DBT Problem Solving - Set - 010

***Consider the following relations***

***product {id, name, price, othercharges, isperishable}***

***metal\_type {id, type}***

***material {id, name, typeid, isperishable, cost}***

***bom {id, productid, materialid, quantity}***

***depositor {id, accountno, date, amount}***

***withdraw {id, accountno, date, amount}***

***loan {loannumber, branchid, amount}***

***loan\_borrower {id, customerid, loannumber}***

**Given the above relations solve the following queries.**

1. Write a query to display all perishable products.
2. Write a query to display the product names and list of material required for production.
3. Write a query to find the list of products which uses perishable material for production.
4. Write a query to calculate product wise total cost incurred to manufacture a product (Only raw materials).
5. Write a query to calculate product wise total cost incurred to manufacture a product including other charges.
6. Write a query to display all product names where liquid material is used.
7. Write a query to display all the material type which is used to produce any product.
8. Write a query to display all the material type which is not used to produce any product.
9. Write a query to display the product name in which raw material 'Milk' is used.
10. Write a query to display the product name where maximum raw material is used.
11. Write a query to display the material name which is the costliest.
12. Write a query to find the material name whose cost is in the range of 10 and 20.
13. Write a query to calculate 10% tax on production cost for 'Cycle'.
14. Write the query to display all material names whose material state is 'Solid'.
15. Write a query to display all product details where in their name 'E' is appearing.

Answers Set – 010:

1. select \* from product where isPerishable = 'y';
2. select product.name, material.name from product, material, bom where product.id = bom. productID and bom. materialID = material.id;
3. select distinct product.name from product, material, bom where product.id = bom. productID and bom.materialID = material.id and material.isPerishable = 'Y';
4. select product.name, sum(cost\*quantity) "Total Production Cost" from product, material, bom where product.id = bom.productID and bom.materialID = material.id group by product.name;
5. select product.name, sum(cost\*quantity) + otherCharges "Total Production Cost" from product, material, bom where product.id = bom.productID and bom.materialID = material.id group by product.name;
6. select distinct product.name from product, bom, material where product.id= bom.productID and bom.materialID= material.id and typeID = 2;
7. select distinct material\_type.type from material\_type, bom where bom.materialID = material\_Type.id;
8. select material\_type.type from material\_type where not exists (select \* from bom where bom.materialID = material\_Type.id);
9. select product.name from product, bom, material where product.id = bom.productID and bom.materialID = material.id and material.name = 'Milk';
10. select product.Name from bom, product where product.id = bom.productID group by productID having count(\*) = (select max(r1) from (select count(\*) R1 from bom group by productID) T1);
11. select material.name from material where cost = (select max(cost) from material);
12. select material.name from material where cost between 10 and 20;
13. select sum(cost) 'Production Cost', sum(cost) \*.10 "Tax" from product, bom, material where product.id = bom.productID and bom.materialID = material.ID and product.name = 'Cycle';
14. select material.name from material\_type, material where material.typeID = material\_type.id and material\_type.type='Solid';
15. select \* from product where name like '%e%';