```
In [11]: recipes list = []
    ...: ingredients_list = []
    ...: def take_recipe(name, cooking_time, ingredients):
            recipe = {'name': name, 'cooking_time': cooking_time, 'ingredients'
    ...: : ingredients}
            recipes_list.append(recipe)
    ...: a = input("Name of the recipe: ")
    ...: b = int(input("Cook time for the recipe: "))
    ...: c = input("Ingredients list if finished type 'done': ")
    ...: if c.lower() == "done":
             print("you need an ingredient")
    ...: else:
            while c.lower() != "done":
                 ingredients_list.append(c)
                 c = input("Ingredients list if finished type 'done': ")
           take_recipe(name=a, cooking_time=b, ingredients=ingredients_list)
            print(recipes_list)
Name of the recipe: pie
Cook time for the recipe: 50
Ingredients list if finished type 'done': crust
Ingredients list if finished type 'done': apples
Ingredients list if finished type 'done': sugar
Ingredients list if finished type 'done': done
[{'name': 'pie', 'cooking_time': 50, 'ingredients': ['crust', 'apples', 'sugar']
}]
[In [12]: print(recipes_list)
[{'name': 'pie', 'cooking_time': 50, 'ingredients': ['crust', 'apples', 'sugar']
In [17]: recipes_list = []
    ...: ingredients_list = []
    ...: def take_recipe(name, cooking_time, ingredients):
             recipe = {'name': name, 'cooking_time': cooking_time, 'ingredients'
    ...: : ingredients}
             recipes_list.append(recipe)
    ...: a = input("Name of the recipe: ")
    ...: b = int(input("Cook time for the recipe: "))
    ...: c = input("Ingredients in recipe seperated by a coma: ").split(", ")
    ...: take_recipe(name=a, cooking_time=b, ingredients=c)
    ...: print(recipes_list)
Name of the recipe: pie
Cook time for the recipe: 50
Ingredients in recipe seperated by a coma: crust, apples, sugar
[{'name': 'pie', 'cooking_time': 50, 'ingredients': ['crust', 'apples', 'sugar']
}]
```

For loop to add specified number of recipes and add ingredients to a list.

```
n = int(input("How many recipes are you adding?: "))
for i in range(n):
    recipe = take_recipe()
    for ingredient in recipe['ingredients']:
        if ingredient not in ingredients_list:
            ingredients_list.append(ingredient)
    recipes_list.append(recipe)
```

How many recipes are you adding?: 3

For loop to calculate recipe difficulty.

```
for recipe in recipes_list:
    if recipe['cooking_time'] <= 10 and len(recipe['ingredients'])

        recipe['difficulty'] = 'easy'
    elif recipe['cooking_time'] <= 10 and len(recipe['ingredients'])
:
        recipe['difficulty'] = "moderate"
    elif recipe['cooking_time'] > 10 and len(recipe['ingredients'])
:
        recipe['difficulty'] = "intermediate"
        elif recipe['cooking_time'] > 10 and len(recipe['ingredients'])

        recipe['difficulty'] = "hard"
```

Difficulty level: easy

Display the recipe.

```
for recipe in recipes_list:
    print("Recipe: " + recipe['name'])
    print("Cooking Time: " + str(recipe['cooking_time']) + " minute

    print("Difficulty level: " + recipe['difficulty'])
    print("Ingredients: ")
    for position, ingredient in enumerate(recipe['ingredients']):
        print(str(position + 1) + ", " + ingredient)
    ingredients_list.sort()
```

```
Recipe: pizza
Cooking Time: 10 minutes
Difficulty level: moderate
Ingredients:
1, sauce
2, dough
3, cheese
4, sausage
5, canadian bacon
```

Sort and display ingredients needed for all recipes.

```
ingredients_list.sort()

print("-----Ingredients Needed for all-----")
for ingredients in ingredients_list:
    print(ingredients.capitalize())
```

```
Apples
Canadian bacon
Cheese
Cinnamon
Crust
Dough
Leaves
Sauce
Sausage
Sugar
Water
```

## Full display.

```
How many recipes are you adding?: 3 Name of the recipe: pie
Cook time for the recipe: 60
Ingredients in recipe separated by a comma: sugar, crust, apples, cinnamon
Name of the recipe: pizza
Cook time for the recipe: 10
Ingredients in recipe separated by a comma: sauce, dough, cheese, sausage,
canadian bacon
Name of the recipe: tea
Cook time for the recipe: 5
Ingredients in recipe separated by a comma: water, leaves
Recipe: pie
Cooking Time: 60 minutes
Difficulty level: intermediate
Ingredients:
1, sugar
2, crust
3, apples
4, cinnamon
Recipe: pizza
Cooking Time: 10 minutes
Difficulty level: moderate
Ingredients:
1, sauce
2, dough
3, cheese
4, sausage
5, canadian bacon
Recipe: tea
Cooking Time: 5 minutes
Difficulty level: easy
Ingredients:
1, water
2, leaves
 -----Ingredients Needed for all------
Apples
Canadian bacon
Cheese
Cinnamon
Crust
Dough
Leaves
Sauce
Sausage
Sugar
Water
```