

Color Key
black=existing
blue=modified
green=new
gray=Java library

```
+NewsDataBaseModel  
-serialVersionUID: long  
-actionListenerList: ArrayList<ActionListener>  
-newsSourceMap: Map<String, String>  
-newsTopicMap: Map<String, String>  
-newsSubjectMap: Map<String, String>  
-none: NewsMakerModel  
-newsMakerListModel: NewsMakerListModel  
-newsStoryListModel: NewsStoryListModel  
+NewsDataBaseModel()  
+NewsDataBaseModel(newsMakerListModel: NewsMakerListModel,  
newsStoryListModel: NewsStoryListModel)  
+getNewsSourceMap(): Map<String, String>  
+getNewsSources(): String[]  
+setNewsSourceMap(newsSourceMap: Map<String, String>): void  
+getNewsTopicMap(): Map<String, String>  
+getNewsTopics(): String[]  
+setNewsTopicMap(newsTopicMap: Map<String, String>): void  
+getNewsSubjectMap(): Map<String, String>  
+getNewsSubjects(): String[]  
+setNewsSubjectMap(newsSubjectMap: Map<String, String>): void  
+newsMakerListIsEmpty(): boolean  
+containsNewsMakerModel(newsMakerModel: NewsMakerModel): boolean  
+getNewsMakerListModel(): NewsMakerListModel  
+getNewsMakerNames(): String[]  
+getNewsMakers(): DefaultListModel<NewsMakerModel>  
+setNewsMakerListModel(newsMakerListModel: NewsMakerListModel): void  
+addNewsMakerModel(newsMakerModel: NewsMakerModel): void  
+replaceNewsMakerModel(newsMakerModel: NewsMakerModel): void  
+removeNewsMakers(newsMakers: DefaultListModel<NewsMakerModel>): void  
+removeAllNewsMakers(): void  
+sortNewsMakerListModel(): void  
+newsStoryListIsEmpty(): boolean  
+containsNewsStory(newsStory: NewsStory): boolean  
+getNewsStoryListModel(): NewsStoryListModel  
+getNewsStories(): DefaultListModel<NewsStory>  
+setNewsStoryListModel(newsStoryListModel: NewsStoryListModel): void  
+setNewsStoryListModelFromArray(newsStoryModelArray: NewsStory[]): void  
+addNewsStory(newsStory: NewsStory): void  
+removeNewsStories(newsStories: DefaultListModel<NewsStory>): void  
+removeAllNewsStories(): void  
+addActionListener(l: ActionListener): void  
+removeActionListener(l: ActionListener): void  
+processEvent(e: ActionEvent): void
```

```
+NewsMakerListModel  
-serialVersionUID: long  
-newsMakerDefaultListModel: DefaultListModel<NewsMakerModel>  
+NewsMakerListModel()  
+NewsMakerListModel(newsMakerListModel: NewsMakerListModel)  
+isEmpty(): boolean  
+size(): int  
+contains(newsMakerModel: NewsMakerModel): boolean  
+get(newsMakerModel: NewsMakerModel)  
+getExactMatch(newsMakerName: String)  
+getPartialMatch(newsMakerName: String)  
+getNewsMakers(): DefaultListModel<NewsMakerModel>  
+get(int): NewsMakerModel  
+getNewsMakerNames(): String[]  
+add(newsMakerModel: NewsMakerModel): void  
+replace(newsMakerModel: NewsMakerModel): void  
+remove(newsMakerModel: NewsMakerModel): void  
+removeList(newsMakers: DefaultListModel<NewsMakerModel>): void  
+removeAllNewsMakers(): void  
+setNewsMakersFromNewsMakerList(newsMakerListModel: NewsMakerListModel): void  
+sort(): void
```

```
+NewsMakerModel  
-serialVersionUID: long  
-actionListenerList: ArrayList<ActionListener>  
-name: String  
-newsStoryListModel: NewsStoryListModel  
+NewsMaker()  
+NewsMaker(name: String)  
+getName(): String  
+getNewsStoryListModel(): NewsStoryListModel  
+addNewsStory(newsStory: NewsStory): void  
+setName(String): void  
+setNewsStoryListModel(newsStoryListModel: NewsStoryListModel): void  
+removeNewsStory(newsStory: NewsStory): void  
+equals(o: Object): boolean  
+compareTo(newsMaker: NewsMaker): int  
+toString(): String  
+addActionListener(ActionListener)  
+removeActionListener(ActionListener)  
+processEvent(ActionEvent)
```

```
+NewsStoryListModel  
-serialVersionUID: long  
-newsStories: DefaultListModel<NewsStory>  
+NewsStoryListModel()  
+NewsStoryListModel(newsStoryListModel: NewsStoryListModel)  
+isEmpty(): boolean  
+size(): int  
+contains(newsStory: NewsStory): boolean  
+get(index: int): NewsStory  
+getNewsStories(): DefaultListModel<NewsStory>  
+add(newsStory: NewsStory): void  
+remove(newsStory: NewsStory)  
+removeList(newsStories: DefaultListModel<NewsStory>)  
+setNewsStories(newsStoryListModel: NewsStoryListModel): void  
+setNewsStoriesFromArray(newsStoryModelArray: NewsStory[]): void
```

```
+NewspaperStory  
-serialVersionUID: long  
NewspaperStory(date: LocalDate,  
source: String, length: int,  
topic: String, subject: String,  
partOfDay: PartOfDay,  
newsMaker1: NewsMakerModel,  
newsMaker2: NewsMakerModel)  
+getLengthInWords(): int
```

```
+TVNewsStory  
-serialVersionUID: long  
-partOfDay: PartOfDay  
TVNewsStory(date: LocalDate,  
source: String, length: int,  
topic: String, subject: String,  
partOfDay: PartOfDay,  
newsMaker1: NewsMakerModel,  
newsMaker2: NewsMakerModel)  
+getLengthInWords(): int  
+getPartOfDay(): PartOfDay  
+equals(o: Object): boolean
```

```
+OnlineNewsStory  
-serialVersionUID: long  
-partOfDay: PartOfDay  
OnlineNewsStory(date: LocalDate,  
source: String, length: int,  
topic: String, subject: String,  
partOfDay: PartOfDay,  
newsMaker1: NewsMakerModel,  
newsMaker2: NewsMakerModel)  
+getLengthInWords(): int  
+getPartOfDay(): PartOfDay  
+equals(o: Object): boolean
```

```
+NewsStory  
-serialVersionUID: long  
-date: LocalDate  
-source: String  
-length: int  
-topic: String  
-subject: String  
-newsMaker1: NewsMakerModel  
-newsMaker2: NewsMakerModel  
#NewsStory(date: LocalDate, source: String, length: int,  
topic: String, subject: String,  
newsMaker1: NewsMakerModel,  
newsMaker2: NewsMakerModel)  
+getDate(): LocalDate  
+getSource(): String  
+getLengthInWords(): int  
+getTopic(): String  
+getSubject(): String  
+getNewsMaker1(): NewsMakerModel  
+getNewsMaker2(): NewsMakerModel  
+setDate(date: LocalDate)  
+setSource(source: String)  
+setLength(length: int)  
+setTopic(topic: String)  
+setSubject(subject: String)  
+setNewsMaker1(newsMaker1: NewsMakerModel)  
+setNewsMaker2(newsMaker2: NewsMakerModel)  
+equals(o: Object): boolean  
+compareTo(newsStory: NewsStory): int
```

```
«enumeration»  
+PartOfDay  
MORNING  
AFTERNOON  
EVENING  
LATE_NIGHT  
+toString(): String
```

```
«enumeration»  
+NewsMetric  
LENGTH  
COUNT  
+toString(): String
```

```
«enumeration»  
+SortCriterion  
SOURCE  
TOPIC  
SUBJECT  
LENGTH  
DATE_TIME  
+toString(): String
```

```
«enumeration»  
+NewsContent  
NEWSPAPER  
ONLINE  
TV  
+VALUES_LIST: List<NewsMedia>  
+toString(): String  
+valuesAsList(): List<NewsMedia>
```

```
«interface»  
Serializable
```

```
«interface»  
Comparable<T>  
+compareTo(o: T): int
```

```
«interface»  
ActionListener  
+actionPerformed(e: ActionEvent): void
```

```
«interface»  
Comparator<T>  
+compareTo(o1: T, o2: T): int
```

```
+PieChartView  
-pieChart: PieChart  
-newsMakerModel: NewsMakerModel  
-media: String  
-content: String  
-measure: String  
+PieChartView(newsMakerModel: NewsMakerModel,  
media: String, content: String, measure: String)  
-constructTitle(): String  
-constructWedges(): List<Wedge>  
+actionPerformed(actionEvent: ActionEvent): void
```

```
+PieChart  
-title: String  
-wedges: List<Wedge>  
+PieChart(String title,  
List<Wedge> wedges)  
+setTitle(String): void  
+setWedges(List<Wedge>): void  
+paintComponents(Graphics): void
```

```
+Wedge  
-double percent  
-text String  
+Wedge(percent: double,  
text: String)  
+getPercent(): double  
+setPercent(percent: double): void  
+getText(): String  
+setText(text: String): void
```

```
+TextView  
-jFrame: JFrame  
-newsMakerModel: NewsMakerModel  
-newsMedia: List<NewsMedia>  
-sortCriteria: List<SortCriterion>  
-listOfStories: String  
-summaryLine: String  
-jTextArea: JTextArea  
-jScrollPane: JScrollPane  
-jSummaryLine: JTextArea  
+TextView(newsMakerModel: NewsMakerModel,  
newsMedia: List<NewsMedia>,  
sortCriteria: List<SortCriterion>)  
-constructNewsStoriesAndSummary()  
-constructTitle()  
-actionPerformed(ActionEvent)
```

```
+EditNewsMakerView  
-jFrame: JFrame  
-newsMakerModel: NewsMakerModel  
-newsMedia: List<NewsMedia>  
-sortCriteria: List<SortCriterion>  
-listOfStories: String  
-summaryLine: String  
-jTextArea: JTextArea  
-jScrollPane: JScrollPane  
-jSummaryLine: JTextArea  
+EditNewsMakerView(newsMakerModel: NewsMakerModel,  
newsMedia: List<NewsMedia>,  
sortCriteria: List<SortCriterion>)  
-constructNewsStoriesAndSummary()  
-constructTitle()  
-actionPerformed(ActionEvent)
```

```
+MediaTypeSelectionView  
-serialVersionUID: long  
-newsPaper: JCheckBox  
-newsTV: JCheckBox  
-newsOnline: JCheckBox  
-mediaType: JLabel  
-jButton: JButton  
-jCancelButton: JButton  
-jOkButton: JButton  
-jCompletionButtons: JPanel  
-jMediaPanel: JPanel  
+MediaTypeSelectionView()
```

```
NoozFileProcessor  
-serialVersionUID: long  
-newsMakers: NewsMakerListModel  
-newsStories: NewsStoryListModel  
-newsDataBase: NewsDataBaseModel  
+readNoozFile(fileName: String, sourceMap: Map<String, String>,  
topicMap: Map<String, String>, subjectMap: Map<String, String>): NewsDataBaseModel  
+writeNewsToFile(fileName: String, listOfStories: List<NewsStory>): void  
-processLine(line: String, sourceMap: Map<String, String>,  
topicMap: Map<String, String>, subjectMap: Map<String, String>): void  
-decodeDate(dateString: String): LocalDate  
-decodeLength(lengthString: String): int  
-decodeNewsMakerName(parts: String[], startIndex: int): String  
-decodePartOfDay(partOfDayCode: String): PartOfDay
```

```
CodeFileProcessor  
-codeMap: Map<String, String>  
+readCodeFile(fileName: String): Map<String, String>
```

```
NoozDriver  
-newsDataBaseModel: NewsDataBaseModel  
-selectionView: SelectionView  
-newsController: NewsController  
+main(args: String[]): void
```

```
+SelectionView  
-serialVersionUID: long  
-newsDataBaseModel: NewsDataBaseModel  
-jMenuBar: JMenuBar  
-jmFile: JMenuItem  
-jmLoad: JMenuItem  
-jmSave: JMenuItem  
-jmImport: JMenuItem  
-jmExport: JMenuItem  
-jmNewsMaker: JMenuItem  
-jmAddNewsMaker: JMenuItem  
-jmEditNewsMaker: JMenuItem  
-jmDeleteNewsMaker: JMenuItem  
-jmPieChart: JMenuItem  
-jmText: JMenuItem  
-jNewsMakerList: JList<NewsMakerModel>  
-jspNewsMakerList: JScrollPane  
-jpNewsMakerList: JPanel  
-jNewsStoryList: JList<NewsStory>  
-jspNewsStoryList: JScrollPane  
-jpNewsStoryList: JPanel  
-splitPane: JSplitPane  
+SelectionView()  
+registerFileMenuListener(  
fileMenuListener: ActionListener): void  
+registerNewsMakerMenuListener(  
newsMakerMenuListener: ActionListener): void  
+registerNewsStoryMenuListener(  
newsStoryMenuListener: ActionListener): void  
+registerDisplayMenuListener(  
displayMenuListener: ActionListener): void  
+setNewsDataBaseModel(  
newsDataBaseModel: NewsDataBaseModel): void  
+actionPerformed(actionEvent: ActionEvent): void  
+getSelectedNewsMakers(): int[]  
+getSelectedNewsStories(): int[]
```

```
+AddEditNewsStoryView  
-serialVersionUID: long  
-newsDataBaseModel: NewsDataBaseModel  
-newsStoryModel: NewsStoryModel  
-jLabel: JLabel  
-jcbNewsStoryType: JComboBox<NewsStoryType>  
-jpNewsStoryType: JPanel  
-jlbNewsStorySource: JLabel  
-jcbNewsStorySource: JComboBox<String>  
-jpNewsStorySource: JPanel  
-jlbNewsStoryTopic: JLabel  
-jcbNewsStoryTopic: JComboBox<String>  
-jpNewsStoryTopic: JPanel  
-jlbNewsStorySubject: JLabel  
-jcbNewsStorySubject: JComboBox<String>  
-jpNewsStorySubject: JPanel  
-jlbNewsStoryNewsMaker1: JLabel  
-jcbNewsStoryNewsMaker1: JComboBox<String>  
-jpNewsStoryNewsMaker1: JPanel  
-jlbNewsStoryNewsMaker2: JLabel  
-jcbNewsStoryNewsMaker2: JComboBox<String>  
-jpNewsStoryNewsMaker2: JPanel  
-jlbNewsStoryLength: JLabel  
-jcbNewsStoryLength: JComboBox<Integer>  
-jpNewsStoryLength: JPanel  
-jlbNewsStoryYear: JLabel  
-jcbNewsStoryYear: JComboBox<Integer>  
-jpNewsStoryYear: JPanel  
-jlbNewsStoryMonth: JLabel  
-jcbNewsStoryMonth: JComboBox<Month>  
-jpNewsStoryMonth: JPanel  
-jlbNewsStoryDay: JLabel  
-jcbNewsStoryDay: JComboBox<Integer>  
-jpNewsStoryDay: JPanel  
-jlbNewsStoryPartOfDay: JLabel  
-jcbNewsStoryPartOfDay: JComboBox<PartOfDay>  
-jpNewsStoryPartOfDay: JPanel  
-jlbNewsStoryWhen: JLabel  
-jbtAddEditNewsStory: JButton  
-jpdAddEditNewsStory: JPanel  
+AddEditNewsStoryView(newsDataBaseModel:  
NewsDataBaseModel,  
newsStoryModel: NewsStoryModel)
```

```
+NewsController  
-newsDataBaseModel: NewsDataBaseModel  
-selectionView: SelectionView  
-editNewsMakerView: EditNewsMakerView  
-viewDialog: JDialog  
-addEditNewsStoryView: AddEditNewsStoryView  
-editedNewsStory: NewsStory  
-mediaTypeSelectionView: MediaTypeSelectionView  
-selectedMediaTypes: List<NewsMedia>  
+NewsController()  
+setNewsDataBaseModel(newsDataBaseModel: NewsDataBaseModel): void  
+setSelectionView(selectionView: SelectionView): void  
+loadNewsData(): void  
+saveNewsData(): void  
+importNoozStories(): void  
+exportNewsStories(): void  
+addNewsMaker(): void  
+editNewsMakers(): void  
+deleteNewsMakers(): void  
+deleteNewsMakerList(): void  
+addNewsStory(): void  
+editNewsStories(): void  
+sortNewsStories(): void  
+deleteNewsStories(): void  
+deleteAllNewsStories(): void  
+displayPieCharts(): void  
+displayTextViews(): void
```

```
-FileMenuListener  
+actionPerformed(actionEvent: ActionEvent): void  
-NewsMakerMenuListener  
+actionPerformed(actionEvent: ActionEvent): void  
-NewsStoryMenuListener  
+actionPerformed(actionEvent: ActionEvent): void  
-DisplayMenuListener  
+actionPerformed(actionEvent: ActionEvent): void  
+EditNewsMakerNameListener  
+actionPerformed(actionEvent: ActionEvent): void  
+RemoveNewsMakerFromNewStoriesListener  
+actionPerformed(actionEvent: ActionEvent): void  
+AddEditNewsStoryListener  
+actionPerformed(actionEvent: ActionEvent): void  
+MediaTypeSelectionListener  
+actionPerformed(actionEvent: ActionEvent): void
```