

HOTEL & SPA DATA MANAGEMENT SYSTEM

A system for hotel reservations and staff management is one under which the hotel keeps a record the visitor.

A guest can book room/rooms in either category, these records assist in producing the final invoice, to the workers at the front desk.

And our scheme provides staff with controlling and coordination of jobs.

The control scheme for the hotel data base should be able to meet the following requirements.

The device should be able to maintain the visitors' records and the space allocated to them,

Guests should be able to reserve any category of room,

you can reach the payment customers' information,

Can access data for staff,

the information of the spa data can be found.

3. Guest

(Guest_id, Guest_Fname, Guest_Lname, Guest_phone, Guest_bday, Guest_nationality, Guest_email)

Guest_id	Guest_Fname	Guest_Lname	Guest_phone	Guest_bday	Guest_nationality	Guest_email
997701	Ma	To	72563478	1978-10-18	Brazilian	ma@gmail.com
997702	Ri	Tm	81776682	1998-07-08	Lebanese	ri@gmail.com
997703	Da	Hd	76957135	1990-03-28	Lebanese	da@gmail.com
997704	Mi	Mo	2786417	1988-12-01	italian	mik@gmail.com
997705	Ct	Md	3978478	1996-02-18	italian	ct@gmail.com
997706	Va	So	1131197	1980-06-13	Canedian	va@gmail.com
997707	Li	Ts	7987256	1992-05-06	Syrian	lid@gmail.com
997708	Al	Zh	3787851	1978-10-18	colombian	al@gmail.com
NULL	NULL	NULL	NULL	NULL	NULL	NULL

4. category (catg_name, personnb, costperday, bedtype, features)

catg_name	personnb	costperday	bedtype	features
Double	2	20	single	wifi,AC,Bathroom
Queen	2	30	Queen-size	wifi,AC,TV,Bathroom
Single	1	15	single	wifi,AC,Bathroom
Studio	4	44	Queen-size/single	wifi,AC,TV,Bathroom

5. room (room_id, floor, catg_name)

room_id	floor	catg_name
101	1	Single
102	1	Single
103	1	Single
104	1	Single
201	2	Double
202	2	Double
203	2	Double
301	3	Queen
302	3	Queen
401	4	Studio
402	4	Studio

6. Spa (Spa_id, staff_id, guest_id)

Spa_id	staff_id	guest_id
930301	3332	997701
930302	3332	997705
930303	3333	997708
NULL	NULL	NULL

→ staff_id represent staff of department spa

7. spa_Pay (Spa_pay_id,Spa_id,staff_id,spa_amount)

Spa_pay_id	Spa_id	staff_id	spa_amount
60601	930301	2222	50
60602	930302	2223	50
60603	930303	2223	50
NULL	NULL	NULL	NULL

8. Reservation

(Reservation_id,Staff_ID,Reservation_date,Start_date,End_date,guest_id,room_id)

Reservation_id	Staff_ID	Reservation_date	Start_date	End_date	guest_id	room_id
4455001	2222	2020-01-15	2020-01-16	2020-01-26	997701	103
4455003	2222	2020-02-01	2020-02-02	2020-02-14	997702	202
4455007	2222	2020-02-09	2020-02-10	2020-02-17	997703	301
4455015	2223	2020-02-15	2020-02-20	2020-02-24	997704	402
4455019	2223	2020-03-10	2020-03-15	2020-03-30	997705	104
4455020	2223	2020-04-01	2020-04-05	2020-04-10	997706	203
4455026	2223	2020-03-05	2020-03-07	2020-03-10	997707	302
4455033	2223	2020-04-08	2020-04-10	2020-04-18	997708	401
NULL	NULL	NULL	NULL	NULL	NULL	NULL

→ staff_id represent staff of department reservation

9. invoice (invoice_id,Reservation_id,amount,purchased_type,invoice_date)

invoice_id	Reservation_id	amount	purchased_type	invoice_date
20203771	4455001	150	Cash	2020-01-16
20203782	4455003	240	Cash	2020-02-02
20203824	4455007	210	Visa	2020-02-10
20203920	4455015	160	Cash	2020-02-20
20203935	4455019	225	Visa	2020-03-15
20203939	4455020	100	Cash	2020-04-05
20203958	4455026	90	Visa	2020-03-07
20203974	4455033	320	Cash	2020-04-10
NULL	NULL	NULL	NULL	NULL

Queries:

1. report the name of Staff and dept name for each reservation .
select RV.Reservation_id,RV.Staff_ID,staff.Staff_Fname,DT.Dept_Name
from reservation RV ,staff ,department DT
where staff.Staff_ID=RV.Staff_ID and staff.Dept_id=DT.Dept_id;

Reservation_id	Staff_ID	Staff_Fname	Dept_Name
4455001	2222	I	Reservation
4455003	2222	I	Reservation
4455007	2222	I	Reservation
4455015	2223	E	Reservation
4455019	2223	E	Reservation
4455020	2223	E	Reservation
4455026	2223	E	Reservation
4455033	2223	E	Reservation

2. report the names and nationality of the Guests who's have a TV in his room and the number and floor of the room .
select
GT.Guest_Fname,GT.Guest_Lname,GT.Guest_nationality,room.room_id,room.floor
from room , reservation RV ,guest GT ,category CG
where room.room_id=RV.room_id and RV.Guest_id=GT.Guest_id and
room.catg_name=CG.catg_name
and CG.features regexp 'TV';

Guest_Fname	Guest_Lname	Guest_nationality	room_id	floor
Da	Hd	Lebanese	301	3
Mi	Mo	italian	402	4
Li	Ts	Syrian	302	3
Al	Zh	colombian	401	4

3. List the names of the Staff who earn more than salary avg
select staff.Staff_ID,Staff.Staff_Fname,DT.Dept_Name
from staff , department DT
where staff.Dept_id=DT.Dept_id and staff.Staff_salary > (select avg(Staff_salary) from Staff);

Staff_ID	Staff_Fname	Dept_Name
1111	K	Management
2221	N	Management
3331	S	Management

4. Report the count of different Spa service make by same staff .
 select staff.Staff_Fname, DT.dept_name,count(spa.spa_id)
 from staff , spa , department DT
 where spa.Staff_ID=staff.Staff_ID and staff.Dept_id=DT.Dept_id
 group by (SPA.Staff_ID);

Staff_Fname	dept_name	count(spa.spa_id)
N	Spa	2
S	Spa	1

5. report the total amount of reservation staff from maximum to minimum .
 select staff.staff_Fname,sum(IV.amount)as "Total amount"
 from staff ,invoice IV, Reservation RV
 where RV.Reservation_id=IV.Reservation_id and Staff.Staff_ID=RV.Staff_ID
 group by(Staff.Staff_ID)
 order by (sum(IV.amount)) DESC;

staff_Fname	Total amount
E	895
I	600

6. report the number of days for each booking
 select GT.Guest_id,GT.Guest_Fname,(IV.amount/CG.costperday) as "Nb of days"
 from guest GT ,invoice IV, reservation RV,room,category CG
 where RV.reservation_id=IV.reservation_id and room.room_id=RV.room_id
 and room.catg_name=CG.catg_name and RV.Guest_id=GT.Guest_id;

Guest_id	Guest_Fname	Nb of days
997701	Ma	10
997702	Ri	12
997703	Da	7
997704	Mi	4
997705	Ct	15
997706	Va	5
997707	Li	3
997708	Al	8

7. Report all booking for syrian Guest exist in Queen room

```
select RV.reservation_id,RV.guest_id,GT.guest_Fname
from reservation RV, guest GT
where GT.guest_id=RV.guest_id and Guest_nationality='syrian'
and EXISTS (SELECT * FROM room
WHERE room.room_id=RV.room_id and room.catg_name='Queen' );
```

reservation_id	guest_id	guest_Fname
4455026	997707	Li

8. report all staff contact with each guest.

```
select GT.Guest_id , GT.Guest_Fname ,staff.staff_Id,staff.Staff_Fname , DT.dept_name
from guest GT , spa ,staff , department DT
where spa.Staff_ID=staff.Staff_ID and staff.Dept_id=DT.Dept_id and
GT.guest_id=spa.guest_id
UNION
select GT.Guest_id , GT.Guest_Fname ,staff.staff_Id,staff.Staff_Fname , DT.dept_name
from guest GT , reservation RV,staff , department DT
where staff.Staff_ID=RV.Staff_ID and GT.Guest_id=RV.Guest_id and
staff.Dept_id=DT.Dept_id
ORDER BY Guest_id ;
```

Guest_id	Guest_Fname	staff_Id	Staff_Fname	dept_name
997701	Ma	3332	N	Spa
997701	Ma	2222	I	Reservation
997702	Ri	2222	I	Reservation
997703	Da	2222	I	Reservation
997704	Mi	2223	E	Reservation
997705	Ct	3332	N	Spa
997705	Ct	2223	E	Reservation
997706	Va	2223	E	Reservation
997707	Li	2223	E	Reservation
997708	Al	3333	S	Spa
997708	Al	2223	E	Reservation

9. update the costperday increace 10% for studio
 update category
 SET costperday = costperday*1.1
 where catg_name = 'studio';

catg_name	personnb	costperday
Double	2	20
Queen	2	30
Single	1	15
Studio	4	40
NULL	NULL	NULL

BEFORE

→

catg_name	personnb	costperday
Double	2	20
Queen	2	30
Single	1	15
Studio	4	44

AFTER

10. create a view voucher

```
CREATE VIEW Voucher AS
select GT.Guest_Fname , GT.Guest_Lname,GT.Guest_nationality
,(IV.amount/CG.costperday) as "Nb of days",
room.catg_name,RV.room_id,IV.amount as "total
amount",IV.invoice_date,IV.purchased_type,staff.staff_Fname
from (((((reservation RV
inner join room on room.room_id=RV.room_id)
inner join category CG on CG.catg_name=room.catg_name)
inner join staff on RV.staff_id=staff.staff_id )
inner join guest GT on RV.guest_id=GT.guest_id)
inner join invoice IV on IV.Reservation_id=RV.Reservation_id) ;
```

Guest_Fname	Guest_Lname	Guest_nationality	Nb of days	catg_name	room_id	total amount	invoice_date	purchased_type	staff_Fname
Ma	To	Brazilian	10	Single	103	150	2020-01-16	Cash	I
Ri	Tm	Lebanese	12	Double	202	240	2020-02-02	Cash	I
Da	Hd	Lebanese	7	Queen	301	210	2020-02-10	Visa	I
Mi	Mo	italian	3.63636363636362	Studio	402	160	2020-02-20	Cash	E
Ct	Md	italian	15	Single	104	225	2020-03-15	Visa	E
Va	So	Canedian	5	Double	203	100	2020-04-05	Cash	E
Li	Ts	Syrian	3	Queen	302	90	2020-03-07	Visa	E
Al	Zh	colombian	7.27272727272725	Studio	401	320	2020-04-10	Cash	E

This method allows the owner to manage and coordinate the hotel in order to have the best results and Servers for his guest.

