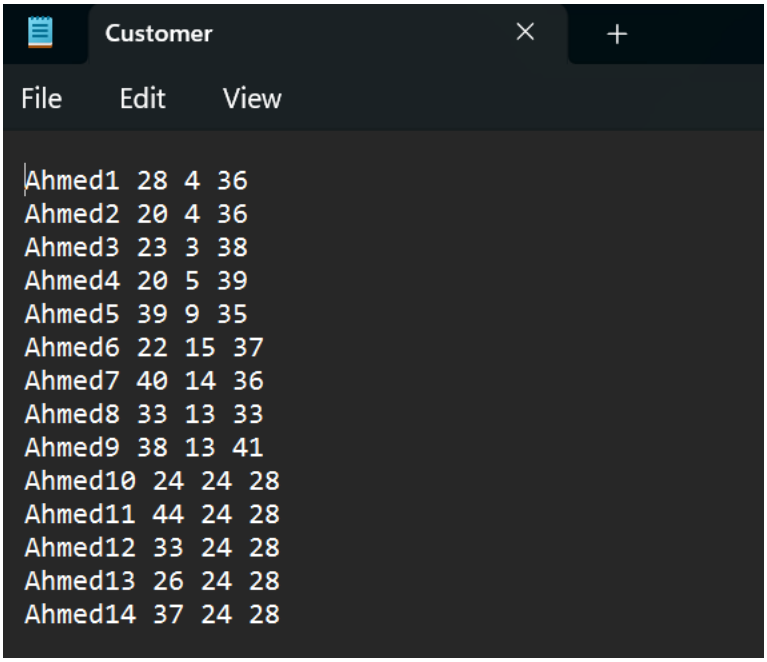
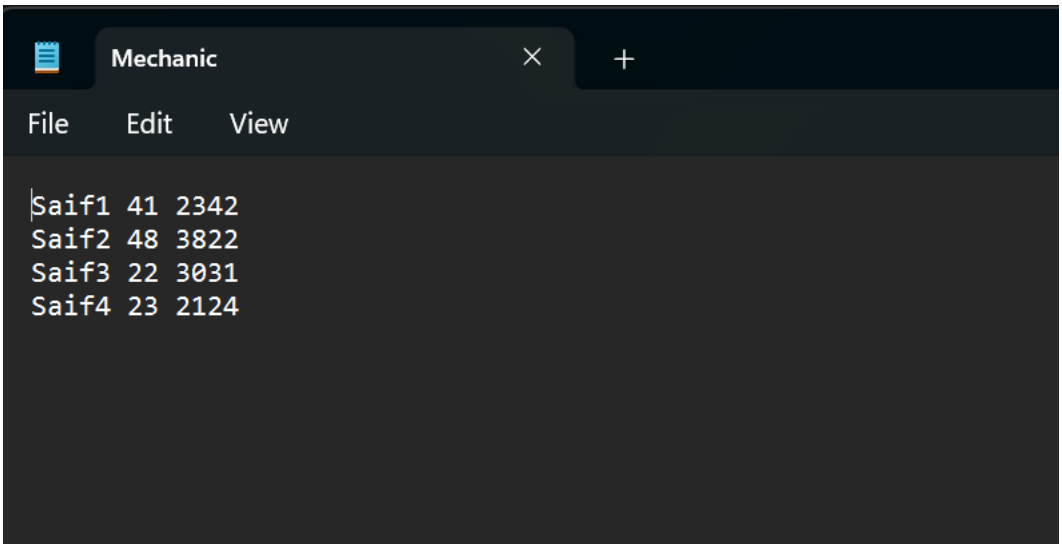
Name: Saif Ahmed Abd Elfattah, ID: 900225535





After reading the two files:

```
Mr/Mrs. Ahmed1 has appointment with Mr. Saif1 on 4:36
Mr/Mrs. Ahmed2 has appointment with Mr. Saif2 on 4:36
Mr/Mrs. Ahmed3 has appointment with Mr. Saif3 on 3:38
Mr/Mrs. Ahmed4 has appointment with Mr. Saif4 on 5:39
Mr/Mrs. Ahmed5 has appointment with Mr. Saif1 on 9:35
Mr/Mrs. Ahmed6 has appointment with Mr. Saif2 on 15:37
Mr/Mrs. Ahmed7 has appointment with Mr. Saif3 on 14:36
Mr/Mrs. Ahmed8 has appointment with Mr. Saif4 on 13:33
Mr/Mrs. Ahmed9 has appointment with Mr. Saif1 on 13:41
Mr/Mrs. Ahmed10 has appointment with Mr. Saif2 on 22:28
Mr/Mrs. Ahmed11 has appointment with Mr. Saif3 on 22:28
Mr/Mrs. Ahmed12 has appointment with Mr. Saif4 on 22:28
Mr/Mrs. Ahmed13 has appointment with Mr. Saif1 on 22:28
 Appointment for Ahmed14 was cancelled.
```

After Sorting:

```
Mr/Mrs. Ahmed14 has appointment with no mechanic
Mr/Mrs. Ahmed14 has appointment with no mechanic
Mr/Mrs. Ahmed3 has appointment with Saif3 3:38
Mr/Mrs. Ahmed2 has appointment with Saif2 4:36
Mr/Mrs. Ahmed1 has appointment with Saif1 4:36
Mr/Mrs. Ahmed4 has appointment with Saif4 5:39
Mr/Mrs. Ahmed5 has appointment with Saif1 9:35
Mr/Mrs. Ahmed8 has appointment with Saif4 13:33
Mr/Mrs. Ahmed9 has appointment with Saif1 13:41
Mr/Mrs. Ahmed7 has appointment with Saif3 14:36
Mr/Mrs. Ahmed6 has appointment with Saif2 15:37
Mr/Mrs. Ahmed12 has appointment with Saif4 22:28
Mr/Mrs. Ahmed13 has appointment with Saif1 22:28
Mr/Mrs. Ahmed10 has appointment with Saif2 22:28
Mr/Mrs. Ahmed11 has appointment with Saif3 22:28
```

First the code opened both the customer file and the mechanic file. Then the program assigned each customer to the mechanic in the order the mechanics are stored, so we have 4 mechanics, the first customer Ahmed 1 went to the first mechanic Saif 1, the second customer Ahmed 2 went to the second mechanic Saif 2, and so on till you go back to the I got back to the first mechanic Saif 1 with the customer 5.

To fully test my code, I made the last 5 customers have the same appointment time which is 22:28 . The program assigned the first 4 with the 4 mechanics but there was no fifth mechanic to get assigned to that 5^{th} customer, so the program said that its appointment gets canceled accordingly.

After sorting, the program starts with the customers with no mechanic available than listed all such that the customer with an earlier appointment time is stored at the beginning of the queue and then so on till it gets to the customer with the latest appointment stored at the end