**QUESTION 1: Appliance Rental System using ArrayList**

Sally runs an appliance rental store and needs a system to manage the rental of various appliances. Each appliance has a unique ID, a name, and a status to indicate whether it is currently rented or not. Sally needs a system to:

* Add new appliances to her inventory.
* Rent appliances if they are found by their ID.
* Remove appliances from her inventory by their ID.
* Track how many appliances are still available for rent after each operation.

**Task:**

Implement an ApplianceRentalSystem class using an ArrayList to manage the list of appliances. Each appliance should be represented by an Appliance class. The Appliance class should have the following attributes:

* id (int): A unique identifier for the appliance, starting from 301 and increasing sequentially for each new appliance added.
* name (String): The name of the appliance.
* rented (boolean): Status indicating whether the appliance is currently rented (default = false).

The ApplianceRentalSystem class should include the following methods:

**Add Appliance:**

Implement the method public void addAppliance(String name) to add a new appliance to the inventory list.

* This method should take the appliance name as input and create a new Appliance object with a unique ID and the given name, then add it to the list of appliances.

**Rent Appliance:**

Implement the method public void rentAppliance(int id) to rent an appliance by its ID.

* If the appliance is found, mark it as rented and print a message indicating that the appliance with the given ID is now rented.
* If the appliance is not found, print a message indicating that the appliance with the given ID is not found.

**Remove Appliance:**

Implement the method public void removeAppliance(int id) to remove an appliance from the inventory by its ID.

* Search through the list to find the appliance with the matching ID and remove it.
* Print whether the appliance was successfully removed or if it was not found.

**Track Available Appliances:**

Implement the method public int countNonRentedAppliances() to count and return the number of appliances that are not rented.

* This method will be used to display how many appliances are still available for rent after performing the rent and remove operations.

**Input Format:**

* First line: An integer n representing the number of appliances to add to the inventory.
* Next n lines: Each line contains the name of an appliance to be added.
* The next line: An integer representing the ID of the appliance to be rented.
* The last line: An integer representing the ID of the appliance to be removed from the inventory.

**Output Format:**

**Current Inventory:**

* Print "Appliances in the Inventory:".
* For each appliance in the inventory, print the appliance details in the format: Appliance{id=<id>, name='<name>', rented=<rented>}.

**Appliance Rental Status:**

* If the appliance is rented, print: "Appliance with ID <id> is rented."
* If the appliance is not found, print: "Appliance with ID <id> not found."

**Appliance Removal Status:**

* If the appliance is removed, print: "Appliance with ID <id> removed successfully."
* If the appliance is not found, print: "Appliance with ID <id> not found."

**Updated Inventory:**

* Print "Updated Inventory:".
* For each appliance in the updated inventory, print the appliance details in the format: Appliance{id=<id>, name='<name>', rented=<rented>}.

**Total Non-Rented Appliances:**

* Print "Total non-rented appliances: <number>", where <number> is the total count of appliances that are not rented.

**Sample Input and Output:**

**Sample 1:**

**Input:**

3

Fridge

Oven

Microwave

302

301

**Output:** Appliances in the Inventory:

Appliance{id=301, name='Fridge', rented=false}

Appliance{id=302, name='Oven', rented=false}

Appliance{id=303, name='Microwave', rented=false}

Appliance with ID 302 is rented.

Appliance with ID 301 removed successfully.

Updated Inventory:

Appliance{id=302, name='Oven', rented=true}

Appliance{id=303, name='Microwave', rented=false}

Total non-rented appliances: 1

**Sample 2:**

**Input:**

2

Air Conditioner

Washing Machine

999

305

**Output:** Appliances in the Inventory:

Appliance{id=301, name='Air Conditioner', rented=false}

Appliance{id=302, name='Washing Machine', rented=false}

Appliance with ID 999 not found.

Appliance with ID 305 not found.

Updated Inventory:

Appliance{id=301, name='Air Conditioner', rented=false}

Appliance{id=302, name='Washing Machine', rented=false}

Total non-rented appliances: 2

**Sample 3:**

**Input:**

1

Television

301

301

**Output:** Appliances in the Inventory:

Appliance{id=301, name='Television', rented=false}

Appliance with ID 301 is rented.

Appliance with ID 301 removed successfully.

Updated Inventory:

Total non-rented appliances: 0