1)

/\*

lets give hikes to our salaries. If the employees has recieved more than 4000 /- by 5/1/2017, give hike 10% or else give hive 15%  
and for HR and admins if the employees has recieved amount more than 1500/- by 5/1/2017, give hike 15% or else give 20%  
get   
empid, current\_salary,hike%,salary\_after\_hike columns as result

\*/

create table assign8\_1

(eid int, dept varchar(15),dos date,salary int)

insert into assign8\_1 values

(1, 'software' ,'1/1/2017', 1000),

(1, 'software' ,'2/1/2017', 1000),

(1, 'software' ,'3/1/2017', 1000),

(1, 'software' ,'4/1/2017', 1000),

(1, 'software' ,'5/1/2017', 1000),

(2, 'software' ,'1/1/2017', 2000),

(2, 'software' ,'2/1/2017', 1000),

(2, 'software' ,'3/1/2017', 1000),

(2, 'software' ,'4/1/2017', 1000),

(3, 'HR' ,'2/1/2017', 500),

(3, 'HR' ,'3/1/2017', 500),

(3, 'HR' ,'4/1/2017', 500),

(3, 'HR' ,'5/1/2017', 500),

(4, 'adminstaff' ,'2/1/2017', 300),

(4, 'adminstaff' ,'3/1/2017', 300),

(4, 'adminstaff' ,'4/1/2017', 300),

(4, 'adminstaff' ,'5/1/2017', 300)

select \* from assign8\_1

;with cte1 as

(

select \*,salary as current\_Salary, case when dept='software' and max(salary)over(partition by eid)>=4000 and dos<='5/1/2017'

then 1.1\*salary

when dept='software' and max(salary)over(partition by eid,dept)<4000

then 1.15\*salary

when dept='hr' or dept='adminstaff' and max(salary)over(partition by eid,dept)>=1500

then 1.15\*salary

when dept='hr' or dept='adminstaff' and max(salary)over(partition by eid,dept)<1500

then 1.2\*salary

else

salary end as salary\_after\_hike from assign8\_1),

cte2 as(

select \*,(salary\_after\_hike-current\_Salary)\*100/current\_Salary as hike from cte1

where dos in(select max(dos) from assign8\_1 group by eid)),

cte3 as(

select eid,dept,max(dos) as dos from cte2 group by eid,dept)

select distinct b.eid,b.dept,current\_Salary,salary\_after\_hike,ceiling(hike) as hike from cte2 a join cte3 b on a.eid=b.eid and a.dept=b.dept

2)/\*Find the shortest route to guntur from hyderabad\*/

create table assign8\_2(id int,routeno int,src varchar(150),dest varchar(15),dist int)

insert into assign8\_2 values

(1 , 1001 , 'Hyderabad' , 'Khammam' , 200),

(2 , 1001 , 'Khammam' , 'Vijayawada' , 180),

(3 , 1001 , 'Vijayawada' , 'Guntur' , 50),

(4 , 1002 , 'Hyderabad' , 'suryapet' , 150),

(5 , 1002 , 'suryapet' , 'Vijayawada' , 150),

(6 , 1002 , 'Vijayawada' , 'Guntur' , 50),

(7 , 1003 , 'Hyderabad' , 'suryapet' , 150),

(8, 1003 , 'suryapet' , 'Guntur' , 300)

select \* from assign8\_2

with cte1 as (select sum(dist) as sum1,routeno from assign8\_2 group by routeno)

select routeno,sum1 as min\_distance,'Hyderabad' as source,'Guntur' as destination from cte1 where sum1=(select min(sum1) from cte1)