Description

Create Georgian Dish Archive (GDA) in java.

This software has following features:

1. Storage for the dishes
2. Ability to add the dish to the Archive
3. Ability remove the dish from the archive
4. Ability to print fulfilling information about dishes on the console

Structure

We will need the following classes for the software:

1. GeorgianRecipe – the repice itself.
2. GeorgianRecipeArchive – how it is managed
3. GRAT – tester class. This class is used to test software's effectiveness.

Class GeorgianRecipe

String	name,region
String	description
List<String>	ingredients
String	instructions

Class GeorgianRecipeArchive

void addRecipe (GeorgianRecipe recipe)
Boolean removeRecipe(GeorgianRecipe recipe)
void printRecipes()

Class GeorgianRecipe

The class `GeorgianRecipe` should have several fields, including `name,region,description,ingredients,instructiond`. This class can be implemented in the following way:

```java
package lizi_zarkua_1.task3;

import java.util.List;

public class GeorgianRecipe{
    private String name, region;
    private String description;
    private List<String> ingredients;
    private String instructions;


    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public String getRegion() {
        return region;
    }
```

```java
    public void setRegion(String region) {
        this.region = region;
    }

    public String getDescription() {
        return description;
    }

    public void setDescription(String description) {
        this.description = description;
    }

    public void setIngredients(List<String> ingredients) {
        this.ingredients = ingredients;
    }

    public List<String> getIngredients(){
        return ingredients;
    }

    public String getInstructions() {
        return instructions;
    }

    public void setInstructions(String instructions) {
        this.instructions = instructions;
    }
```

Class GeorgianRecipeArchive

The Georgian Dish Archive should have an inner structure for storing dishes. The system should have methods for adding the new dishes and removing them. It should have the ability to print the entire Archive content when needed. The class can be implemented in the following way:

```java
package lizi_zarkua_1.task3;
import java.util.ArrayList;
import java.util.List;


public class GeorgianRecipeArchive {
    private List<GeorgianRecipe> storage = new ArrayList<>();

    // Add a recipe to the archive
    public void addRecipe(GeorgianRecipe recipe) {
        storage.add(recipe);
    }

    // Remove a recipe from the archive
    public boolean removeRecipe(GeorgianRecipe recipe) {
        boolean removed = false;
        for (int i = 0; i < storage.size(); i++) {
            GeorgianRecipe r = storage.get(i);
            if (r.getName().equals(recipe.getName()) && r.getRegion().equals(recipe.getRegion())) {
                storage.remove(i);
                removed = true;
                break;
            }
        }
        return removed;
    }


    public void printRecipes() {
        if (storage.isEmpty()) {
            System.out.println(x:"The archive is empty");
        } else {
            for (GeorgianRecipe r : storage) {
                System.out.println(r.getName() + ", " + r.getRegion());
                System.out.println(r.getDescription());
                System.out.println("Ingredients: " + r.getIngredients());
                System.out.println("Instructions: " + r.getInstructions());
                System.out.println();
            }
        }
    }
}
```

GDA Tester class

Now let's test our software. First, create some dishes. Then add to our archive and remove from it. Then try to print all the information about dishes.

```java
package lizi_zarkua_1.task3;

import java.util.Arrays;

public class GRAT {
    Run | Debug
    public static void main(String[] args) {
        GeorgianRecipe recipe1 = new GeorgianRecipe();
        recipe1.setName(name:"Khachapuri");
        recipe1.setRegion(region:"Adjarian");
        recipe1.setDescription(description:"A traditional Georgian cheese-filled bread.");
        recipe1.setIngredients(Arrays.asList(...a:"Flour", "Cheese", "Eggs", "Butter"));
        recipe1.setInstructions(instructions:"Mix the ingredients, shape the dough, add cheese, bake in the oven.");

        GeorgianRecipe recipe2 = new GeorgianRecipe();
        recipe2.setName(name:"Khinkali");
        recipe2.setRegion(region:"Khalakhuri");
        recipe2.setDescription(description:"A traditional Georgian dumpling filled with spiced meat.");
        recipe2.setIngredients(Arrays.asList(...a:"Flour", "Ground beef", "Onion", "Spices"));
        recipe2.setInstructions(instructions:"Prepare the filling, make dough pockets, fill with the filling, boil.");

        GeorgianRecipeArchive archive = new GeorgianRecipeArchive();
        archive.addRecipe(recipe1);
        archive.addRecipe(recipe2);

        archive.removeRecipe(recipe1);

        archive.printRecipes();
    }
}
```