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|  | -- a. Assume truck 1721 is destroyed in a crash. Find all customers who had a package on that  -- truck at the time of the crash. Find all recipients who had a package on that truck at the time |
|  | -- of the crash. Find the last successful delivery by that truck prior to the crash |
|  | with crash\_date(value) as |
|  | (select tracking.date from tracking,package,customer |
|  | where tracking.del\_transport\_id=1721 and tracking.status='crash' and package.package\_id=tracking.package\_id |
|  | and customer.customer\_id=package.customer\_id limit 1) |
|  | select tracking\_id,del\_transport\_id,package\_id,status,date from tracking,crash\_date |
|  | where del\_transport\_id=1721 and status='delivered' and tracking.date<crash\_date.value |
|  | order by date desc limit 1; |
|  |  |
|  | -- b.Find the customer who has shipped the most packages in the past year. |
|  | select customer\_id,count(package\_id) as cnt |
|  | from package where extract(year from package.delivery\_start)=extract(year from now())-1 |
|  | group by customer\_id |
|  | order by cnt desc limit 1; |
|  |  |
|  | -- c.Find the customer who has spent the most money on shipping in the past year |
|  | select customer\_id,sum(price) as sum |
|  | from package where extract(year from package.delivery\_start)=extract(year from now())-1 |
|  | group by customer\_id |
|  | order by sum desc limit 1; |
|  |  |
|  | -- d.Find the street with the most customers |
|  | select count(customer\_id) as cnt\_customers,city,street\_name from customer |
|  | group by city,street\_name |
|  | order by cnt\_customers desc limit 1; |
|  |  |
|  | -- e.Find those packages that were not delivered within the promised time |
|  | select package.package\_id,package.delivery\_end as planning\_delivery\_end,tracking.date as delivered\_date from tracking,package |
|  | where tracking.package\_id=package.package\_id and tracking.status='delivered' and tracking.date>package.delivery\_end; |
|  | -- select count(distinct package\_id) from tracking; --17 |
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|  | -- f.Generate the bill for each customer for the past month. Consider creating several types of bills. |
|  | -- f-1. |
|  | select customer.first\_name as name,customer.last\_name as surname,customer.city as city,customer.street\_name as street, |
|  | customer.home\_num as home, sum(package.price) as amount |
|  | from package,customer |
|  | where extract(month from package.delivery\_start)=extract(month from now())-1 and package.customer\_id=customer.customer\_id |
|  | group by package.customer\_id,customer.first\_name, package.customer\_id, customer.last\_name,customer.home\_num,package.customer\_id,customer.city, |
|  | customer.street\_name; |
|  | -- f-2. |
|  | select package.customer\_id as id,customer.first\_name as name,customer.last\_name as surname, sum(package.price) as gen\_amount, |
|  | package.price-coalesce(normal.price,0.0)-coalesce(hm.price,0.0)-coalesce(international\_shipment.price,0.0) as price\_weight, |
|  | count(package.package\_id) as cnt,normal.price as normal\_price, |
|  | hm.price as hm\_price,international\_shipment.price as inter\_price |
|  | from package inner join customer on package.customer\_id = customer.customer\_id |
|  | left join hazardous\_material hm on package.package\_id = hm.package\_id |
|  | left join normal on package.package\_id = normal.package\_id |
|  | left join international\_shipment on package.package\_id = international\_shipment.package\_id |
|  | where extract(month from package.delivery\_start)=extract(month from now())-1 |
|  | group by id,name,surname, normal\_price,hm\_price,inter\_price,price\_weight; |
|  | -- f-3. |
|  | select package.customer\_id as id,customer.first\_name as name,customer.last\_name as surname,package.package\_id as p\_id, package.price as amount, |
|  | package.price-coalesce(normal.price,0.0)-coalesce(hm.price,0.0)-coalesce(international\_shipment.price,0.0) as price\_weight, |
|  | normal.price as n\_price,hm.price as hm\_price,international\_shipment.price as inter\_price |
|  | from package inner join customer on package.customer\_id = customer.customer\_id |
|  | left join hazardous\_material hm on package.package\_id = hm.package\_id |
|  | left join normal on package.package\_id = normal.package\_id |
|  | left join international\_shipment on package.package\_id = international\_shipment.package\_id |
|  | where extract(month from package.delivery\_start)=extract(month from now())-1; |