

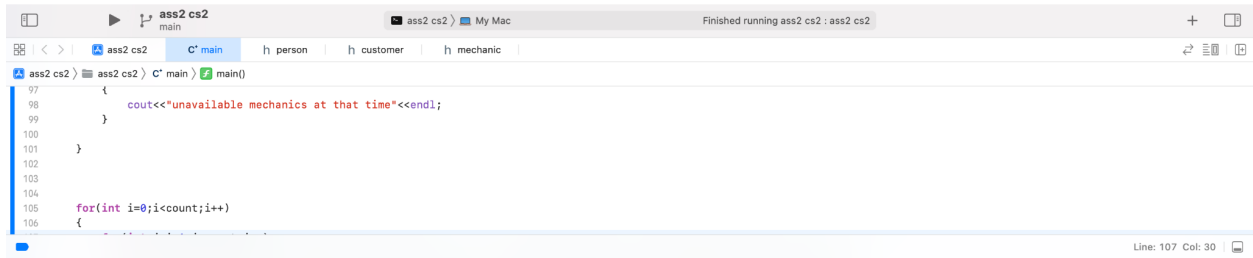
```
ass2 cs2
main
ass2 cs2 > C* main > main()
88     pl1j=cl1j;
89     f3 = true;
90
91 }
92 else
93 {
94     cout<<"unavailable mechanics at that time"<<endl;
95 }
96
97 }
```

enter the size:4
enter the info of mechanics
name:ayman
age:23
mechanic id:3456
name:khaled
age:34
mechanic id:45667
name:mai
age:34
mechanic id:5677
customer
name:ahmed
age:44
id :5677
time:1
00
name:sara
age:24
id :34567
time:4
30
name:kareem
age:45
id :56678
time:3
00
name:mohamed
age:34
id :56778
time:1
00
ahmed with ayman at 1:0
mohamed with khaled at 1:0
kareem with mai at 3:0
sara with khaled at 4:30
Program ended with exit code: 0

All Output

In this photo it shows the output after i insert the information of customer and mechanics and i sorted them before pushing them in the queue:

- 1) I created two 3 dynamic arrays 2 of type customer and 1 of type mechanic(in main)
- 2) In abstract class I called the struct (app).
- 3) In customer class I created function get appointment to return the appointment the customer assign it, and i created extra variable called mechanical name so i can take the name from mechanic array and assign it customer array.
- 4) In class mechanics I created a struct array that takes only 20 appointments and there is a function that is called to check if a mechanic is available or not and if it returns true it assigns value in the array using the setapp function.
- 5) In main : i entered the information of customer and mechanics using loops.
I also used three flags to help me in iteration the isavailable function and i assigned all the flag with false then when it enter each if statement it change to true so it can iterate again and there is a for loop inside it i assigned if statement using third flag and when it enter this loop it change all the flags to false again so it can iterate again.
 - also, i declared counter to increase when it enter in if statement
 - in each if statement i assign the info of the customer in the main array to another array of customers called (p), so i can use it after that to sort the appointment then push it to the queue.
 - then , I made another for loop to sort the appointment that I entered in array (p) using the overloading operator(<)and swap function and with each iteration I pushed it to the queue of type customer, and I used the counter in loop as the end point of the loop because this will be the accurate size of this array .
 - then i printed all the input in the queue using while (!myqueue.empty()).
 - At the end I called the function print info using a for loop.



```
97 {
98     cout<<"unavailable mechanics at that time"<<endl;
99 }
100 }
101 }
102 }
103 }
104 }
105 for(int i=0;i<count;i++)
106 {
```

```
enter the size:4
enter the info of mechanics
name:ayman
age:34
mechanic id:4566
name:laila
age:33
mechanic id:45667
name:marwa
age:34
mechanic id:45667
customer
name:amal
age:345
id :45678
time:12
30
name:mayan
age:45
id :56788
time:12
30
name:loly
age:56
id :7789
time:12
30
name:nada
age:44
id :56678
time:12
30
unavailable mechanics at that time
amal with ayman at 12:30
mayan with laila at 12:30
loly with marwa at 12:30
Program ended with exit code: 0
```

All Output

Filter

This photo show that it printed unavailable mechanic when the forth customer assigned the the same appointment of the first three

```
15
unavailable mechanics at that time
sara with khaled at 1:15
kareem with mai at 1:15
mohamed with ayman at 1:15
ahmed with ayman at 2:30
nesma with khaled at 4:30
-----
sara with khaled at 1:15
kareem with mai at 1:15
mohamed with ayman at 1:15
ahmed with ayman at 2:30
nesma with khaled at 4:30
Program ended with exit code: 0
All Output
```

Filter

This photo show that it printed unavailable mechanic when the forth customer assigned the the same appointment , and i used print info function

```
00
ahmed with ayman at 1:0
mohamed with khaled at 1:0
kareem with mai at 3:30
sara with khaled at 4:30
-----
ahmed with ayman with id 23445 at 1:0
mohamed with khaled with id 3445 at 1:0
kareem with mai with id 44566 at 3:30
sara with khaled with id 3445 at 4:30
Program ended with exit code: 0
All Output
```

Filter

This shows the print info function with the id of the mechanic that is assigned with the customer.