```
rd0305@cse01:~/hw5rd$ ./a.out
  +----------------------------------------------------------------+
  |                 Computer Science and Engineering               |
  |           CSCE 1040 - Computer Science II  (Homework 5)        |
  |              Riya Danait      rd0305    rd0305@my.unt.edu       |
  +----------------------------------------------------------------+


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 1
ADD A NEW PLANE TO THE FLEET

Enter tail Number:
100
Enter make:
Boeing
Enter model:
737
Enter status (in, out or repair):
in
Enter number of seats:
100
Enter range:
1000


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
```

```
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 2
ADD A CREW MEMBER TO AIRLINE STAFF

Enter type (Pilot, CoPilot or Cabin):
Pilot
Enter Crew ID:
1
Enter name:
Pilot
Enter status (available, on-leave or sick):
available
Enter a 5 character rating code for the Pilot:
12345
Enter cumulative flight hours:
1000


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 2
ADD A CREW MEMBER TO AIRLINE STAFF

Enter type (Pilot, CoPilot or Cabin):
CoPilot
Enter Crew ID:
```

```
2
Enter name:
CoPilot
Enter status (available, on-leave or sick):
available
Enter a 4 character rating code for the CoPilot:
1234
Enter cumulative flight hours:
1000


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 2
ADD A CREW MEMBER TO AIRLINE STAFF

Enter type (Pilot, CoPilot or Cabin):
Cabin
Enter Crew ID:
3
Enter name:
Cabin3
Enter status (available, on-leave or sick):
available
Enter the position for Cabin (First Class, Business Class, Economy Front, Economy Rear, Lead):
First Class


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
```

8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 2
ADD A CREW MEMBER TO AIRLINE STAFF

Enter type (Pilot, CoPilot or Cabin):
Cabin
Enter Crew ID:
4
Enter name:
Cabin4
Enter status (available, on-leave or sick):
available
Enter the position for Cabin (First Class, Business Class, Economy Front, Economy Rear, Lead):
Business Class

1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 2
ADD A CREW MEMBER TO AIRLINE STAFF

Enter type (Pilot, CoPilot or Cabin):
Cabin
Enter Crew ID:
5

```
Enter name:
Cabin5
Enter status (available, on-leave or sick):
on-leave
Enter the position for Cabin (First Class, Business Class, Economy Front, Economy Rear, Lead):
Economy Front


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 2
ADD A CREW MEMBER TO AIRLINE STAFF

Enter type (Pilot, CoPilot or Cabin):
Cabin
Enter Crew ID:
6
Enter name:
Cabin6
Enter status (available, on-leave or sick):
available
Enter the position for Cabin (First Class, Business Class, Economy Front, Economy Rear, Lead):
Lead


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
```

```
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 3
ADD A NEW FLIGHT TO FLIGHT SCHEDULE

Enter start date (MM-DD-YYYY):
04-21-2018
Enter start time (HH:MM):
09:00
Enter start time zone (e.g. America/Chicago, America/New_York, America/Los_Angeles etc..):
America/Chicago
Enter end date (MM-DD-YYYY):
04-21-2018
Enter end time (HH:MM):
14:00
Enter end time zone (e.g. America/Chicago, America/New_York, America/Los_Angeles etc..):
America/New_York
Enter starting airport code:
DFW
Enter ending airport code:
JFK
Enter passenger count:
100
Local time: 21 Apr 2018 09:00 CDT
UTC time: 2018-04-21 14:00:00 UTC

Local time: 21 Apr 2018 14:00 EDT
UTC time: 2018-04-21 18:00:00 UTC

Found planeID 100 for flight.
Found pilotID 1 for flight.
Found copilot ID 2 for flight.
Found 3 available cabin crew for flight
Scheduled a new flight 100 departing from DFW at 04-21-2018 09:00 America/Chicago arriving at JFK04-21-2018 14:00
America/New_York


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
```

```
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 10
PRINT THE ENTIRE FLIGHT SCHEDULE


------------------------------------------------------------------------------------------------------------
----------------------------------------------------
Plane ID  PilotID   CoPilotID CabinID1  CabinID2  CabinID3  StartDate StartTime StartTZ           EndDate    EndTime   Enc
Departure Arrival   Passgrs.  Status
------------------------------------------------------------------------------------------------------------
----------------------------------------------------
100       1         2         3         4         6         04-21-2018 09:00    America/Chicago   04-21-2018 14:00
America/New_York   DFW       JFK       100       SCHEDULED


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 11
PRINT A LIST OF ALL FLIGHTS BASED ON STATUS

Enter flight status (SCHEDULED, ACTIVE, CANCELED or COMPLETED):
SCHEDULED
------------------------------------------------------------------------------------------------------------
----------------------------------------------------
Plane ID  PilotID   CoPilotID CabinID1  CabinID2  CabinID3  StartDate StartTime StartTZ           EndDate    EndTime   Enc
Departure Arrival   Passgrs.  Status
```

```
--------------------------------------------------------------------------------------------------------
----------------------------------------------------
100        1         2         3         4         6         04-21-2018  09:00   America/Chicago      04-21-2018  14:00
America/New_York     DFW       JFK       100       SCHEDULED


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 12
PRINT THE DETAILS OF A SINGLE FLIGHT IN FLIGHT SCHEDULE

Enter plane ID:
100
--------------------------------------------------------------------------------------------------------
----------------------------------------------------
Plane ID  PilotID   CoPilotID CabinID1  CabinID2  CabinID3  StartDate StartTime StartTZ              EndDate     EndTime   En
Departure Arrival   Passgrs.  Status
--------------------------------------------------------------------------------------------------------
----------------------------------------------------
100        1         2         3         4         6         04-21-2018  09:00   America/Chicago      04-21-2018  14:00
America/New_York     DFW       JFK       100       SCHEDULED


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
```

```
    13. Print the entire airline staff
    14. Print details of a single crew member in airline staff
    15. Print the entire fleet of planes
    16. Print the details of a plane from the fleet
    17. Update entire flight schedule based on current time
    18. Quit
    Please enter choice (1-18): 13
    PRINT ENTIRE AIRLINE STAFF
```

```
--------------------------------------------------------------------------------------------------------
-----------------
Crew ID        Crew Member Name            Crew Type          Status          Rating Code        Cumulative Flight
Position
--------------------------------------------------------------------------------------------------------
-----------------
1              Pilot                       Pilot              available       12345              1000
2              CoPilot                     CoPilot            available       1234               1000
3              Cabin3                      Cabin              available
First Class
4              Cabin4                      Cabin              available
Business Class
5              Cabin5                      Cabin              on-leave
Economy Front
6              Cabin6                      Cabin              available
Lead
```

```
1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 14
PRINT DETAILS OF A SINGLE CREW MEMBER

Enter crew member ID:
3
```

```
--------------------------------------------------------------------------------------------------------------------
------------------
Crew ID        Crew Member Name          Crew Type            Status           Rating Code       Cumulative Flight
Position
--------------------------------------------------------------------------------------------------------------------
------------------
3              Cabin3                    Cabin                available
First Class
```

1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 15
PRINT THE ENTIRE FLEET OF PLANES

```
--------------------------------------------------------------------------------------------------------------------
Tail Number   Make                      Model          Seats          Range          Status
--------------------------------------------------------------------------------------------------------------------
100           Boeing                    737            100            1000           in
```

1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff

```
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 16
PRINT THE DETAILS OF A PLANE FROM THE FLEET

Enter tail number:
100
-----------------------------------------------------------------------------------------------
Tail Number    Make                    Model           Seats           Range           Status
-----------------------------------------------------------------------------------------------
100            Boeing                  737             100             1000            in


1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 17
UPDATE ENTIRE FLIGHT SCHEDULE BASED ON CURRENT TIME

This option will update flight status based on current time and
will remove all COMPLETED and CANCELED flights from the schedule
Do you wish to continue? (Y/N):y
Current time in GMT is Sat Apr 21 01:12:07 2018



1. Add a new plane to the fleet
2. Add a new crew member to the airline staff
3. Add a new flight to the flight schedule
4. Update a flight in flight schedule
5. Update a crew member
6. Update a plane status
7. Delete a flight from flight schedule
8. Delete a crew member from airline staff
```

```
9. Delete a plane from fleet
10. Print the entire flight schedule
11. Print a list of all flights based on status
12. Print the details of a single flight in flight schedule
13. Print the entire airline staff
14. Print details of a single crew member in airline staff
15. Print the entire fleet of planes
16. Print the details of a plane from the fleet
17. Update entire flight schedule based on current time
18. Quit
Please enter choice (1-18): 10
PRINT THE ENTIRE FLIGHT SCHEDULE


------------------------------------------------------------------------------------------------------------
----------------------------------------------------
Plane ID  PilotID   CoPilotID CabinID1  CabinID2  CabinID3  StartDate StartTime StartTZ             EndDate    EndTime   Enc
Departure Arrival   Passgrs.  Status
------------------------------------------------------------------------------------------------------------
----------------------------------------------------
100       1         2         3         4         6         04-21-2018 09:00    America/Chicago     04-21-2018 14:00
America/New_York    DFW       JFK       100       SCHEDULED
```