Association
Inheritance
Realization / Implementation
Dependency

Back End
Package -- backend

Front End
Package -- GUI

Controller

- mainFileSearcher: FileSearcher
- currentDir: String
- mainPictureManager: PictureManager
- extensionPreferences: ArrayList<String>
- log: Log
- availiableTags: Tag
- pictureRecognizer: PictureRecognizer

+ Controller(String currentDir, ArrayList<String> extensionPreferences, String logFileLocation, String tagFileLocation, String pictureManagerFileLocation): void
+ getPictureDataPaths(): ArrayList<String>
+ getDirectory(): String
+ getPrevFileNames(String pictureDir): ArrayList
+ addTagsToPicture(String dataPath, ArrayList<String> tagsToAdd): String
+ addTagToPicture(String dataPath, String tagToAdd): String[]
+ removeTagsFromPicture(String dataPath, ArrayList<String> tagsToRemove): String
+ removeTagFromPicture(String dataPath, String tagToBeRemoved):String[]
+ getLog(): ArrayList<String>
+ changeFileDirectory(String dataPath, String newDir): String
+ changeCurrentDirectory(String newDir): void
+ addToTagList(ArrayList<String> newTags): String
+ removeFromTagList(ArrayList<String> deletedTags): String
+ getAvailableTags(): ArrayList<String>
+ getPictureCurrentTags(String dataPath): ArrayList<String>
+ revertToPrevName(String dataPath, String newName): String
+ getSuggestedTags(String dataPath): ArrayList<String>
+ sortTags(String keyword): void
+ hidePicturesWithoutTag(ArrayList<String> tagsOfInterest): void
+ hideSubdirectoryPictures(): void
+ showHiddenPictures(): void

PictureRecognizer

- apiKey: String
- numOfTags: int

+ PictureRecognizer(String key): void
+ getSuggestions(String datapath): ArrayList<String>
- callApi(String datapath): List<Concept>

SerializableOperator (Uses Serializable)

No instance variables

+ initializeFile(String pathName): boolean
+ createFile(String pathName, boolean deleteOld): void
+ readFile(String pathName): ArrayList<?>
+ saveFile(String pathName, ArrayList<?> objectToSerialize): void

Tags

- tags: ArrayList<String>
- pathName: String

+ Tag(String pathName): void
+ getTags(): ArrayList<String>
+ addTag(String newTag): String
+ removeTag(String deletedTag): String
+ containsTag(String tagToCheck): boolean
+ sortTagsByKeyWord(String keyword): void

«interface»
Serializable

Picture (Implements Serializable)

- dataPath: String
- prevFileNames: ArrayList<String>
- attachedTags: ArrayList<String>
- name: String
- originalName: String

+ Picture(String dataPath): void
+ getPrevFileNames(): ArrayList<String>
+ getAttachedTags(): ArrayList<String>
+ getDataPath(): String
+ getName(): String
+ getOriginalName(): String
+ setName(String newDataPath): void
+ setDataPath(String newDataPath): void
+ addNewPrevFileName(String newPrevFileName): void
+ deletePrevFileName(): void
+ addNewAttahcedTag(String newAttachedTag): void
+ clearAttachedTags(): void
+ removeAttachedTag(String tagToDelete): void
+ extractName(String dataPath): String
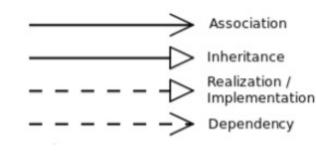
PictureManager (Uses Serializable)

- viewingDir: String
- directoryPictures: ArrayList<Picture>
- allPictures: ArrayList<Picture>
- pathName: String
- hiddenPictures: ArrayList<Picture>

+ PictureManager(String currentDir, ArrayList<String> pictureDataPaths, String pathName): void
+ addTagToPicture(String dataPath, String tagToAdd): boolean
+ removeTagFromPicture(String dataPath, String tagToBeRemoved): boolean
+ changeFileName(String dataPath, String newName): boolean
+ changeActualFileName(String oldPath, String newPath): void
+ getPictureAtDataPath(String dataPath): Picture
+ updateAllPictures(ArrayList<String> dataPaths): void
+ updateDirectoryPictures(): void
+ getAllPictures(): ArrayList<Picture>
+ getDirectoryPictures(): ArrayList<Picture>
+ getViewingDir(): String
+ setViewingDir(String newDir): void
+ changeDirectoryOfPicture(Picture picture, String newDir): String
+ hidePicturesWithoutTags(ArrayList<String> tagsOfInterest): void
+ hideSubdirectoryPictures(): void
+ showHiddenPictures(): void

Log (Uses Serializable)

- logs: ArrayLists<String>
- pathName: String

+ Log(String pathName): void
+ addChange(String prevName, String newName): void
+ logAddedTag(String dataPath, String newName): void
+ logRemovedTag(String dataPath, String newName): void
+ logChangedName(String dataPath, String newName): void
- printLog(): void
+ getLogList(): ArrayList<String>
+ extractFileName(String dataPath): String

FileSearcher

- imageFileTypes: ArrayList<String>
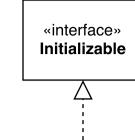
+ FileSearcher(ArrayList<String>imageFileTypes): void
+ getFileNames(String absoluteDir): ArrayList<String>
- isPicture(File file): boolean
- getFileType(File file): String

«interface»
Initializable

GuiLayout (Implements Initializable)
This class connects to our fxml file
and communicates with the controller.

+ dir: StringProperty
+ scrollPane: ScrollPane
+ hbox: HBox
+ bottomButtonHBox: HBox
+ directoryText: Text
+ selectedPictureText: Text
+ bottomLabel: Label
+ existingTagBox: VBox
+ currentTagBox: VBox
+ prevNameBox: VBox
+ logBox: VBox
+ movePicToDirButton: Button
+ changeDirButton: Button
+ addNewTagToListButton: Button
+ addToPicButton: Button
+ deleteButton: Button
+ revertToPrevButton: Button
+ sortButton: Button
+ newPictureDir: TextField
+ newDir: TextField
+ newTagToList: TextField
- gridPane: GridPane
- col: int
- pictureLocations: ArrayList<String>
- selectedPicturePath: StringProperty
- bottomLabelText: StringProperty
- extPrefs: ArrayList<String>
- logFileLocation: String
- tagFileLocation: String
- pictureManagerFileLocation: String
- controller: Controller
- group: ToggleGroup

+ initialize(URL location, ResourceBundle resources): void
+ createAndSetImageViews(): void
+ imageViewClicked(): void
+ generateReturnToGridPaneButton(): void
+ replaceGridPaneWithLargeImage(): void
+ setImagePositionOnGrid(ArrayList<ImageView> imageViews, int maxCols): void
+ openSuggestedTagsWindow: void
+ openInFileBrowser: void
+ hidePicturesWithoutSpecifiedTags: void
+ hideSubdirectoryPictures: void
+ showHiddenPictures: void
+ changeFileDirectory(): void
+ changeCurrentDirectory(): void
+ addNewTagButtonClicked: void
+ addTagsToList: attribute
+ addNewTagToList(): void
+ addToPicClicked(): void
+ existsCheckedItem(VBox box): boolean
+ revertToPrev(): void
+ removeTagsFromPicture(): void
- setImagePositionOnGrid(ArrayList<ImageView> imageViews, int maxCols): void
- createImageView(String imagePath): ImageView
- addImageViewsOnGrid(ArrayList<ImageView> imageViews): void
- displayPictures(): void
- existsCheckedItem(VBox box): boolean
- removeTagsFromExistingTags(): void
- updateGridPane(): void
- updateLog(): void
- updateExistingTagView(): void
- updateCurrentTagView(): void
- updatePrevNameView(): void
- updateAll(): void

«abstract»
Application

Extends

Main
The main method in this class
will start the GUI

+ start(Stage primaryStage): void
+ main(String[] args): void
- getDirFromChooser(Stage stage): String

SuggestedTagsController

+ vbox: VBox
+ topText: Label
- GuiLayout: guiLayoutController
- StringProperty: topTextString

+ addSelectedTags(): void
# setSuggestedTags(ArrayList<String> suggestedTags): void
# setGuiLayoutController(GuiLayout g): void