

### 3 Recipes generated by the program

#### 1. Generated recipe: white sugar honey

Ingredients:

```
[ ['flour', 'amount: 0.5 cup'],  
  ['butter', 'amount: 0.5 cup'],  
  ['baking soda', 'amount: 0.04 tsp'],  
  ['brown sugar', 'amount: 4.15 cup'],  
  ['egg', 'amount: 6 eggs'],  
  ['honey', 'amount: 0.91 tbsp'],  
  ['white sugar', 'amount: 2.6 cup'],  
  ['vanilla extract', 'amount: 2 tsp'],  
  ['yoghurt', 'amount: 0.25 cup']]
```

#### 2. Generated recipe: vanilla extract cocoa powder

Ingredients:

```
[ ['flour', 'amount: 0.5 cup'],  
  ['butter', 'amount: 0.5 cup'],  
  ['baking soda', 'amount: 0.25 tsp'],  
  ['egg', 'amount: 2 eggs'],  
  ['salt', 'amount: 0.25 tsp'],  
  ['white sugar', 'amount: 1 cup'],  
  ['vanilla extract', 'amount: 1 tsp'],  
  ['cocoa powder', 'amount: 3 tbsp'],  
  ['honey', 'amount: 1 tbsp'],  
  ['powdered sugar', 'amount: 1 cup']]
```

#### 3. Generated recipe: vanilla extract cocoa powder

Ingredients:

```
[ ['flour', 'amount: 0.5 cup'],  
  ['butter', 'amount: 0.11 cup'],  
  ['baking soda', 'amount: 0.09 tsp'],  
  ['egg', 'amount: 2 eggs'],  
  ['salt', 'amount: 0.81 tsp'],  
  ['white sugar', 'amount: 0.54 cup'],  
  ['vanilla extract', 'amount: 1 tsp'],  
  ['cocoa powder', 'amount: 0.25 cup']]
```

## Example output after implementation described in Future work

“What do you want to make?”

“1. try something new? (

--->switch to the fitness function that give more weight on the novelty\_score

2. make something that is guaranteed to be successful?

--->switch to the fitness function that give more weight on the receipe\_similarity

3. choose the recipe welcomed by most of users?

--->switch to the fitness function that give more weight on the class\_ratio and predicted star rating getting from MLP”

<Generated recipe: white sugar honey >

Calories: 230

predicted star rating: 4.5 star

Ingredients:

```
[
'base':[
    ['flour', 'amount: 0.5 cup'],
    ['butter', 'amount: 0.5 cup'],
    ['egg', 'amount: 6 eggs']]
'rising':
    ['baking soda', 'amount: 0.04 tsp'],
'flavour':[
    ['brown sugar', 'amount: 4.15 cup'],
    ['honey', 'amount: 0.91 tbsp'],
    ['white sugar', 'amount: 2.6 cup'],
    ['vanilla extract', 'amount: 2 tsp'],
    ['yoghurt', 'amount: 0.25 cup']]
]
```