A | |
| **Method Name** | **getMapFinalResult** | Scope | public |
| Return | Return Type | Description | |
| N/A | HashMap<String,List<File[]>> |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **setMapFinalResult** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| lstNew | HashMap<String,List<File[]>> | N/A | |
| **Method Name** | **getSizeMinFolder** | Scope | public |
| Return | Return Type | Description | |
| N/A | int |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **setSizeMinFolder** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| size | int | N/A | |
| **Method Name** | **setConfig** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| num | int | N/A | |

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| DetailScreen | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| header | String[] |  | Store the header of the Detail Screen |
| **Methods** | | | |
| **Method Name** | **DetailScreen** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| header | String[] | N/A | |
| dataFiles | HashMap<String,List<File[]>> | N/A | |

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| RegisteredFolder | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| folder | File |  | Reference to the file |
| lstFiles | List<File> |  | Store the list of files |
| **Methods** | | | |
| **Method Name** | **setLstFiles** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| lstFiles | List<File> | N/A | |
| **Method Name** | **getLstFiles** | Scope | public |
| Return | Return Type | Description | |
| lstFiles | List<File> |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **getFolder** | Scope | public |
| Return | Return Type | Description | |
| folder | File |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **setFolder** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| folder | File | N/A | |

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| Controller | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| cpObject | CompareProcess |  | Reference to the compare process |
| nameController | String |  | Reference to the name of controller |
| **Methods** | | | |
| **Method Name** | **getNameController** | Scope | public |
| Return | Return Type | Description | |
| N/A | String |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |

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| ScanFolderController | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| fComponent | IFolderController |  | Reference to the folder controller |
| **Methods** | | | |
| **Method Name** | **openFolder** | Scope | public |
| Return | Return Type | Description | |
| N/A | boolean |  | |
| Parameter | Type | Default Value | |
| num | int | N/A | |
| **Method Name** | **getListFile** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **getCurrentFolder** | Scope | public |
| Return | Return Type | Description | |
| N/A | File |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **findSizeMinFolder** | Scope | private |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |

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| CompareController | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| cmpComponent | IComparator |  | Reference to the interface IComparator |
| **Methods** | | | |
| **Method Name** | **doComparing** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |

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| CriterionController | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| logs | ArrayList |  | Store the list of logs |
| lstCriterions | HashMap<String, ICriterion> |  | Store the list of criterions |
| **Methods** | | | |
| **Method Name** | **registerCriterion** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| crt | IDetailCriterion | N/A | |
| **Method Name** | **checkCriterion** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **setCriterion** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| num | int | N/A | |

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| DisplayController | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| Rs | Result |  | Reference to the result of compare process |
| **Methods** | | | |
| **Method Name** | **displayStatus** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| message | String | N/A | |
| **Method Name** | **displayResult** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **displayInfo** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **enableDetail** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **setEnableCancel** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| enable | boolean | N/A | |

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| CompareThread | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| t | Thread |  | Reference to the thread |
| fdC | ScanFolderController |  | Reference to the scan controller |
| cmpC | CompareController |  | Reference to the compare controller |
| ctrC | CriterionController |  | Reference to the criterion controller |
| dspT | DisplayThread |  | Reference to the display thread |
| **Methods** | | | |
| **Method Name** | **run** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **start** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **stop** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |

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| DisplayThread | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| t | Thread |  | Reference to the thread |
| dsp | DisplayController |  | Reference to the display controller |
| **Methods** | | | |
| **Method Name** | **run** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **triggerNotify** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |
| **Method Name** | **start** | Scope | public |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |

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| Result | | | |
| **Attributes** | | | |
| Name | Type | Initialize | Description |
| newerFolder | String |  | Reference to the folder result |
| newerPathFolder | String |  | The path of newer folder |
| logs | List<String> |  | Reference to list logs |
| pathFolder1 | String |  | Path of the folder 1 |
| pathFolder2 | String |  | Path of the folder 2 |
| numFileOfFolder1 | Int |  | Number of files in folder 1 |
| numFileOfFolder2 | Int |  | Number of files in folder 2 |
| numSameFile | Int |  | Number of same files in 2 folder |
| sizeMinFolder | Int |  | Size of the folder whose fewer file |
| **Methods** | | | |
| **Method Name** |  | Scope |  |
| Return | Return Type | Description | |
| N/A | None |  | |
| Parameter | Type | Default Value | |
| N/A | None | N/A | |