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| **RMOS** | |
| **Data members**   * status: (OPERATIONAL/DOWN). Default value AVAILABLE. You may use either Strings or enums. * RCMID: String * location: String * duration: int * itemType: String * startTime: Date * finishTime: Date * durationType: (DAY/WEEK): Default value DAY. You may use either Strings or enums. |  |
| **Methods**   * **RMOS()** | * a constructor. |
| * **getStatus (String RCMID**): String | * return operational status of each machine. |
| * **showRCMByStatus(status: enum or String)** | * Shows the list of machine that are operational or down, based on the parameter value. |
| * **getAllRCMStatus:** String | * return operational status for all machines |
| * **getRCMWeight (String RCMID, int duration, String durationType)**: double (default unit: lbs) | * return weight of items collected in a specific duration: * if duration is week: then convert it to days |
| * **getRCMTotalItemType (String itemType):** int * **getRCMTotalAmount (String RCMID ):** double | * No. of items collected by type (aluminum, glass and so on) * amount of money in the machine |
| * **getFreqRCMEmptied (int n, String durationType)**: int | * show the number of times a particular RCM was emptied in a specific duration. (in the last n days) |
| * **showRCMUsedMost (int n, String durationType)**: String | * Return the location of recycling station and id of the machine that was used  the most (in the last n days) |
| * **removeRCM (RCMID: String, location: String):** void | * Remove a machine from the group * Sets the RCMID, location to null |
| * **activateRCM** (**RCMID: String, location: String**): void * **addRCM (RCMID: String, location: String):** String | * Activate / add a new machine to the group. |
|  | * Updates the capabilities of the RCMs |

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| **RCM** | |
| **Data members**   * RCMID: String * location: String * status: String/Enum * weight: double * itemType: String * **itemList** – a list of item type acceptable by the RCM. You may  choose to implement the list as an array ([]) or as an ArrayList. |  |
| **Methods**   * **getWeight (String itemType):** double | * return weight in Lbs |
| * **getWeightInkg (String itemType):** double | * return weight in Metric units (kg). * 1 pounds (lbs) = 0.4536 (kg). |
| * **showItemInfo (String itemType):** String | * Displays the item type, weight (in lbs) and price due to the customer. |
| * **IsFull ():** Boolean | * Does not allow an item if RCM is full (capacity to hold the items has been  reached) |
| * **IsItemPermitted (String itemType):** Boolean | * Does not allow an item that is not permitted and shown as a recyclable  item by the RCM. |
| * **getITotalWeight ()**: double | * return total weight of items in RCM |
| * **getAmount ()**: double | * return amount of money currently in the machine |
| * **getLastTimeRCMEmptied()**: Date | * Return last time the machine is emptied of items |
| * **showList:** String | * Display a list of items that it can accept and price paid for each item |

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| **RecyclableItem** | |
| **Data member**   * itemName: String * itemType: String * price: Double * itemWeight: double |  |
| **Methods**   * **getPrice(double itemWeight):** double | * Get price |
| * **changeItem(String ItemName):** String | * Change item |
| * **changePrice(String ItemName):** double | * Change price |
| * **addItem (String ItemName):** String | * Return new Item which is added |

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| **Administrator** | |
| **Data members**   * userName: String * password: String |  |
| **Methods**   * getAdminUserName | * return admin username |
| * getAdminPass | * return admin password |

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| **Reward** |  |
| **Data members**   * cash: double * voucher: double * RecyclableItem item |  |
| **Methods**   * setCash(double price) |  |
| * setVoucher(double price) |  |
| * getTotalValue(String cash / voucher) |  |
| * getVoucher() |  |
| * getCash() |  |

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| **Date** |
| **Data members**   1. (emptiedTime): String   **Methods**   1. getTime(): Show the time a specific RCM was emptied last time. |

Class RecyclableItem extends RCM