Java-Additional-Assignments

5. Create a class with a method which can remove all the elements from a list other than the collection of elements specified.

Class Name	ListManager
Method Name	removeElements
Method Description	Remove all the elements from a list other than the collection of elements specified.
Argument	List<String> list1, List<String> list2;
Return Type	List- ArrayList contains the resulting List after the removal process.
Logic	Accept two List objects list1 and list2 and remove all the elements from list 1 other than the elements contained in list2.This should be done in single step process without using loop.

6. Create a class that can accept an array of String objects and return them as a sorted List

Class Name	ListManager
Method Name	getArrayList
Method Description	Converts the String array to ArrayList and sorts it
Argument	String []elements
Return Type	List- ArrayList containing the elements of the String array in sorted order
Logic	Load the elements in to an ArrayList and sort it.

7. Create a method that returns collection that contain only unique String object in the sorted order.

Class Name	UniqueCollection
Method Name	getCollection
Method Description	Accepts a String array and load the elements into a collection that can hold only unique element in a sorted order.
Argument	String []elements
Return Type	Interface type of the Collection used
Logic	Accept a String array, convert it to a collection of unique elements stored in sorted order and return the results.

8. Create a class which accepts a HashMap and returns the keys in the Map

Class Name	MapManager
Method Name	getKeys
Method Description	Returns the keys in the hasp map
Argument	HashMap
Return Type	Set
Logic	Retrieve the keys in hash map and return the set of keys

9.

Create a class method which throws an AgeLimitException when an invalid age is entered as argument.

Class Name	AgeValidator
Method Name	validateAge
Method Description	Accepts an age and if the age is less than 18 throw an AgeLimitException
Argument	int age
Return Type	Void
Logic	Accepts an age if the age is less than 18 Throw an AgeLimitException

Create a class which accepts a number choice and returns the Month of the year. If the entered number is greater than 12 or less than 1 throw InvalidChoiceException. If the entered option is not a number throw NotANumberException.

Cass Name	CalculateMonth
Method Name	getMonth
Method Description	Accepts a user choice and return the month based on the choice
Argument	int option
Return Type	String : Month
Logic	Accepts a number from the user and returns the Month associated with it . For example 1 : January 2:February Etc If the entered number is greater than 12 or less than 1 throw InvalidChoiceException.If the entered option is not a number throw NotANumberException.

- Create a class that performs the conversion between data type values.

Class Name	TypeConvertor
Method Name	binaryToLong
Method Description	Converts the binary number to Long object
Argument	String binaryNumber
Return Type	Long – Long Equivalent of the binaryNumber
Logic	Convert the binary to Long using the appropriate APIs
Method Name	stringToInteger
Method Description	Converts the string to an integer
Argument	String integerValue
Return Type	int – Integer Values
Logic	Convert the string to integer using the appropriate APIs