

The screenshot shows the Visual Studio Code interface with a C++ project. The Explorer panel on the left shows a file tree with various source files. The main editor displays the code for `main.cpp`, which includes a loop that registers customers and checks for available mechanics. The output window at the bottom shows the program's execution results, with a red box highlighting the messages: `-Appointment for b was cancelled.`, `-Appointment for d was cancelled.`, `-Appointment for e was cancelled.`, `-Appointment for f was cancelled.`, and `-Appointment for h was cancelled.` Below these, it shows `Before Sorting:` and the details for customer x: `Name of Customer: x`, `Age: 20`, `Customer is registered with Ahmed`, and `Appointment Time: 2:30`.

```
171  
172 }  
173 cout << endl<<endl;  
174  
175 cout << "After Sorting: " << endl << endl; // After Sorting  
176  
177 while(!kobry.isEmpty()){  
178     kobry.front().print();  
179     cout << "Customer is registered with "<< searchByID(mechanics, kobry.front().getMechanicID());  
180     cout <<endl<< "Appointment Time: " << kobry.front().getappointment().hours<< ":" << kobry.front().getappointment().mins<<endl;  
181     kobry.pop();  
182     cout << endl<<endl;  
183 }  
184  
185 x.close(); //closing file  
186 y.close(); //closing file  
187  
188 return 0;  
189  
190 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

-Appointment for b was cancelled.
-Appointment for d was cancelled.
-Appointment for e was cancelled.
-Appointment for f was cancelled.
-Appointment for h was cancelled.
Before Sorting:
Name of Customer: x
Age: 20
Customer is registered with Ahmed
Appointment Time: 2:30

Ln 187, Col 39 Spaces: 4 UTF-8 CRLF C++ Win32

As you can see, those are the customers that wouldn't be registered to any mechanic. This is because customer b is the 5th customer to want appointment at time 2:30. This means that 4 other customers wanted this same appointment, being x, z, c, and a. Given that only 4 mechanics exist, no one else could be appointed that time.

Before Sorting:

Name of Custoemr: x
Age: 20
Customer is registered with Ahmed
Appointment Time: 2:30

Name of Custoemr: z
Age: 30
Customer is registered with Araa
Appointment Time: 2:30

Name of Custoemr: c
Age: 40
Customer is registered with Ayman
Appointment Time: 2:30

Name of Custoemr: a
Age: 20
Customer is registered with Amgad
Appointment Time: 2:30

Customer b is not registered with any mechanic.
Customer d is not registered with any mechanic.
Customer e is not registered with any mechanic.
Customer f is not registered with any mechanic.
Name of Custoemr: g
Age: 27
Customer is registered with Ahmed
Appointment Time: 10:20

Customer h is not registered with any mechanic.
Name of Custoemr: i
Age: 66
Customer is registered with Ahmed
Appointment Time: 4:40

Name of Custoemr: j
Age: 27
Customer is registered with Ahmed
Appointment Time: 1:20

Name of Custoemr: k
Age: 22
Customer is registered with Ahmed
Appointment Time: 18:20

Name of Custoemr: l
Age: 44
Customer is registered with Araa
Appointment Time: 18:20

Name of Custoemr: m
Age: 26
Customer is registered with Ahmed
Appointment Time: 19:30

This is how the output looks before sorting. Obviously, the timings of the appointment are random.

```
Customer b is not registered with any mechanic.  
Customer d is not registered with any mechanic.  
Customer e is not registered with any mechanic.  
Customer f is not registered with any mechanic.  
Customer h is not registered with any mechanic.
```

After Sorting:

```
Name of Custoemr: j  
Age: 27  
Customer is registered with Ahmed  
Appointment Time: 1:20
```

```
Name of Custoemr: c  
Age: 40  
Customer is registered with Ayman  
Appointment Time: 2:30
```

```
Name of Custoemr: a  
Age: 20  
Customer is registered with Amgad  
Appointment Time: 2:30
```

```
Name of Custoemr: x  
Age: 20  
Customer is registered with Ahmed  
Appointment Time: 2:30
```

```
Name of Custoemr: z  
Age: 30  
Age: 22  
Customer is registered with Ahmed  
Appointment Time: 18:20
```

```
Name of Custoemr: l  
Age: 44  
Customer is registered with Araa  
Appointment Time: 18:20
```

```
Name of Custoemr: m  
Age: 26  
Customer is registered with Ahmed  
Appointment Time: 19:30
```

Again, those are the customers who had no appointments due to overlapping.

However, they are now combined in one place due to our modifications.

After sorting and inserting the appointed customers into a queue, this is the output. As is obvious, it is sorted according to their appointment time.