Question 1

Create table student ,Student id,Name ,Email,Password,Age,Division,Marks,Pass/fail

- -Print all students whose age > 23
- -Print all students who failed in the exam
- -Print all details of student with id = 100
- -Print mark of the student with id = 101
- -Change field name to pass/fail to status
- -Remove the column password
- -Change values all students age by adding 6
- -Change everyone marks by decreseing 10
- -Change the data type of column age into bigint
- -Copy the table student into two different tables student 1 and student 2.
- -Delete all the datas of table student 1 -Drop the table student 2.
- -Print all values from table student

Answer

1)Create table student ,Student id,Name ,Email,Password,Age,Division,Marks,Pass/fail

Code: create table Student (studentID int,Name varchar(20),Email varchar(30),Password varchar(20),age int,Division varchar(10),Marks int,Pass_or_Fail varchar(10)); sp_help Student:



Code: insert into Student values (100, 'Manu', 'manu@gmail.com', 'manu123',21, 'A',25, 'pass'); insert into Student values (101, 'Emily', 'Emily@gmail.com', 'Emily123',25, 'B',15, 'fail'); insert into Student values (102, 'Michael', 'Michael@gmail.com', 'Michael123',30, 'A',30, 'pass'); insert

into Student values (103,'Sophia','Sophia@gmail.com','Sophia123',19,'C',10,'fail'); insert into Student values (104,'Liam','Liam@gmail.com','Liam123',18,'B',24,'fail'); insert into Student values (105,'Martin','Martin@gmail.com','Martin123',20,'C',43,'pass'); select * from Student;

studentID	Name	Email	Password	age	Division	Marks	Pass_or_Fail
100	Manu	manu@gmail.com	manu123	10	Α	25	pass
101	Emily	Emily@gmail.com	Emily 123	25	В	15	fail
102	Michael	Michael@gmail.com	Michael 123	30	Α	30	pass
103	Sophia	Sophia@gmail.com	Sophia 123	19	С	10	fail
104	Liam	Liam@gmail.com	Liam123	18	В	24	fail
105	Martin	Martin@gmail.com	Martin 123	20	С	43	pass

a) Print all students whose age > 23 Code: select * from Student where age>23;



b) Print all students who failed in the exam

Code: select * from Student where Pass or Fail='fail';

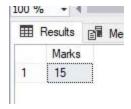
	studentID	Name	Email	Password	age	Division	Marks	Pass_or_Fail
1	101	Emily	Emily@gmail.com	Emily 123	25	В	15	fail
2	103	Sophia	Sophia@gmail.com	Sophia 123	19	С	10	fail
3	104	Liam	Liam@gmail.com	Liam 123	18	В	24	fail

c) Print all details of student with id = 100

Code: select * from Student where studentID=100;



 d) Print mark of the student with id = 101 Code: select Marks from Student where studentID=101;



e) Change field name to pass/fail to status

Code: sp_rename 'Student.Pass_or_Fail','Status','column'; select * from Student;

	studentID	Name	Email	Password	age	Division	Marks	Status
1	100	Manu	manu@gmail.com	manu123	10	Α	25	pass
2	101	Emily	Emily@gmail.com	Emily 123	25	В	15	fail
3	102	Michael	Michael@gmail.com	Michael 123	30	Α	30	pass
4	103	Sophia	Sophia@gmail.com	Sophia 123	19	С	10	fail
5	104	Liam	Liam@gmail.com	Liam123	18	В	24	fail
6	105	Martin	Martin@gmail.com	Martin 123	20	С	43	pass

f) Remove the column password Code: alter table Student drop column Password;



g) Change values all students age by adding 6Code: update Student set age=age+6;



h) Change everyone marks by decreasing 10

Code: update Student set Marks=Marks-10;

	Results		Messages					
	studer	ntID	Name	Email	age	Division	Marks	Status
1	100		Manu	manu@gmail.com	16	Α	15	pass
2	101		Emily	Emily@gmail.com	31	В	5	fail
3	102		Michael	Michael@gmail.com	36	Α	20	pass
4	103		Sophia	Sophia@gmail.com	25	С	0	fail
5	104		Liam	Liam@gmail.com	24	В	14	fail
6	105		Martin	Martin@gmail.com	26	С	33	pass

i) Change the data type of column age into bigint

Code: alter table Student alter column age bigint; sp_help Student;

	Column_name	Type	1
1	studentID	int	
2	Name	varchar	
3	Email	varchar	
4	age	bigint	
5	Division	varchar	
6	Marks	int	
7	Status	varchar	

j) Copy the table student into two different tables student 1 and student 2.
 Code: select * into Student1 from Student;
 select * from Student1;



Student 2:

Code: select * into Student2 from Student; select * from Student2;

	studentID	Name	Email	age	Division	Marks	Status
1	100	Manu	manu@gmail.com	16	Α	15	pass
2	101	Emily	Emily@gmail.com	31	В	5	fail
3	102	Michael	Michael@gmail.com	36	A	20	pass
4	103	Sophia	Sophia@gmail.com	25	С	0	fail
5	104	Liam	Liam@gmail.com	24	В	14	fail
6	105	Martin	Martin@gmail.com	26	С	33	pass

k) Delete all the datas of table student 1

Code: delete from Student1; select * from Student1;



I) Drop the table student 2.

Code: drop table Student2; select * from Student2;

```
Msg 3701, Level 11, State 5, Line 26
Cannot drop the table 'Student2', because it does not exist or you do not have permission.
Msg 208, Level 16, State 1, Line 27
Invalid object name 'Student2'.
```

m) Print all values from table student

Code: select * from Student;



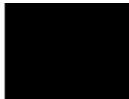
Question 2

Create table and insert values as per 1st table and group them as second table?



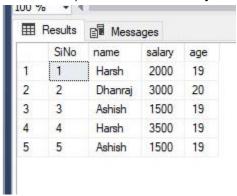




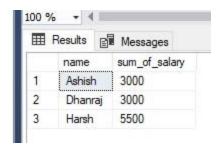


Answers:

Code: create table salary(SiNo int,name varchar(20),salary int,age int); insert into salary values(1,'Harsh',2000,19),(2,'Dhanraj',3000,20),(3,'Ashish',1500,19),(4,'Harsh',3500,19),(5,'Ashish',1500,19); select * from salary;



Code: select name,sum(salary) as sum_of_salary from salary group by name;



Question 3

create table petrol details distributorid, distributorname, buyrate, sellrate, volumein, volumeout, year insert into tablename values(),0.0

- 1) query to fetch distributor name from table using the alias name as distributors
- 2) query to fetch distributomame from petrol details in

uppercase

- 3) query to print the first 3 characters of distributor name
- 4) query to display all details from the petrol order by distributor name as ascending
- 5) query to display details for petrol with the distributor name as hindusthan and bharath
- 6) query to display details whose distributorname contains h
- 7) what is the total amount of petrol in volume sold by every distributor
- 8) query to print details of year between 2020-2022
- 9) query to fetch the count of each distributor name.

Answers:

Code: create table petrolDetails(distributorid int,distributorName varchar(20),buyRate int, sellRate int,volumeIn int,volumeOut int,year int);

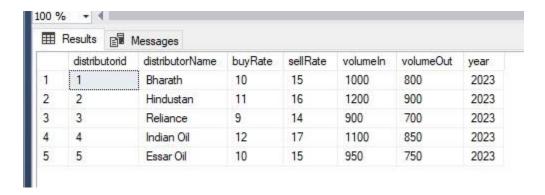
INSERT INTO petrolDetails (distributorid, distributorName, buyRate, sellRate, volumeIn, volumeOut, year)

VALUES

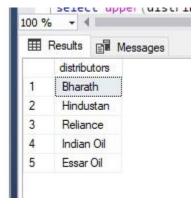
- (1, 'Bharath', 10, 15, 1000, 800, 2023),
- (2, 'Hindustan', 11, 16, 1200, 900, 2023),
- (3, 'Reliance', 9, 14, 900, 700, 2023),

- (4, 'Indian Oil', 12, 17, 1100, 850, 2023),
- (5, 'Essar Oil', 10, 15, 950, 750, 2023);

select * from petrolDetails;



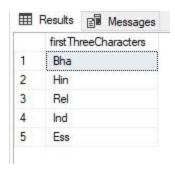
1) select distributorName as distributors from petrolDetails;



2) select upper(distributorName) as Uppercase from petrolDetails;



3) select left(distributorName, 3) as firstThreeCharacters from petrolDetails;



4) select * from petrolDetails order by distributorName asc;



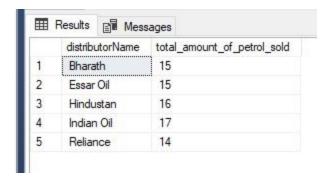
5) select * from petrolDetails where distributorName = 'Hindustan' or distributorName = 'Bharath ';



6) select * from petrolDetails where distributorName like '%h%';



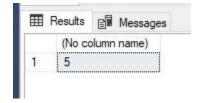
7) select distributorName,sum(sellRate) as total_amount_of_petrol_sold from petrolDetails group by distributorName;



8) select * from petrolDetails where year between 2020 and 2023;



9) select count (distributorName) from petrolDetails;



Question 4:

Create below mention tables of Employee and empsalary as per requirements and complete the sub questions?

- 1)How many permanent employee take salary more than 50000
- 2) Select the detail of employee whose emailed is in gmail
- 3)Select the details of the employee who work either for department HR or Development
- 4) What is total salary that is paid to permanent employees? 5)List name of all employees whose name ends with a.

Create table employee

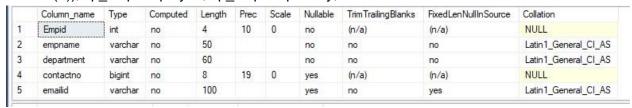
Columns	Empid	empname	department	contactno	emailid
Datatypes	Int	Varchar(50)	Varchar(60)	Bigint	Varchar(100)
Constraints	Primary key	Not null	Not null	unique	

Create table empsalary

Columns	Empid	salary	permanent
Datatypes	Int	int	Varchar(3)
Constraints	Refer empid in employee	Not null	
Eg:	101	50000	Yes/No

Answer:

Code: create table employee(Empid int primary key,empname varchar(50) not null, department varchar(60) not null,contactno bigint unique,emailid varchar(100)); create table empsalary(Empid int foreign key references employee(Empid),salary bigint not null,permanent varchar(3)); sp_help employee; sp_help empsalary;



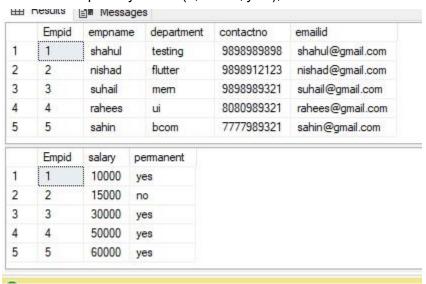
	Column_name	Type	Computed	Length	Prec	Scale	Nullable	Trim Trailing Blanks	FixedLenNullInSource	Collation
1	Empid	int	no	4	10	0	yes	(n/a)	(n/a)	NULL
2	salary	bigint	no	8	19	0	no	(n/a)	(n/a)	NULL
3	permanent	varchar	no	3			yes	no	yes	Latin1_General_CI_AS

Table:

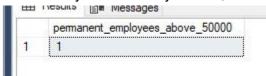
Code: insert into employee values(1,'shahul','testing',98989898,'shahul@gmail.com'); insert into employee values(2,'nishad','flutter',9898912123,'nishad@gmail.com'); insert into employee values(3,'suhail','mern',9898989321,'suhail@gmail.com'); insert into

employee values(4,'rahees','ui',8080989321,'rahees@gmail.com'); insert into employee values(5,'sahin','bcom',7777989321,'sahin@gmail.com');

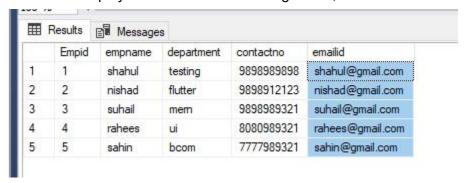
insert into empsalary values(1,10000,'yes'); insert into empsalary values(2,15000,'no'); insert into empsalary values(3,30000,'yes'); insert into empsalary values(4,50000,'yes'); insert into empsalary values(5,60000,'yes');



 select count (*) AS permanent_employees_above_50000 from empsalary where permanent='yes' and salary>50000;



2) select * from employee where emailed like '%gmail%';

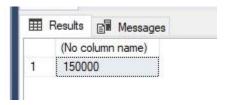


select * from employee where department = 'HR' or department = 'Development';

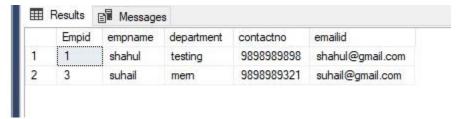


There is no value because i didn't put any HR or Development in the department category

4) select sum (salary) from empsalary where permanent ='yes';



5) select * from employee where empname like '%I';



There is no emphase ends with a in the table so, instead of i take 'L',

Question 5

Create a two tables rooms and booking as per requirements shown below?

1.Create table rooms

columns	roomid	available	roomtype	dailyrent
Datatype	Int	Bit	Varchar(50)	int
constraints	Primary key	Default 1	Check roomtype is double,single,deluxe	Default 1000

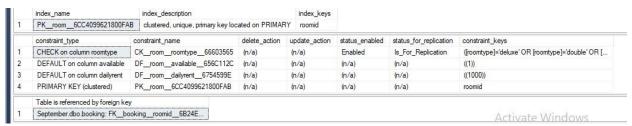
2.Create table booking details

columns	Bookingid	Roomid	Customername	Fromdate	Todate	phoneno
Datatype	Int	int	Varchar(50)	datetime	datetime	bigint
constraints	Primary key	Refer roomid in rooms table	Not null	Default currentdate	Not null	Check length is 10 digits, unique

Answer:

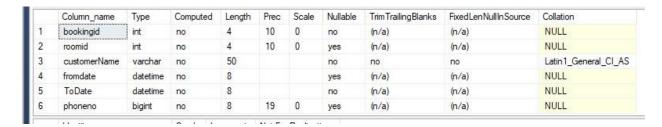
Room table Code: create table room (roomid int primary key,available bit default 1, roomtype VARCHAR(50) CHECK (roomtype IN ('single', 'double', 'deluxe')),dailyrent int default 1000); sp_help room;

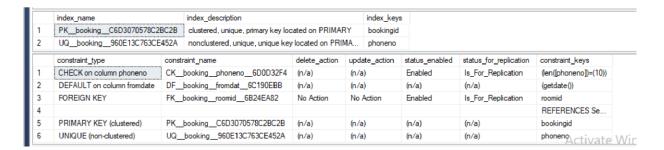




Booking table code: create table booking (bookingid int primary key,roomid int foreign key references room(roomid),customerName varchar(50) not null,fromdate datetime default getdate (),ToDate datetime not null, phoneno bigint check(len(phoneno)=10) unique);

sp_help booking;





Question 6:

Create a Table Employee

Fields employee id, first name, last name, emailid, phone number, salary?

Answers:

Code: create table Employee1(employeeid int,First_name varchar(20),Last_name varchar(20),Email_id varchar(30),Phone_no bigint,Salary int);

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	Column_name	Type	Computed	Length	Prec	Scale	Nullable	Trim Trailing Blanks	FixedLenNullInSource	Collation
1	employeeid	int	no	4	10	0	yes	(n/a)	(n/a)	NULL
2	First_name	varchar	no	20			yes	no	yes	Latin1_General_CI_AS
3	Last_name	varchar	no	20			yes	no	yes	Latin1_General_CI_AS
4	Email_id	varchar	no	30			yes	no	yes	Latin 1_General_CI_AS
5	Phone_no	bigint	no	8	19	0	yes	(n/a)	(n/a)	NULL
6	Salary	int	no	4	10	0	yes	(n/a)	(n/a)	NULL

insert into Employee1 values(1,'Muhammed','Rahees','rahees@gmail.com',9998887776,10000); insert into Employee1 values(2,'Sahul','Rasheed','sahul@gmail.com',9998833333,32000); insert into Employee1 values(3,'Sahin','siyad','sahin@gmail.com',7777887776,15000); insert into Employee1 values(4,'Suhail','K M','suahil@gmail.com',9991117776,25000); select* from Employee1;



Question 7

Perform inner, left, right, and Full join on Tables?

Answer:

Codes:

Student table

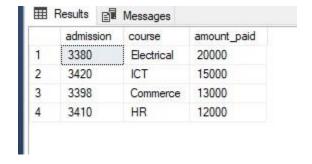
Create table StudentTable (admission int, firstName varchar(20),lastName varchar(20),age int); insert into StudentTable values (3420,'Nicholas','Samuel',14); insert into StudentTable values (3480,'Joel','John',15); insert into StudentTable values (3410,'Japheth','Becky',16); insert into

StudentTable values (3398,'George','Joshua',14); insert into StudentTable values (3486,'John','Lucky',15); insert into StudentTable values (3403,'Simon','Dan',13); insert into StudentTable values (3400,'Calton','Becham',16); select * from StudentTable;



Fee Table:

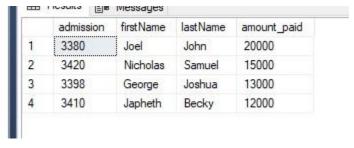
create table FeeTable (admission int,course varchar(20),amount_paid int); insert into FeeTable values (3380,'Electrical',20000); insert into FeeTable values (3420,'ICT',15000); insert into FeeTable values (3398,'Commerce',13000); insert into FeeTable values (3410,'HR',12000); select * from FeeTable;



Right Join:

Code: select

StudentTable.admission,StudentTable.firstName,StudentTable.lastName,FeeTable.amount_paid from StudentTable right join FeeTable on StudentTable.admission = FeeTable.admission;



Left Join:

Code: select

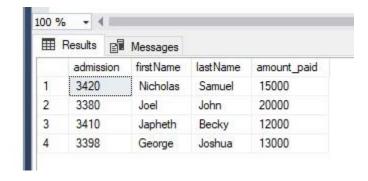
StudentTable.admission,StudentTable.firstName,StudentTable.lastName,FeeTable.amount_paid from StudentTable left join FeeTable on StudentTable.admission = FeeTable.admission;



Inner Join:

Code: select

StudentTable.admission,StudentTable.firstName,StudentTable.lastName,FeeTable.amount_paid from StudentTable inner join FeeTable on StudentTable.admission = FeeTable.admission;



Full Join:

select

StudentTable.admission,StudentTable.firstName,StudentTable.lastName,FeeTable.amount_paid from StudentTable full join FeeTable on StudentTable.admission = FeeTable.admission;

	admission	firstName	lastName	amount_paid
1	3420	Nicholas	Samuel	15000
2	3380	Joel	John	20000
3	3410	Japheth	Becky	12000
4	3398	George	Joshua	13000
5	3486	John	Lucky	NULL
6	3403	Simon	Dan	NULL
7	3400	Calton	Becham	NULL