SQL Query Results

a. List each staff number and the number of swipe card records that exist for each staff number. Sort by the largest number of records first to the smallest number of records being last.

Ans. select `staff number`, count(*) as `number of swipe cards` from `swipe card` group by `staff number` order by 2 desc;

staff number	number of swipe cards
101	3
104	3
102	2
103	1
105	1

b. List the distinct staff names and staff numbers (from the staff card) of all staff who have 2 or more spot reservations. Sort by staff surname in ascending dictionary order.

Ans. select `last name`, `given name`,`staff number` from `swipe card` where `card id` in (select `card id` from `spot reservation` group by `card id` having count(*)>=2)order by `last name`;

last name	given name	staff number
gowda	jyothi	103
rebelo	ashley	102
savanur	fayyaz	101

c. Show all entry attempts for a chosen swipe card (use where `card id` = to choose the card id you want to use for your query). Leave a comment above your query indicating which card id you want the marker to test with. (e.g. 61688)

Ans. select `card id`, count(*) from `spot area entry attempt` group by `card id`;

card id	count(*)
771	4
772	2
773	1
774	1
775	1

 # test the card id =771 because it has more entries compared to other card id's

```
select * from `spot area entry attempt`
where `card id` =771;
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attempt id	card id	area id	date and time of entry
501	771	20	2022-11-11 13:23:44
507	771	20	2022-11-11 13:23:44
508	771	20	2022-11-11 13:23:44
509	771	20	2022-11-11 13:23:44

d. List the details of each Car Park and the total number of numbered parking spots in each car park.

Ans. select t5.`carpark id`,t5.`map reference`,`description`,count(t5.`parking spot id`) as `Total parking spots`from (select t3.`carpark id`,t3.`map reference`,t3.`description`,t4.`parking spot id` from `car park` as t3 left join(select t1.`area id`,t1.`carpark id`,t2.`parking spot id` from `spot reservation parking area` as t1 left join `numbered parking spot`as t2 on t1.`area id`=t2.`area id`) as t4 on t3.`carpark id`=t4.`carpark id`) as t5 group by t5.`carpark id`;

carpark id	map reference	description	Total parking spots
1	gmaps	turn right in roundabout	5
2	hmaps	turn left in roundabout	4
3	imaps	go straight in roundabout	3
4	jmaps	turn right in t intersection	2
5	kmaps	turn left in t intersection	1

e. How many cars has each swipe card ever been associated with? List each swipe card id and count of different number plates.

Ans. select `number plate`,count(`card id`) as `number of swipe cards` from `spot reservation` group by `number plate` having count(`card id`)>=1;

number plate	number of swipe cards
111	1
112	5
113	2
114	2
115	6

select `card id`,count(`number plate`) as `number of different cars` from `spot reservation` group by `card id`;

card id	number of different cars
771	5
772	6
773	3
774	1
775	1

f. For a given timeslot (your choice of year and semester), how many parking spots are not allocated in each car park? Leave a comment above your query indicating which year and semester you want the marker to test with. (e.g. 2021, s2).

Ans. create table dumy as
select t5.`carpark id`,t5.`map reference`,`description`,count(t5.`parking spot id`) as `total parking spots` from (select t3.`carpark id`,t3.`map reference`,t3.`description`,t4.`parking spot id` from `car park` as t3 left join(select t1.`area id`,t1.`carpark id`,t2.`parking spot id` from `spot reservation parking area` as t1 left join `numbered parking spot`as t2 on t1.`area id`=t2.`area id`) as t4 on t3.`carpark id`=t4.`carpark id`) as t5 group by t5.`carpark id`;

create table dumy1 as select t2.year,t2.Semester,t1.`parking spot id`,t1.`area id` from `numbered parking spot` as t1 inner join allocation as t2 on t1.`parking spot id`=t2.`parking spot id`;
select * from dumy1;

create table dumy2 as select t1.`area id`,t1.`carpark id`,t2.year,t2.Semester from `spot reservation parking area` as t1 inner join dumy1 as t2 on t1.`area id`=t2.`area id`;

select * from dumy;
select * from dumy2;
create table dumy4 select `carpark id`,`year`,Semester,count(*) as allocated from dumy2
group by `carpark id`,`year`,Semester;
select * from dumy4;

select t1.`carpark id`,t2.year,t2.Semester, (t1.`total parking spots` - t2.allocated) as `number of spots not allocated` from dumy as t1 left join dumy4 as t2 on t1.`carpark id`=t2.`carpark id`;

	carpark id	year	Semester	number of spots not allocated
▶	1	2022	s1	4
	2	2022	s2	3
	3	2022	s3	2
	4	2022	s4	1
	5	2023	s1	0

As number of parking spots not allocated in year 2022 and semester s1 are more I would like to select it.
select t1.`carpark id`,t2.year,t2.Semester, (t1.`total parking spots` - t2.allocated) as `number of spots not allocated` from dumy as t1 left join dumy4 as t2 on t1.`carpark id`=t2.`carpark id`
where t2.year=2022 and t2.Semester='s1';

	carpark id	year	Semester	number of spots not allocated
▶	1	2022	s1	4

g. What is the total $ amount that each staff member has paid for parking during the lifetime of this system? In the query, list the staff number and the total $ amount for that staff member.

Ans. select t1.`staff number`, sum(t2.`payment amount`) as `Total Payment` from `swipe card` as t1 left join `spot reservation` as t2 on t1.`card id`=t2.`card id` group by t1.`staff number`;

staff number	Total Payment
101	502.50
102	603.00
103	301.50
104	100.50
105	100.50

h. How much revenue (payments total) has each car park brought in each year? List the car park id, year, and total $ amount for that car park for that year.

Ans. select t7.`carpark id`, t7.year, sum(t7.`payment amount`) from ((select t5.`carpark id`, t6.year, t6.`payment amount` from `spot reservation parking area` as t5 inner join(select t3.`area id`, t4.year, t4.`payment amount` from `numbered parking spot` as t3 inner join(select t1.`parking spot id`,t1.year, t2.`payment amount` from allocation as t1 inner join `spot reservation` as t2 on t1.`reservation id`= t2.`reservation id`) as t4 on t3.`parking spot id`=t4.`parking spot id`) as t6 on t5.`area id`=t6.`area id`)) as t7 group by t7.`carpark id`, t7.year;

carpark id	year	sum(t7.`payment amount`)
1	2022	201.00
2	2022	201.00
3	2022	100.50
4	2022	100.50
5	2023	100.50