**Task 1**

Use the frequent flyer database.**List all flights (Flight\_no) for those that leaves HOU or SFO**

SELECT Flight\_no from flight where Flight\_origin in ('HOU', 'SFO');

**Task 2**

Use the frequent flyer database.Generate a list of all information about the frequently flyer whose first name starts with “D”.

Select Flyer\_name from flyer where Flyer\_name like 'D%'; # as the ques says first name

If first name is after comma then the below code can be used:-

Select Flyer\_name from flyer where Flyer\_name like '%, D.';

**Task 3**

Use the frequent flyer database.Generate a list of all flight operators, along with the number of flights of each operator, and its average miles per flight. Order the output by the average miles per flight in an descending order.

Select flight\_operator,count(\*),avg(miles\_per\_flight) from flight

group by flight\_operator

order by avg(miles\_per\_flight) desc;

**Task 4**

Use the frequent flyer database.Generate a list of trips (from the trip table), including the Flight\_no, Flight\_date, and another column which shows “expensive” when the Flight\_fare is greater than 300, and shows “cheap” otherwise.

select flight\_no, flight\_date, case when flight\_fare > 300 then 'expensive' else 'cheap' end as flight\_fare\_description from trip;

**Task 5**

Use the frequent flyer database.List the name of the flyers who ever went to Atlanta flight

select flyer.flyer\_name

from flyer, trip,flight

where flyer.frequent\_flyer\_id= trip.frequent\_flyer\_id

and trip.flight\_no = flight.flight\_no

and flight.flight\_destination = 'ATL';

**Task 6**

Use the frequent flyer database.Generate the Frequent\_Flyer\_ID of the flyers who took First class flights at least 2 times.

select frequent\_flyer\_id, count(\*) from trip

where flight\_seating = 'First'

group by frequent\_flyer\_id

having count(\*) >= 2;

**Task 7**

Use the frequent flyer database.What is the most visited flight destination?

select flight\_destination, count(\*) from flight

group by flight\_destination

order by count(\*) desc

limit 1;

# as per data since there are 2 destinations which are most popular, so we can also use limit 2 if required

**Task 8**

Use the book loan dataset.Extract the most popular author in the university (borrowed the most of the times)

select Book.Book\_First\_Author, count(\*)

from loan,copy,book

where loan.Book\_Call\_No=copy.Book\_Call\_No

and copy.Book\_ISBN=book.Book\_ISBN

group by Book.Book\_first\_author

order by count(\*) desc

limit 1;

# as per data since there are 2 book authors which are most popular, so we can also use limit 2 if required

**Task 9**

Use the book loan dataset.We have two chemistry books in the library, show the one with more popularity (borrowed by more students).

Select copy.Book\_ISBN, count(\*) from loan, copy, book

where loan.book\_call\_no = copy.book\_call\_no

and copy.book\_isbn = book.book\_isbn

and book.Book\_Title = "Basic Chemistry"

group by copy.Book\_ISBN

order by count(\*) desc

limit 1;

**Task 10**

Use the book loan dataset.Calculate the average numbers of books borrowed by each student.

Select count(\*)/count(distinct stu\_id) as Average\_book\_per\_student

from loan;