
ModelColle<T, K>
collection : T[]
getSize(): boolean
addToCollection(element: T, param: String): boolean //Create
removeFromCollection(key: K): boolean //Delete
removeFromCollection(int index): boolean //Delete
searchCollection(key: K): T //Read
indexOf(key: K) : int
initializeCollection(): void
getKey(T item): K
matchKey(K k1, K k2): boolean
Notes:
Collection is a generic abstract class that capture the similar behavior between Automobile and OptionSet classes.
Add methods only works when the element to be added does not exist in collection.
Remove methods only works when the element to be removed already exist in the collection.
Update methods only work when the element to be updated already exist in the collection.
Extends
OptionSet extends Collection<Option, String>
- name: String
- selectedOp: Option
setName(name: String): void
getName(): String
strRepresentation(): String
//Collection's Abstract Methods
initializeCollection(): void
getKey(Option item): String
matchKey(String k1, String k2): boolean
//CREATE &DELETE Option
addOption(optName:String, optPrice: String): boolean
removeOption(optName:String): boolean
//UPDATE Option
updateOption(optName:String, newName:String, newPrice:Double): boolean
updateOptionName(optName:String, newName:String): boolean
updateOptionPrice(optName:String, newPrice:Double): boolean
setSelectedOption(String name): boolean
//READ Option
getOptionPrice(optName:String): Double
getOptionToStr(optName:String): String
getSelectedOption(): Option
//READ MULTIPLE Option
getAllOptionAsStrArray(): String[][]
getAllOptionName(): String[]
getAllOptionPrice(): Double[]
Option
- name: String
- price: double
setName(name: String): void
setPrice(price: double): void
getName(): String
getPrice(): double
strRepresentation(): String
Extends
SelectedOptionSet extends OptionSet
- optSetLabels: ArrayList<String>
addSelectedOption(String optSet, Option opt): boolean
removeSelectedOption(String optSet): boolean
removeAllSelectedOption(): void
setOptSetLabel(String currentName, String newName) void
setSelectedOption(String optSet, Option): void
getSelectedOption(String optSet): Option
getAllSelectedOpName(): String[]
getAllSelectedOpPrice(): Double[]
sumOfAllSelectedOpPrice(): Double
strRep(): String
Automobile extends Collection<OptionSet, String>
- model: String
- basePrice: Double
- selectedOps: SelectedOptionSet
+ setModel(model: String): void
+ setBasePrice(basePrice: String): void
+ getModel(): String
+ getBasePrice(): Double
+ toString(): String
+ strRepSelectedOps(): String
//Collection's Abstract Methods
initializeCollection(): void
getKey(OptionSet item): String
matchKey(String k1, String k2): boolean
//CREATE &DELETE OptionSet
+ addOptionSet(name: String, size: int): boolean
+ removeOptionSet(name: String): boolean
+ removeAllOptionSet: boolean
//UPDATE OptionSet
+ updateOptionSetName(currentName: String, newName: String): boolean
+ updateOptionSetSize(name: String, newSize: int): boolean
//READ OptionSet
+ getNumOfOptionSet(): int
+ getOptionSetSize(name: String): int
+ getOptionSetToStr(name: String): String
//READ MULTIPLE OptionSet
+ getAllOptionSetName(): String[]
+ getAllOptionSetSize(): int[]
//CREATE &DELETE Option
+ addOptionTo(optSetName: String, optName:String, optPrice: String): boolean
+ removeOptionFrom(optSetName: String, optName:String): boolean
+ removeAllOptionFrom(optSetName: String): boolean //Delete
//UPDATE Option
+ updateOption(optSetName: String, optName:String, newName:String, newPrice:Double): boolean
+ updateOptionName(optSetName: String, optName:String, newName:String): boolean
+ updateOptionPrice(optSetName: String, optName:String, newPrice:Double): boolean
//READ Option
+ getOptionAsStrArray(optSetName: String, optName:String): String[]
+ getOptionPrice(optSetName: String, optName:String): Double
+ getOptionToStr(optSetName: String, optName:String): String
//READ MULTIPLE Option
+ getAllOptionAsStrArray(optSetName: String): String[][]
+ getAllOptionName(optSetName: String): String[]
+ getAllOptionPrice(optSetName: String): Double[]
//SelectedOptions
+ getSelectedOption(String optSetName, String optName): boolean
+ getSelectedOptionName(String optSetName): String
+ getSelectedOptionPrice(String optSetName): Double
+ getAllSelectedOpName(): String[]
+ getAllSelectedOpPrice(): Double[]
+ getTotalPrice(): Double
AutoSet<X extends Automobile>
AutoColle: LinkedHashMap<String, X>
+ addAutomobile(X car): boolean
+ removeAutomobile(String key): void
+ clear(): void
+ getAutomobile(String key): X
+ getStrRepOf(String key): String
+ strRep(): String
UpdateAuto (Interface)
+ updateOptionSetName(String currentName, String newName): void
+ updateOptionPrice(String optSet, String opt, Double newPrice): void
+ updateSelectedOption((String model, String optSet, String opt) : void
CreateAuto (Interface)
+ buildAuto(String fileName) throws AutoException: void
PrintAuto (Interface)
+ printAuto(String model) : void
+ printAllAuto() : void
+ printAllSelectedOpts(String model) : void
kbbFacade
Extends
ProxyAutomobile
- autoContainer : AutoColle
+ buildAuto(String fileName) throws AutoException: void
+ updateOptionSetName(String currentName, String newName): void
+ updateOptionPrice(String optSet, String opt, Double newPrice): void
+ updateSelectedOption((String model, String optSet, String opt) : void
+ printAuto(String model) : void
+ printAllAuto() : void
+ printAllSelectedOpts(String model) : void
+ strRepresentation(String model): String
- available(): boolean
FileIO
+ buildAutoObject(fileName: String): Automobile
+ serializeObject(Object obj, String fileName): void
+ deserializeObject(String fileName): Object
+ findFromExceptionFile(String fileName, int errorno): String
+ writeToEndOfFile(String fileName, String content): void
AutoParser
- KEYTERM: String[]
- SUPPORTED_FILEEXT: String
- ifileName: String
- strEditor: AutoRegex
- lookuptable: Map<String, String>
- optsetlookup: Hashtable<String, String[]>
+ buildAutoObject(fileName: String): Automobile
+ validFileType(fileName: String): boolean
# fillLookUpTable(): void
/*Helper Function*/
- setInputFile(fileName: String): boolean
- checkFileHeader(String line): boolean
- fillOptSetLookUpKeys(): void
- addOptToOptSet(String[] optSet, String pairStr): boolean
- allCompulsoryFieldKeyPresent(): boolean
- allCompulsoryFieldsPresent(): boolean
Notes:
- the lookuptable is not for directly storing each of the file
- Both lookuptable and optsetlookup are use for sorting information for the nested nature of Automobile data.
- KEYTERM contains all special word that are used in the input file
- fillLookUpTable() method sort information from each line of the file to the 2 temporary containers
- buildAutoObject() will take all necessary information from the 2 containers to build the Automobile object.
- buildAutoObject() will act as the key method to interact with other object.
- The separation between fillLookUpTable() and buildAutoObject() will improve the reusability of code when a new file type is introduced because they only need to override fillLookUpTable() method.
AutoRegex
- compulsoryLineRegex: Pattern
- assignmentRegex: Pattern
- parenthesisRegex: Pattern
- setNotationRegex: Pattern
- m: Matcher
+ isCompulsoryLine(line: String): boolean
+ removeParenthesis(line: String): String
+ removeSetNotation(line: String): String
+ getAssignmentOperands(line: String): String[]
+ getAllSetElement(line: String): String[]
+ splitNTrimCommaSepStr(line: String): String[]
AutoException Interface
- eFileName: String
- eLogFileName: String
- errorNo: int
- errorName: String
- extraNote: String
- timeStamp: Timestamp
+ setErrorNo(int errorno): boolean
+ getErrorNo(): int
+ getErrorName(): String
+ getErrorNotes(): String
+ fix(): Object
- setErrorName(): void
- initToNonSpecified(): void
- initExceptionFields(int errorNo): boolean
- log(): void
UtilExceptionSolution implements Fixable
- sc: Scanner
- e: AutoException
+ getSolution(int errorNo): Object
+ fixFileNotFoundException(): String
+ fixImproperFileFormatException(): void
+ fixFileTypeNotSupportedException(): void
+ fixPriceFormatException(): String
+ fixItemNotFoundException(): void
Fixable interface
+ getSolution(int errorNo): Object