GasStation Starting in Part 2 Gas Station can just be any location

-point: Point2D (is also the ID?)

-brand: String

-distanceFromCurrentLocation: double

-isMarked: boolean -numbered: int

+GasStation()

+GasStation(point Point2D, brand String, boolean)

+clone(): GasStation

+setPoint(point Point2D): void +setBrand(brand String): void

+setDistanceFromCurrentLocation(distanceFromCurrentLo

cation, double): void

+setMarked(marked, boolean): void +setNumbered(numbered, int):void (getters left out for breivity)

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Point2D

-x: double -y: double

+SmallForm()+MyPoint()

+Point2D(x, y)

+setX(x: double): void +setY(y: double): void +getX(): double

+getY(): double

+distance(point: MyPoint): double +distance(double x, double y): double

+distance(point: Point2d, point2: Point2d): double

+clone(): Point2D

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GasStationList

-list: ArrayList

+GasStationList()

+getListDeepCopy(): ArrayList<GasStation> -- deep copy

-sortVertically(): void -readData(): void

TreeMapFilters

-ratingsTreeMap: TreeMap<String,Integer>

-is24Hours: TreeSet<String>

-counties: AVLTree<KeyValuePair>

-counties2: HashMapLinear<String,String>

+getRatingsTreeMap(): TreeMap<String,Integer>

+getIs24Hours(): TreeSet<String>

+getCountyDataLocationAVLTree():AVLTree<KeyValuePair>

+getCountyDataLocationHashTable(): HashMapLinear<str,str>

+readData(): void

Data data.txt, data2.txt, and data3.txt files

GenericQuickSort

Utility Class only containing static methods

+genericQuickSort(list,ArrayList<E>): void

+genericQuickSort(list,ArrayList<E>, comparator Comparator<? super E>): void

+quickSort(list, ArrayList<E>, first, int, last, int)

+quickSort(list, ArrayList<E>, first, int, last, int, comparator Comparator<? super E>)

+partition(list, ArrayList<E>, first, int, last, int)

+partition(list, ArrayList<E>, first, int, last, int, comparator Comparator<? super E>)

GasStationComparator

+compare(gasStation1, GasStation, gasStation2, GasStation): int

GasStationComparatorDistance

+compare(gasStation1, GasStation, gasStation2, GasStation): int

(continued) SortByClosest

(continued) GasStationList

SortByClosest

Utility Class only containing static methods

+sortByClosest(point Point2D, ratingFilter int, is24Hours boolean): ArrayList<GasStations> +sortByClosest(): ArrayList<GasStations>

View

-currentLocation: Point2D

-ratingFilter: int
-is24Hours: boolean

-getCenterPane(): Pane -getRightPane(): Pane -getLeftPane(): Pane

-getBorderPane(): BorderPane

-repaintLeftCenterPane(): void

+start(): void +main():void

Part 3 added two classes that follow standard algoriths for AVLTree and HashMap(HashMapLinear) (linear open addressing)). Since methods and data fields are standard fare they are left out for breivity.

-See program comments for more info

-These classes are implemented in the TreeMapFilters Class which as of Assignment 3 the TreeMapFilters class is sort of a BST/HashTable Tools Helper class.

Part4 added one class that follow standard algoriths for paralell sorting(ParallelGenericQuickSort). Since methods and data fields are standard fare they are left out for breivity.

-See program comments for more info

-This class is called in the GasStationList class

Help

Utility Class only containing static methods

+about

HelperClass

Utility Class only containing static methods

+getTxtFileAsList():ArrayList<String>

+writeLineToTxtFile(): void

+validatePositiveIntŘange(s, String, x int, y int): int