Firstly we have two views:
1. The inventory manager(command line)
2. Distributor worker(GUI)

For inventory manager:
1.Insert:
Before insert:

```
500          MASKS                HIUDHBIC
501          ICU                  dark room
502          RESPIRATOR           Pressurized
503          bjh                  cool
504          MORPHINE             cool
```

type:
```
Please choose one of the above 14 options: 1

Please enter the drug ID you wish to insert: 506
Please enter the drug storage_detail you wish to insert: jndin
Please enter the drug ingredient you wish to insert: ndij
```

Result:
```
Please choose one of the above 14 options: 4

506          ndij                 jndin
500          MASKS                HIUDHBIC
501          ICU                  dark room
502          RESPIRATOR           Pressurized
503          bjh                  cool
504          MORPHINE             cool
```

2.Delete:

before:

```
 Please choose one of the above 14 options: 4


 506        ndij               jndin
 500        MASKS              HIUDHBIC
 501        ICU                dark room
 502        RESPIRATOR         Pressurized
 503        bjh                cool
 504        MORPHINE           cool
```

type:

```
  Please choose one of the above 14 options: 2


  Please enter the drug ID you wish to delete: 506
```

after:

```
 500        MASKS              HIUDHBIC
 501        ICU                dark room
 502        RESPIRATOR         Pressurized
 503        bjh                cool
 504        MORPHINE           cool
```

3.Update:

Before : the same as before

type:

```
Please choose one of the above 14 options: 3


Please enter the medical ID you wish to update: 501
Please enter the column you wish to update: ingredient
Please enter the new inf you wish to update: ndj
```

after

```
500         MASKS              HIUDHBIC
501         ndj                dark room
502         RESPIRATOR         Pressurized
503         bjh                cool
504         MORPHINE           cool
```

4.Projection:

Before as above

Select ingredient

after:

```
Please choose one of the above 14 options: 11

Please enter the column you wish to select from drugingredient
MASKS
ndj
RESPIRATOR
bjh
MORPHINE
```

5.selection
before:

```
500        MASKS              HIUDHBIC
501        ndj                dark room
502        RESPIRATOR         Pressurized
503        bjh                cool
504        MORPHINE           cool
```

condition and after:

```
Please enter the condition you wish to selectmedical_id>500
501        ndj                dark room
502        RESPIRATOR         Pressurized
503        bjh                cool
504        MORPHINE           cool
```

6.join:
Before: drug is same as above before select

This is manager

	MANAGER_ID ⇕	MEDICAL_ID ⇕	PHONE_NUM ⇕
1	600	500	1000001
2	601	501	1000002
3	602	502	1000003
4	603	503	1000004
5	604	504	1000005
6	600	501	1000001
7	600	502	1000001
8	600	503	1000001
9	600	504	1000001

Condition and result:

Please enter the condition you wish to joint from drug and manager *d.medical_id = m.medical_id*

500	MASKS	HIUDHBIC	600	1000001
501	ndj	dark room	601	1000002
501	ndj	dark room	600	1000001
502	RESPIRATOR	Pressurized	602	1000003
502	RESPIRATOR	Pressurized	600	1000001
503	bjh	cool	600	1000001
503	bjh	cool	603	1000004
504	MORPHINE	cool	600	1000001
504	MORPHINE	cool	604	1000005

7.aggregation function:
Base on the design of my schema the only integer type i use is for id so it is meaningless to use max, min or average , so i only have the count(*)
Before:

500	MASKS	HIUDHBIC
501	ndj	dark room
502	RESPIRATOR	Pressurized
503	bjh	cool
504	MORPHINE	cool

after:

5

8. Nested group by:
The description:

```
    13. nested group by: Retrieve max medical_id managed by each manager with conditions
```

Before: the infor is same as below

```
Please enter the condition you wish to joint from drug and managerd.medical_id = m.medical_id
500        MASKS            HIUDHBIC               600                          1000001
501        ndj              dark room              601                          1000002
501        ndj              dark room              600                          1000001
502        RESPIRATOR       Pressurized            602                          1000003
502        RESPIRATOR       Pressurized            600                          1000001
503        bjh              cool                   600                          1000001
503        bjh              cool                   603                          1000004
504        MORPHINE         cool                   600                          1000001
504        MORPHINE         cool                   604                          1000005
```

type:

```
Please enter the condition you wish to group bymanager_id
```

Result:

```
504

501

502

503

504
```

9.Division:

description:

```
9. Division: find the manager holds all drugs
```

Before inf:

```
Please enter the condition you wish to joint from drug and managerd.medical_id = m.medical_id
500        MASKS            HIUDHBIC               600                          1000001
501        ndj              dark room              601                          1000002
501        ndj              dark room              600                          1000001
502        RESPIRATOR       Pressurized            602                          1000003
502        RESPIRATOR       Pressurized            600                          1000001
503        bjh              cool                   600                          1000001
503        bjh              cool                   603                          1000004
504        MORPHINE         cool                   600                          1000001
504        MORPHINE         cool                   604                          1000005
```

result:

```
Please choose one of the above 14 options: 9

600        500                                          1000001
600        501                                          1000001
600        502                                          1000001
600        503                                          1000001
600        504                                          1000001
```
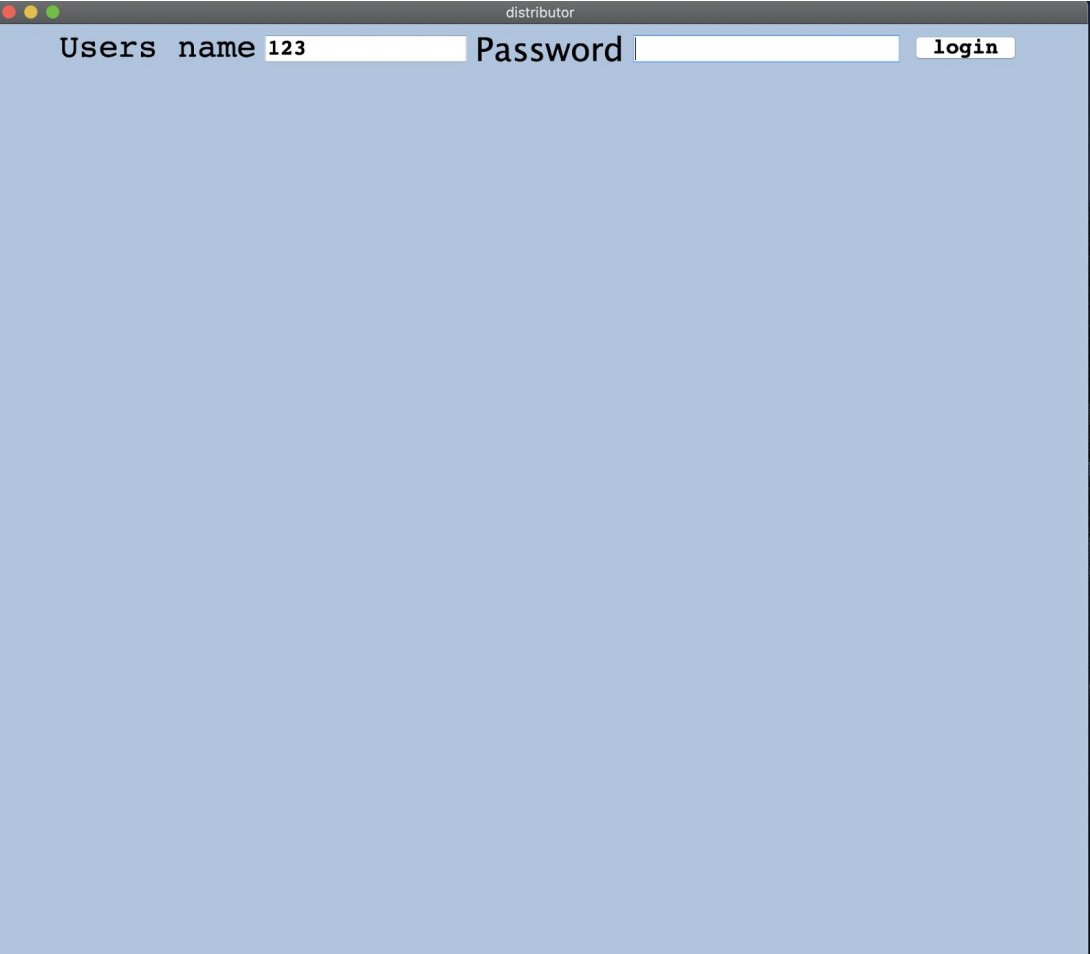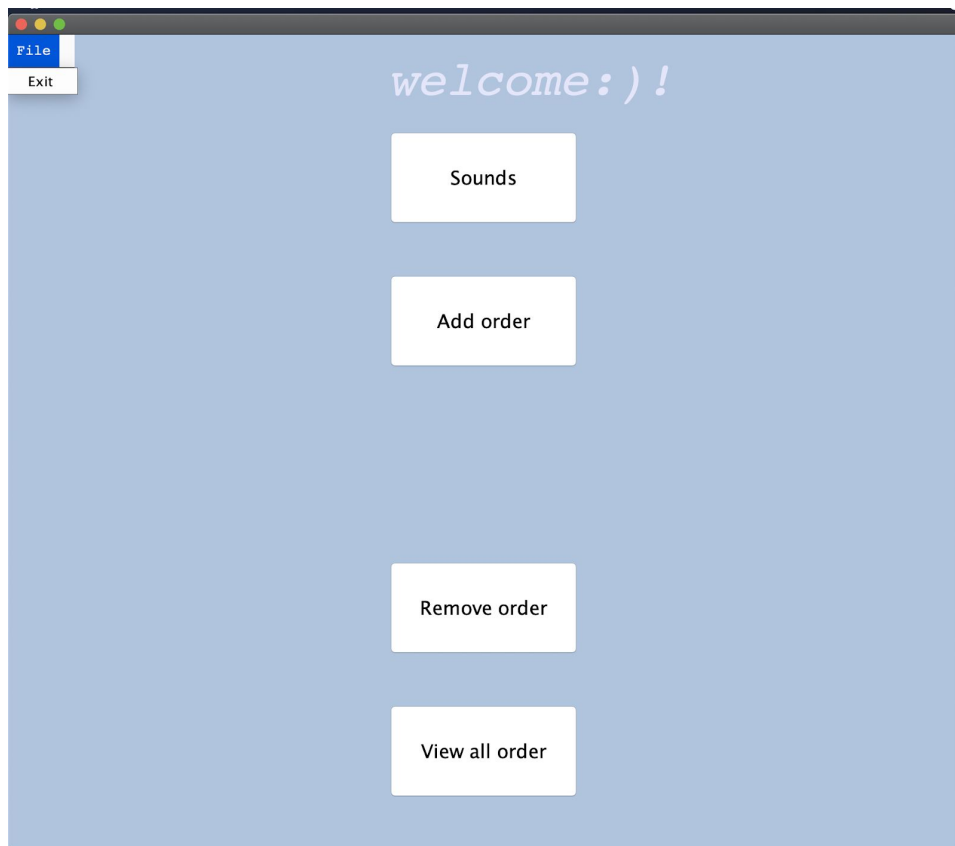
For distributor workers:
1. Insert distributor

2.menu:

3.insert order

order_num need to be removed

Submit

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4.delete order

order_num

order_date

Submit

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