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/\*Create Database\*/

CREATE DATABASE EmpInfo

USE EmpInfo;

/\*Create Table employee\*/

CREATE TABLE employee (

EMPLOYEE\_ID INT NOT NULL AUTO\_INCREMENT PRIMARY KEY,

FIRST\_NAME VARCHAR(50) NOT NULL,

LAST\_NAME VARCHAR(50) NOT NULL,

SALARY INT NOT NULL,

JOINING\_DATE VARCHAR(100) NOT NULL,

MANAGER INT,

DEPARTMENT VARCHAR(70)

);

/\*Insert data into employee table\*/

INSERT INTO employee

(EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME, SALARY, JOINING\_DATE, MANAGER, DEPARTMENT)

VALUES

(1, 'John', 'Abraham', 1000000, '01-JAN-13 12.00.00 AM', 3, 'Banking'),

(2, 'Michael', 'Clarke', 800000, '01-JAN-13 12.00.00 AM', 4, 'Insurance'),

(3, 'Roy', 'Thomas', 700000, '01-FEB-13 12.00.00 AM', null, 'Banking'),

(4, 'Tom', 'Jose', 600000, '01-FEB-13 12.00.00 AM', null, 'Insurance'),

(5, 'Jerry', 'Pinto', 650000, '01-FEB-13 12.00.00 AM', 4, 'Insurance'),

(6, 'Philip', 'Mathew', 750000, '01-JAN-13 12.00.00 AM', 7, 'Services'),

(7, 'TestName1', '123', 650000, '01-JAN-13 12.00.00 AM', null, 'Services'),

(8, 'TestName2', 'Lname%', 600000, '01-FEB-13 12.00.00 AM', 4, 'Insurance');

**/\*1. Write a query to print the number of employees per department in the organization\*/**

SELECT COUNT(EMPLOYEE\_ID), DEPARTMENT FROM EMPLOYEE GROUP BY DEPARTMENT;

**/\*2. Write a SQL query to find the name of the top-level manager of each department\*/**

SELECT NAMAGER\_NAME AS TOP FROM employee GROUP BY DEPARTMENT HAVING EXPERIENCE =

(SELECT MAX(EXPERIENCE) FROM employee GROUP BY DEPARTMENT);

/\*Create table Incentives\*/

CREATE TABLE Incentives (

EMPLOYEE\_REF\_ID INT NOT NULL FOREIGN KEY,

INCENTIVE\_DATE VARCHAR(50),

INCENTIVE\_AMOUNT INT

);

/\*Insert data into incentive table\*/

INSERT INTO Incentives

(EMPLOYEE\_REF\_ID, INCENTIVE\_DATE, INCENTIVE\_AMOUNT)

VALUES

(1, '06-FEB-13', 5000),

(1, '01-FEB-13', 3000),

(1, '07-FEB-13', 4000),

(1, '01-JAN-13', 4500),

(1, '04-JAN-13', 3500),

(1, '08-FEB-13', 6000);

**/\*3. Write a query to find the total incentive received by a given employee in a given month.\*/**

SELECT SUM(INCENTIVE\_AMOUNT) FROM Incentives GROUP BY EMPLOYEE\_REF\_ID;

**/\*4. Write a query to find the month where employees got maximum incentive\*/**

SELECT EXTRACT(MONTH FROM INCENTIVE\_DATE) MONTH

FROM Incentives

WHERE INCENTIVE\_AMOUNT=

(SELECT MAX(INCENTIVE\_AMOUNT) FROM Incentives);

**5. You have two sand timers, which can show 4 minutes and 7 minutes respectively. Use both the sand timers (at a time or one after other or any other combination) and measure a time of 9 minutes.**

|  |  |  |
| --- | --- | --- |
|  | **7 Minutes Sand Timer** | **4 Minutes Sand Timer** |
| After 4 minutes | 3 minutes left  (Elapsed Time : 4 min) | 0 minutes left |
| Turn 4 minutes Sand Timer upside down | 3 minutes left | 4 minutes left |
| After 3 minutes | 0 minutes left  (Elapsed Time : 7 min) | 1 minute left |
| Turn 7 minutes Sand Timer upside down | 7 minutes left | 1 minutes left |
| After 1 minutes | 6 minutes left 1 min wasted  (Elapsed Time : 8 min) | 0 minutes left |
| Again turn 7 minutes Sand Timer upside down | 1 minutes left in other side | 0 minutes left |
| After 1 minutes | 0 minutes left | 0 minutes left |

**6. John and Mary are a married couple. They have two kids, one of them is a girl. Assume safely that the probability of each gender is 1/2. What is the probability that the other kid is also a girl?**

P(Both girls | At least one girl) = P(both girls) / P(At least one girl)

P(Both girls) = .5 \* .5 = .25

P(At least one girl) = 1 - P(No girls)

P(No girls) = P(Both boys) = .5 \* .5 = .25

P(AT least one girl) = 1 - .25 = .75

Thus, P(Both Girls | At least one girl) = .25 / .75 = 1/3

**7. The following appeared as part of a campaign to sell advertising time on a local radio station to local businesses.** *Ron’s Cafe began advertising on our local radio station this year and was delighted to see its business increase by 10 percent over last year's totals. Their success shows you how you can use radio advertising to make your business more profitable.* **Discuss how well reasoned you find this argument. In your discussion be sure to analyse the line of reasoning and the use of evidence in the argument. For example, you may need to consider what questionable assumptions underline the thinking and what alternative explanations or counterexamples might weaken the conclusion. You can also discuss what sort of evidence would strengthen or refute the argument, what changes in the argument would make it more logically sound and what, if anything, would help you better evaluate in conclusion.**

Ans.

In this passage, we get to know about how Ron increased his business by advertising its cafe on the local radio station by 10 per cent over last years' total. In italicized lines, the author is emphasizing that other people may also increase their business by the advertisement. But it may not be true in every case. It fails to give sufficient support in favour of that argument.

The only thing mentioned in the para is that it has increased its profit by 10 per cent but it was not mentioned anywhere that whether the increase in the business was offset by the amount of money that was spent ono advertisement or it was profit without considering the advertisement expenses. Maybe if the expenses on advertising have been considered they may not get that much profit.

There could be another reason for that much profit. They may have hired a better manager and employee. Or maybe the user of the product is increasing in that area without listening to the radio.

If we consider other business to advertise on the radio. It may not impact positively for other products that are being advertised. Maybe the people who use cafe product like drinks and coffee used to listen to radio than the consumers of the other product.