

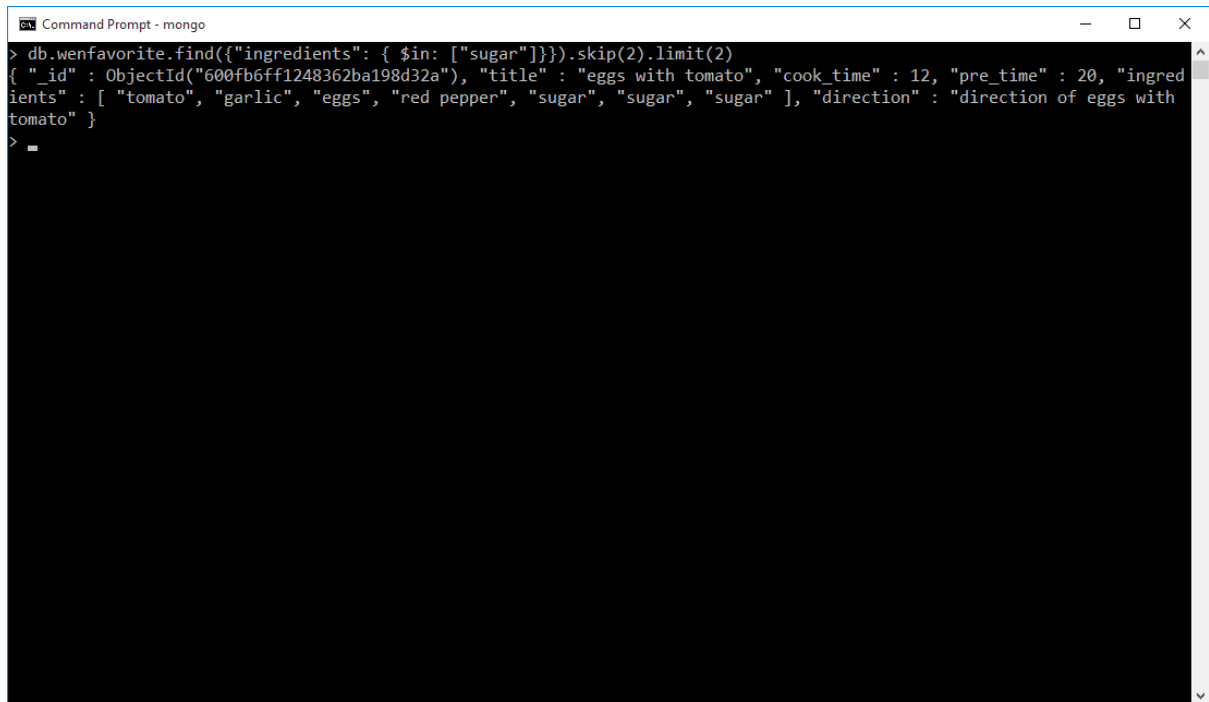
1. a) Created a MongoDB database “wendong”  
b) added four recipes to collection “wenfavorite” and all displayed as below

```
Command Prompt - mongo
> db.wenfavorite.find({})
{ "_id" : ObjectId("600fb5bc1248362ba198d327"), "title" : "fried rice", "cook_time" : 8, "pre_time" : 5, "ingredients" :
[ "rice", "oid", "pepper", "green shallot" ], "direction" : "direction of fried rice" }
{ "_id" : ObjectId("600fb66b1248362ba198d328"), "title" : "beancord with cabbage", "cook_time" : 15, "pre_time" : 10, "in
gredients" : [ "cabbage", "beancord", "green shallot", "sun flower oil" ], "direction" : "direction of beancord with caba
ge" }
{ "_id" : ObjectId("600fb6c01248362ba198d329"), "title" : "fried potato", "cook_time" : 20, "pre_time" : 10, "ingredient
s" : [ "potato", "garlic", "green shallot", "pepper" ], "direction" : "direction of fried potato" }
{ "_id" : ObjectId("600fb6ff1248362ba198d32a"), "title" : "eggs with tomato", "cook_time" : 12, "pre_time" : 20, "ingred
ients" : [ "tomato", "garlic", "eggs", "red pepper" ], "direction" : "direction of eggs with tomato" }
> db
wendong
>
```

2. a. display title and direction

```
Command Prompt - mongo
> db.wenfavorite.find({})
{ "_id" : ObjectId("600fb5bc1248362ba198d327"), "title" : "fried rice", "cook_time" : 8, "pre_time" : 5, "ingredients" :
[ "rice", "oid", "pepper", "green shallot" ], "direction" : "direction of fried rice" }
{ "_id" : ObjectId("600fb66b1248362ba198d328"), "title" : "beancord with cabbage", "cook_time" : 15, "pre_time" : 10, "in
gredients" : [ "cabbage", "beancord", "green shallot", "sun flower oil" ], "direction" : "direction of beancord with caba
ge" }
{ "_id" : ObjectId("600fb6c01248362ba198d329"), "title" : "fried potato", "cook_time" : 20, "pre_time" : 10, "ingredient
s" : [ "potato", "garlic", "green shallot", "pepper" ], "direction" : "direction of fried potato" }
{ "_id" : ObjectId("600fb6ff1248362ba198d32a"), "title" : "eggs with tomato", "cook_time" : 12, "pre_time" : 20, "ingred
ients" : [ "tomato", "garlic", "eggs", "red pepper" ], "direction" : "direction of eggs with tomato" }
> db
wendong
> db.wenfavorite.find({}, {"title":1, "direction":1})
{ "_id" : ObjectId("600fb5bc1248362ba198d327"), "title" : "fried rice", "direction" : "direction of fried rice" }
{ "_id" : ObjectId("600fb66b1248362ba198d328"), "title" : "beancord with cabbage", "direction" : "direction of beancord w
ith cabbage" }
{ "_id" : ObjectId("600fb6c01248362ba198d329"), "title" : "fried potato", "direction" : "direction of fried potato" }
{ "_id" : ObjectId("600fb6ff1248362ba198d32a"), "title" : "eggs with tomato", "direction" : "direction of eggs with toma
to" }
>
```

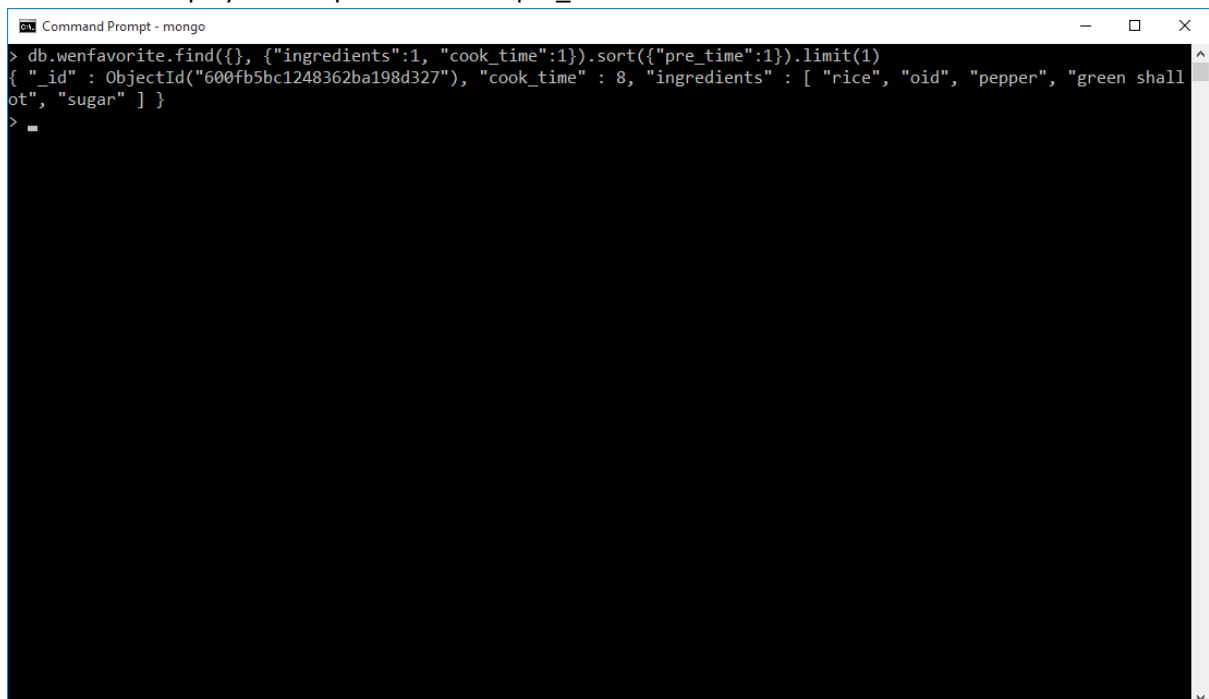
b. skip the first 2 with sugar as ingredient and display the next 2



```
Command Prompt - mongo
> db.wenfavorite.find({"ingredients": { $in: ["sugar"]}}).skip(2).limit(2)
{ "_id" : ObjectId("600fb6ff1248362ba198d32a"), "title" : "eggs with tomato", "cook_time" : 12, "pre_time" : 20, "ingredients" : [ "tomato", "garlic", "eggs", "red pepper", "sugar", "sugar", "sugar" ], "direction" : "direction of eggs with tomato" }
>
```

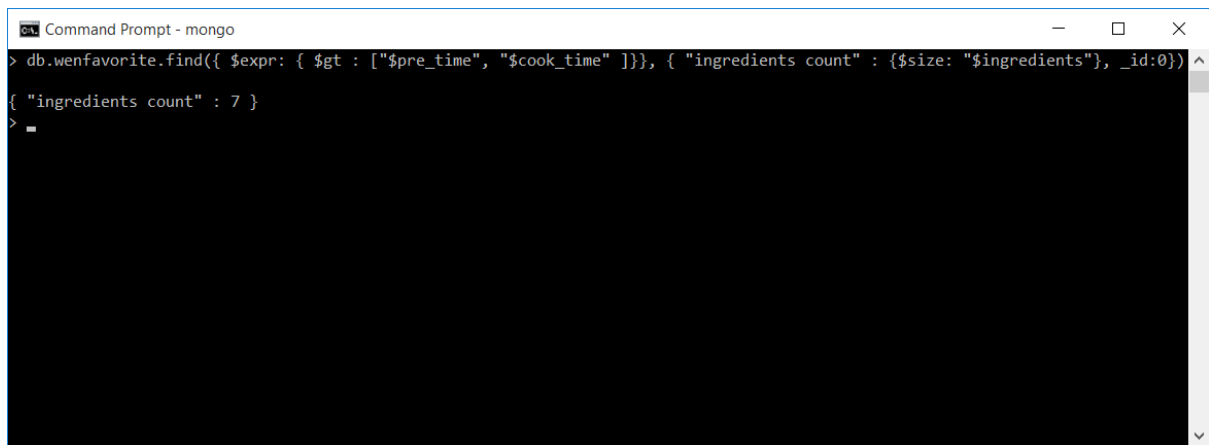
Since there is only one after skipping the first two with sugar, so only one record displayed.

c. Display the recipe with lowest pre\_time



```
Command Prompt - mongo
> db.wenfavorite.find({}, {"ingredients":1, "cook_time":1}).sort({"pre_time":1}).limit(1)
{ "_id" : ObjectId("600fb5bc1248362ba198d327"), "cook_time" : 8, "ingredients" : [ "rice", "oid", "pepper", "green shallot", "sugar" ] }
>
```

d.



```
Command Prompt - mongo
> db.wenfavorite.find({ $expr: { $gt : ["$pre_time", "$cook_time" ]}}, { "ingredients count" : {$size: "$ingredients"}, _id:0}) ^
{ "ingredients count" : 7 }
> _
```