



HOTEL MANAGEMENT SYSTEM.

Final project for MySQL module

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1.) DESCRIPTION;

Following database schema is designed to function as a backend storage database for a web application built to manage a hotel.

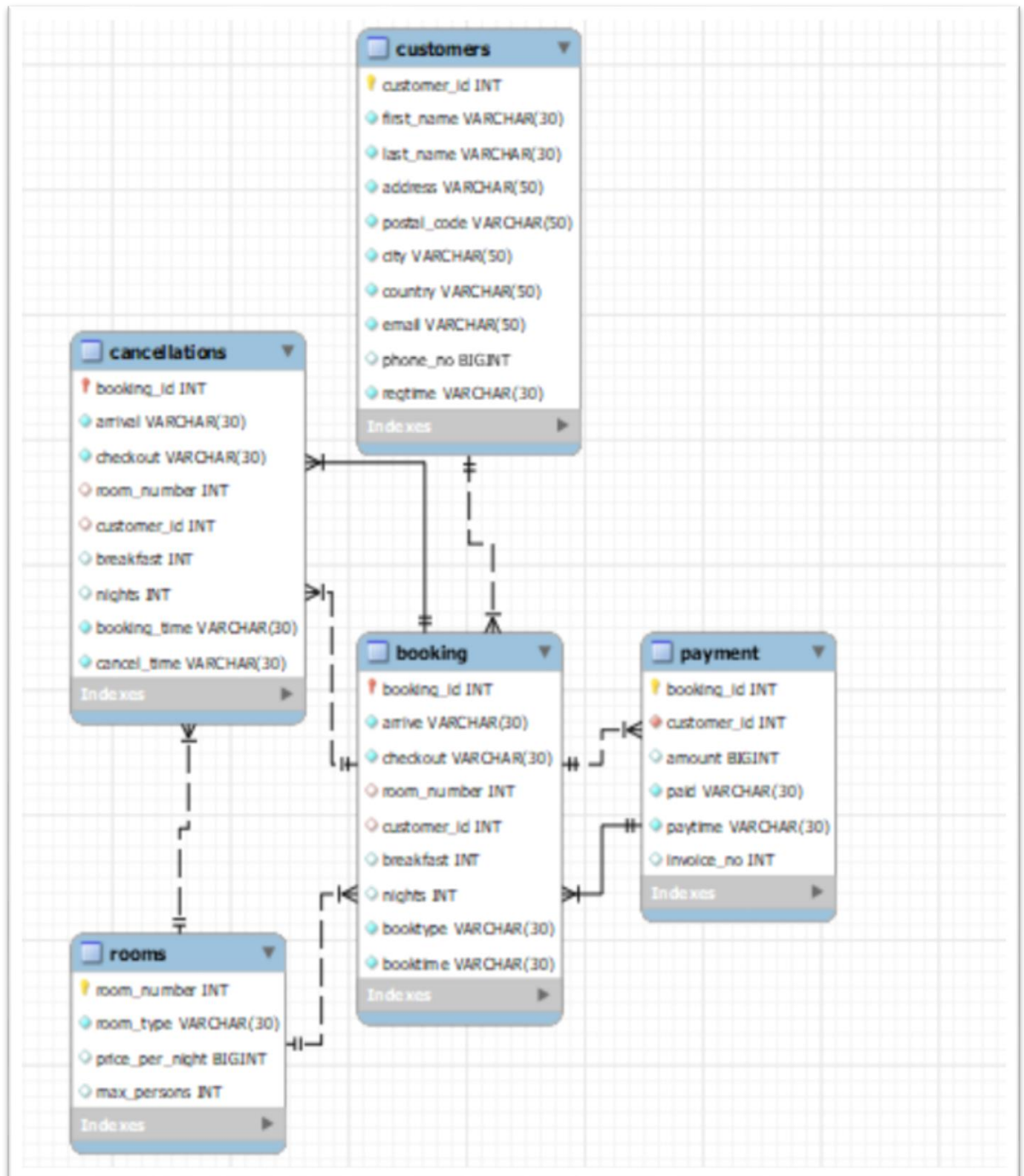
Hotel management project provides room booking, staff management and other necessary hotel management

features. The system allows the manager to post available rooms in the system. Customers can view and book room online. Admin has the power of either approving or disapproving the customer's booking request.

THIS DATABASE CONTAIN 5
TABLES:




- 1) Customers.
- 2) Bookings.
- 3) Payments.
- 4) Rooms.
- 5) Cancellations.

2) E-R DIAGRAM FOR HOTEL MANAGEMENT SYSTEM:






3) TABLE DESCRIPTIONS:

1) BOOKING:

Result Grid  Filter Rows: <input type="text"/> Export:  Wrap Cell Content: 						
	Field	Type	Null	Key	Default	Extra
▶	booking_id	int	NO	PRI	NULL	
	arrive	varchar(30)	NO		NULL	
	checkout	varchar(30)	NO		NULL	
	room_number	int	YES	MUL	NULL	
	customer_id	int	YES	MUL	NULL	
	breakfast	int	YES		NULL	
	nights	int	YES		NULL	
	booktype	varchar(30)	NO		NULL	
	booktime	varchar(30)	NO		NULL	

Result 2 x

2) CUSTOMERS:

Result Grid  Filter Rows: <input type="text"/> Export:  Wrap Cell Content: 						
	Field	Type	Null	Key	Default	Extra
▶	customer_id	int	NO	PRI	NULL	
	first_name	varchar(30)	NO		NULL	
	last_name	varchar(30)	NO		NULL	
	address	varchar(50)	NO		NULL	
	postal_code	varchar(50)	NO		NULL	
	city	varchar(50)	NO		NULL	
	country	varchar(50)	NO		NULL	
	email	varchar(50)	NO		NULL	
	phone_no	bigint	YES		NULL	
	regtime	varchar(30)	NO		NULL	

3) PAYMENT:

Result Grid Filter Rows: Export: Wrap Cell Content:						
	Field	Type	Null	Key	Default	Extra
▶	booking_id	int	NO	PRI	NULL	
	customer_id	int	NO	MUL	NULL	
	amount	bigint	YES		NULL	
	paid	varchar(30)	NO		NULL	
	paytime	varchar(30)	NO		NULL	
	invoice_no	int	YES		NULL	

4) ROOMS:

Result Grid Filter Rows: Export: Wrap Cell Content:						
	Field	Type	Null	Key	Default	Extra
▶	room_number	int	NO	PRI	NULL	
	room_type	varchar(30)	NO		NULL	
	price_per_night	bigint	YES		NULL	
	max_persons	int	YES		NULL	

Result 8 Result 9 Result 10 Result 11 ×

5) CANCELLATIONS:

Result Grid Filter Rows: Export: Wrap Cell Content:						
	Field	Type	Null	Key	Default	Extra
▶	booking_id	int	NO	PRI	NULL	
	arrival	varchar(30)	NO		NULL	
	checkout	varchar(30)	NO		NULL	
	room_number	int	YES	MUL	NULL	
	customer_id	int	YES	MUL	NULL	
	breakfast	int	YES		NULL	
	nights	int	YES		NULL	
	booking_time	varchar(30)	NO		NULL	
	cancel_time	varchar(30)	NO		NULL	

Result 12 Result 13 Result 14 Result 15 Result 16 ×

4) COMMANDS:

- **Create database:** create database hotel_management;
- **Select databases:** use hotel_management;
- **Create table named booking:** create table booking (booking_id int not null, arrive varchar (30) not null, checkout varchar (30) not null, room_number int, customer_id int, breakfast int, nights int, booktype varchar (30) not null, booktime varchar (30) not null, primary key(booking_id));
- **Create table named customer:** create table customers (customer_id int not null, first_name varchar (30) not null, last_name varchar (30) not null, address varchar (50) not null, postal_code varchar (50) not null, city varchar (50) not null, country varchar (50) not null, email varchar (50) not null, phone_no bigint,

regtime varchar (30) not null, primary key(customer_id));

- **Create table named rooms:** create table rooms (room_number int not null, room_type varchar (30) not null, price_per_night bigint, max_person int, primary key(room_number));
- **Create table named payment:** create table payment (booking_id int not null, customer_id int not null, amount bigint, paid varchar (30) not null, paytime varchar (30) not null, invoice_no int, primary key (booking_id));
- **Create table named cancellations:** create table cancellations (booking_id int not null, arrival varchar (30) not null, checkout varchar (30) not null, room_number int, customer_id int, breakfast int, nights int, booking_time varchar (30) not null, cancel_time varchar (30) not null, primary key (booking_id));

5) INSERT TABLE:

- **Select * from booking;**

	booking_id	arrive	checkout	room_number	customer_id	breakfast	nights	booktype	booktime
▶	101	1-01-2022	3-01-2022	201	11110	2	2	online	2.00
	102	2-02-2022	5-02-2022	202	11212	3	3	online	4.30
	103	3-02-2022	6-02-2022	203	12324	3	3	offline	1.25
	104	7-03-2022	11-03-2022	204	12567	3	4	online	3.00
	105	9-03-2022	15-03-2022	205	12433	5	6	online	11.45
	106	4-03-2022	8-03-2022	206	12646	3	4	online	12.35
	107	20-03-2022	24-03-2022	207	12232	4	5	online	4.00
	108	26-03-2022	28-03-2022	208	11243	2	3	offline	12.01
	109	27-03-2022	28-03-2022	209	12212	1	2	offline	2.35
	110	2-04-2022	8-04-2022	202	23231	6	7	online	10.00
	111	4-04-2022	5-04-2022	208	28373	1	2	online	9.00
	112	4-05-2022	10-05-2022	201	27363	6	7	online	12.37
	113	5-05-2022	8-05-2022	206	47462	3	4	offline	4.00
	114	5-06-2022	9-06-2022	210	64642	4	5	online	2.56
	115	7-07-2022	10-07-2022	211	82783	3	4	online	3.56
	116	16-07-2022	25-07-2022	204	82390	9	10	online	11.23
	117	23-07-2022	27-07-2022	209	88370	4	5	online	9.00
	118	2-08-2022	5-08-2022	210	88381	3	4	offline	8.00
	119	10-08-2022	15-08-2022	211	83830	5	4	online	1.00

[illegible]

- **Select * from customers;**

	customer_id	first_name	last_name	address	postal_code	city	country	email	phone_no	regtime
▶	10002	priya	kumar	205 homeland 7 street	110041	delhi	india	priya12@gmail.com	4653643631	9.30
	10003	kira	hastings	10 almshouse ave apt 75	12345	chicago	USA	kirah12@gmail.com	9045367289	10.00
	10032	anabel	chong	10-11 richards park	546363	richards place	singapore	anabel@gmail.com	6453672891	7.35
	10067	nitin	kumar	123 kamala nagar amritsar	143502	punjab	india	nitink32@gmail.com	987654534	11.01
	10080	alish	bahadori	secco building n villa avenue 264	653471	tehran	Iran	alish546@gmail.com	3546252512	2.00
	10089	aiko	hagaki	1-1 haga-cho	111111	tokyo	japan	aiko@gmail.com	4563789032	8.35
	11110	reshma	khan	swami siddhant new dp road katrap	421503	badlapur	india	reshmakhan@gmail.com	7776945986	2.00
	11212	sakshi	gawde	sapphire blossom new road nashik	420003	nashik	india	sakshi1922@gmail.com	1262653538	4.30
	11243	siddhant	sangai	varuna tower building vasanta nagar	400053	andheri	india	siddhant008@gmail.com	7856453210	12.01
	12212	sarika	gada	sai tower building virar lake	400063	goregoan	india	sarikagada01@gmail.com	9786442321	2.35
	12232	arshi	gore	aspire tower building durga nagar	421301	kalyan	india	arshi112@gmail.com	9373636112	4.00
	12324	alina	shonde	konarkshram complex malviya road	400088	tardeo	india	alina110@gmail.com	7465326489	1.25
	12332	michael	howard	7/25 adelaida st	4000	brisbane	australia	michael329@gmail.com	1567389201	11.08
	12433	raj	mahadik	next day building louis wadi	400080	thane	india	rajmahadik1080@gmail....	7065453210	11.45
	12567	mayuri	pawar	dora dive old road shiv nagar	400001	mumbai	india	mayuripawar10@gmail.c...	5234678903	3.00
	12646	harshal	jinturkar	dosti vihar building vartak nagar	400080	thane	india	harshaljinturkar@gmail.c...	7563432901	12.35
	22323	aadya	bakshi	54 kawran bazar dhaka	1215	dhaka	bangladesh	aadyab01@gmail.com	123478533	7.00
	23231	neelam	khan	oberoi tower building beach candy	400001	mumbai	india	neelamkhan18@gmail.com	9130231270	10.00
	27236	marv	iones	ottawa ontario	100011	toronto	canada	marviones11@gmail.com	1133445599	10.11

[illegible]

- **Select * from rooms;**

	room_number	room_type	price_per_night	max_persons
►	201	single	1500	1
	202	double	1800	2
	203	quad	2000	3
	204	queen	3000	3
	205	king	3000	3
	206	single	1500	1
	207	quad	2000	3
	208	quad	2000	3
	209	queen	3000	3
	210	king	3000	3
	211	queen	3000	3
	212	quad	2000	3
	213	single	1500	1
	214	king	3000	3
	215	queen	3000	3
	216	quad	2000	3
	217	double	1800	2
	218	double	1800	2
●	NULL	NULL	NULL	NULL

- **Select * from payment;**

	booking_id	customer_id	amount	paid	paytime	invoice_no
▶	101	11110	9000	online	2.00	131
	102	11212	5000	online	4.30	132
	103	12324	6000	online	1.25	133
	104	12567	6000	online	3.00	134
	105	12433	12000	offline	11.45	135
	106	12646	6000	online	12.35	136
	107	12232	10000	online	4.00	137
	108	11243	2000	offline	12.01	138
	109	12212	2000	offline	2.35	139
	110	23231	15000	online	10.00	140
	111	28373	3000	online	9.00	141
	112	27363	12000	online	12.37	142
	113	47462	6000	offline	4.00	143
	114	64642	9000	online	2.56	144
	115	82783	6000	online	3.56	145
	116	82390	17000	online	11.23	146
	117	88370	9000	online	9.00	147
	118	88381	9000	offline	8.00	148
	119	83830	12000	offline	1.00	149

	120	73731	16000	offline	11.53	150
	121	92828	9000	online	6.00	151
	122	22323	6000	offline	7.00	152
	123	27236	9000	online	10.11	153
	124	12332	16000	online	11.08	154
	125	10080	9000	online	2.00	155
	126	10032	9000	offline	7.35	156
	127	10089	10000	online	8.35	157
	128	10002	5000	online	9.30	158
	129	10003	9000	offline	10.00	159
	130	10067	10000	online	11.01	160
•	NULL	NULL	NULL	NULL	NULL	NULL

- **Select * from cancellations;**

[illegible]

6) PREPARTION OF TABLE:

1) *Display all records in booking table with arrive, checkout, customer_id fields?*


Syntax: select arrive, checkout, customer_id from booking;

	arrive	checkout	customer_id
▶	1-01-2022	3-01-2022	11110
	2-02-2022	5-02-2022	11212
	3-02-2022	6-02-2022	12324
	7-03-2022	11-03-2022	12567
	9-03-2022	15-03-2022	12433
	4-03-2022	8-03-2022	12646
	20-03-2022	24-03-2022	12232
	26-03-2022	28-03-2022	11243
	27-03-2022	28-03-2022	12212
	2-04-2022	8-04-2022	23231
	4-04-2022	5-04-2022	28373
	4-05-2022	10-05-2022	27363
	5-05-2022	8-05-2022	47462
	5-06-2022	9-06-2022	64642
	7-07-2022	10-07-2022	82783
	16-07-2022	25-07-2022	82390
	23-07-2022	27-07-2022	88370

	2-08-2022	5-08-2022	88381
	10-08-2022	15-08-2022	83830
	10-09-2022	15-09-2022	73731
	11-10-2022	12-10-2022	92828
	11-11-2022	12-11-2022	22323
	17-11-2022	19-11-2022	27236
	1-12-2022	8-12-2022	12332
	28-12-2022	1-01-2023	10080
	2-03-2023	6-03-2023	10032
	4-04-2023	8-04-2023	10089
	7-05-2023	9-05-2023	10002
	10-05-2023	14-05-2023	10003
	19-05-2023	24-05-2023	10067

2) Display details of customers whose name start with 'a'?

Syntax: select first_name from customers where first_name like "a%";



A screenshot of a database query result. It shows a table with one column labeled 'first_name'. The table contains ten rows of names: anabel, alish, aiko, arshi, alina, aadya, adwer, alesha, and abasi. The names are listed in ascending alphabetical order. The first row 'anabel' is highlighted with a blue background, and the last row 'abasi' is also highlighted with a blue background.

first_name
anabel
alish
aiko
arshi
alina
aadya
adwer
alesha
abasi

3) Display the list of rooms in ascending order of their room_type?

Syntax: select * from rooms order by room_type;

	room_number	room_type	price_per_night	max_persons
▶	202	double	1800	2
	217	double	1800	2
	218	double	1800	2
	205	king	3000	3
	210	king	3000	3
	214	king	3000	3
	203	quad	2000	3
	207	quad	2000	3
	208	quad	2000	3
	212	quad	2000	3
	216	quad	2000	3
	204	queen	3000	3
	209	queen	3000	3
	211	queen	3000	3
	215	queen	3000	3
	201	single	1500	1
	206	single	1500	1

•	213	single	1500	1
	NULL	NULL	NULL	NULL

- 4) *How many amounts did each customer paid?
Use the payment table. Select the customer_id,
number of amounts they paid, and the sum of
their amount?*

Syntax: select customer_id,
count(customer_id), sum(amount) from
payment group by customer_id;

	customer_id	count(customer_id)	sum(amount)
▶	10002	1	5000
	10003	1	9000
	10032	1	9000
	10067	1	10000
	10080	1	9000
	10089	1	10000
	11110	1	9000
	11212	1	5000
	11243	1	2000
	12212	1	2000
	12232	1	10000
	12324	1	6000
	12332	1	16000
	12433	1	12000
	12567	1	6000
	12646	1	6000
	22323	1	6000

	23231	1	15000
	27236	1	9000
	27363	1	12000
	28373	1	3000
	47462	1	6000
	64642	1	9000
	73731	1	16000
	82390	1	17000
	82783	1	6000
	83830	1	12000
	88370	1	9000
	88381	1	9000
	92828	1	9000

5) Explicit use join clause?

Syntax: select * from booking inner join customers on customers.customer_id = booking.Customer_id;

er	customer_id	breakfast	nights	booktype	booktime	customer_id	first_name	last_name	address	postal_code	city	country	email	phone_no	regtime
▶	10002	2	3	online	9.30	10002	priya	kumar	205 homeland 7 street	110041	delhi	india	priya12@gmail.com	4653643631	9.30
	10003	3	4	online	10.00	10003	kira	hastings	10 almshouse ave apt 75	12345	chicago	USA	kirah12@gmail.com	9045367289	10.00
	10032	3	5	offline	7.35	10032	anabel	chong	10-11 richards park	546363	richards place	singapore	anabel@gmail.com	6453672891	7.35
	10067	5	6	online	11.01	10067	nitin	kumar	123 kamala nagar amritsar	143502	punjab	india	nitink32@gmail.com	987654534	11.01
	10080	4	5	online	2.00	10080	alish	bahadori	secco building n villa avenue 264	653471	tehran	Iran	alish546@gmail.com	3546252512	2.00
	10089	5	6	online	8.35	10089	aiko	hagaki	1-1 haga-cho	111111	tokyo	japan	aiko@gmail.com	4563789032	8.35
	11110	2	2	online	2.00	11110	reshma	khan	swami sidhant new dp road katrap	421503	badapur	india	reshmakhan@gmail.com	7776945986	2.00
	11212	3	3	online	4.30	11212	sakshi	gawde	sapphire blossom new road nashik	420003	nashik	india	sakshi1922@gmail.com	1262653538	4.30
	11243	2	3	offline	12.01	11243	siddhant	sangai	varuna tower building vasanta nagar	400053	andheri	india	siddhant008@gmail.com	7856453210	12.01
	12212	1	2	offline	2.35	12212	sanika	gada	sai tower building virar lake	400063	goregoan	india	sanikagada01@gmail.com	9786442321	2.35
	12232	4	5	online	4.00	12232	arshi	gore	aspire tower building durga nagar	421301	kalyan	india	arshi112@gmail.com	9373636112	4.00
	12324	3	3	offline	1.25	12324	alina	shonde	konarkshram complex malviya road	400088	tardeo	india	alina110@gmail.com	7465326489	1.25
	12332	7	7	online	11.08	12332	michael	howard	7/25 adelaida st	4000	brisbane	australia	michael329@gmail.com	1567389201	11.08
	12433	5	6	online	11.45	12433	raj	mahadik	next day building louis wadi	400080	thane	india	rajmahadik1080@gmail....	7065453210	11.45
	12567	3	4	online	3.00	12567	mayuri	pawar	dora dive old road shiv nagar	400001	mumbai	india	mayuripawar10@gmail.c...	5234678903	3.00
	12646	3	4	online	12.35	12646	harshal	tinturkar	dosti vihar building vartak nagar	400080	thane	india	harshalinturkar@gmail.c...	7563432901	12.35

22323	2	3	offline	7.00	22323	aadya	bakshi	54 kawran bazar dhaka	1215	dhaka	bangladesh	aadya01@gmail.com	123478533	7.00
23231	6	7	online	10.00	23231	neelam	khan	oberoi tower building beach candy	400001	mumbai	india	neelamkhan18@gmail.com	9130231270	10.00
27236	3	4	online	10.11	27236	mary	jones	ottawa ontario	100011	toronto	canada	maryjones11@gmail.com	1133445599	10.11
27363	6	7	online	12.37	27363	adiver	jenner	gunnersbury house 1 chapel hill	1112	chapel street	London	adiverjenner9@gmail.com	564534217	12.37
28373	1	2	online	9.00	28373	john	liver	cheery court 71 court southampton	13126	howard street	USA	john18870@gmail.com	987543341	9.00
47462	3	4	offline	4.00	47462	kylie	leo	rue de bourgogne 5 case	1211	geneve	switzerland	kylieleo12@gmail.com	934231687	4.00
64642	4	5	online	2.56	64642	rajiv	rattan	4 amrita shergill road	110003	new delhi	india	rajiv120@gmail.com	9876342145	2.56
73731	5	4	offline	11.53	73731	jon	kirk	221 n. figueroa st. suite	90012	los angeles	USA	jonk756@gmail.com	8765454321	11.53
82390	9	10	online	11.23	82390	inanova	jelena	prospekt tverskaya 9 appart	103009	moscow	russia	jelena554@gmail.com	3545678900	11.23
82783	3	4	online	3.56	82783	sripada	das	sanrat apartment christian basti	781005	guwahati	india	sripadas10@gmail.com	9087453218	3.56
83830	5	4	online	1.00	83830	veena	thayikkan...	a.k.g centre palayam kochi	695034	kerala	india	veena109@gmail.com	9076549812	1.00
88370	4	5	online	9.00	88370	alesha	khan	al quoz industrial area	341308	oakmont	dubai	aleshakhan0@gmail.com	439258041	9.00
88381	3	4	offline	8.00	88381	geeta	vadhwa	1 palam vihar marg chauma	122017	gurgaon	india	geetav@gmail.com	9087653023	8.00
92828	2	3	online	6.00	92828	abasi	adel	16 saray el gezira street	11599	cairo	egypt	abasiadel11@gmail.com	11234522	6.00

6) Explicit use of natural join clause?

Syntax: select * from booking natural join cancellations;

	booking_id	checkout	room_number	customer_id	breakfast	nights	arrive	booktype	booktime	arrival	booking_time	cancel_time
▶	109	28-03-2022	209	12212	1	2	27-03-2022	offline	2.35	27-03-2022	2.35	8.00
	111	5-04-2022	208	28373	1	2	4-04-2022	online	9.00	4-04-2022	9.00	11.45
	118	5-08-2022	210	88381	3	4	2-08-2022	offline	8.00	2-08-2022	8.00	2.00
	121	12-10-2022	201	92828	2	3	11-10-2022	online	6.00	11-10-2022	6.00	9.00

7) Write a query using a join to determine which names are there in the customer table. select the customer_id, first_name, last_name, booking_id, customer_id from cancellations table?

Syntax: select customers. customer_id, customers. First_name, customers.

last_name, cancellations. Booking_id,
cancellations. customer_id from
customers, cancellations where
customers. Customer_id = cancellations.
customer_id;

	customer_id	first_name	last_name	booking_id	customer_id
►	12212	sarika	gada	109	12212
	28373	john	liver	111	28373
	88381	geeta	vadhera	118	88381
	92828	abasi	adel	121	92828

**8) Write a query using a join to determine
booking and payment table. Select the
booking_id, room_number, customer_id
and room_number from rooms table
however display the results sorted by
room_number in descending order?**

Syntax: select booking. booking_id,
booking. room_number, booking.
customer_id, rooms. room_number from
booking, rooms where booking.

**Room_number = rooms. room_number
order by booking. Room_number desc;**

	booking_id	room_number	customer_id	room_number
►	130	217	10067	217
	129	216	10003	216
	128	215	10002	215
	127	214	10089	214
	126	213	10032	213
	123	212	27236	212
	115	211	82783	211
	119	211	83830	211
	120	211	73731	211
	114	210	64642	210
	118	210	88381	210
	109	209	12212	209
	117	209	88370	209
	122	209	22323	209
	108	208	11243	208
	111	208	28373	208
	107	207	12232	207

	124	207	12332	207
	106	206	12646	206
	113	206	47462	206
	125	206	10080	206
	105	205	12433	205
	104	204	12567	204
	116	204	82390	204
	103	203	12324	203
	102	202	11212	202
	110	202	23231	202
	101	201	11110	201
	112	201	27363	201
	121	201	92828	201

9) Find max amount from payment table?

Syntax: select * from payment where amount = (select max(amount) from payment where amount < (select max(amount) from payment));

	booking_id	customer_id	amount	paid	paytime	invoice_no
▶	120	73731	16000	offline	11.53	150
	124	12332	16000	online	11.08	154
•	NULL	NULL	NULL	NULL	NULL	NULL

10) Display list of amounts from payment table in which amount is less than 17000?

Syntax: select count(invoice_no), amount from payment group by amount having min(amount)<17000;

	count(invoice_no)	amount
►	9	9000
	2	5000
	6	6000
	3	12000
	3	10000
	2	2000
	1	15000
	1	3000
	2	16000

11) Apply foreign key?

Syntax: alter table booking add foreign
key(customer_id) references
customer(customer_id);

Syntax: alter table booking add foreign
key(booking_id) references
payment(booking_id);

Syntax: alter table booking add foreign
key(booking_id) references
cancellations(booking_id);

Syntax: alter table booking add foreign
key(room_number) references
rooms(room_number);

Syntax: alter table cancellations add
foreign key(room_number) references
rooms(room_number);

Syntax: alter table cancellations add
foreign key(customer_id) references
booking(customer_id);

Syntax: alter table payment add foreign
key(customer_id) references
booking(customer_id);

12) Show uppercase?

Syntax: select ucase(first_name) from
customers;

	ucase(first_name)
►	PRIYA
	KIRA
	ANABEL
	NITIN
	ALISH
	AIKO
	RESHMA
	SAKSHI
	SIDDHANT
	SARIKA
	ARSHI
	ALINA

	ucase(first_name)
	MICHAEL
	RAJ
	MAYURI
	HARSHAL
	AADYA
	NEELAM
	MARY
	ADWER
	JOHN
	KYLIE
	RAJIV
	JON

13) Return the average value for the price_per_night column in the rooms table?

Syntax: select avg(price_per_night)
from rooms;

	avg(price_per_night)
▶	2272.2222

14) Return the sum value for the price_per_night column in the rooms table?

Syntax: select sum(price_per_night)
from rooms;

	sum(price_per_night)
▶	40900



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