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Class : DIT/FT/2A/14

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Module : ST1501 - DATA ENGINEERING

1. List the product name and price of all products on offer.

Query:

GO

CREATE FUNCTION dbo.discounted\_price

(

@base\_price DECIMAL(10,2),

@discount\_value DECIMAL(10,2),

@discount\_unit VARCHAR(10),

@min\_order\_qty INT,

@quantity INT = 1

)

RETURNS DECIMAL(10, 2)

AS

BEGIN

DECLARE @discounted\_price DECIMAL(10,2);

DECLARE @multiplier INT;

IF (ROUND(@quantity/@min\_order\_qty, 0) = @quantity/@min\_order\_qty) SET @multiplier = @quantity/@min\_order\_qty

ELSE SET @multiplier = FLOOR(@quantity/@min\_order\_qty)

IF (@discount\_unit = '$') SET @discounted\_price = @base\_price \* @quantity - @discount\_value \* @multiplier

IF (@discount\_unit = '%') SET @discounted\_price = @base\_price \* @quantity - @discount\_value \* @multiplier/100 \* @base\_price

RETURN @discounted\_price

END

GO  
  
DECLARE @quantity INT;

SET @quantity = 3;

SELECT

p.product\_name,

promo.promotion\_name,

@quantity AS quantity,

promo.min\_order\_qty,

pp.base\_price,

dbo.discounted\_price(pp.base\_price, promo.discount\_value, promo.discount\_unit, promo.min\_order\_qty, @quantity) AS current\_price

FROM

product AS p

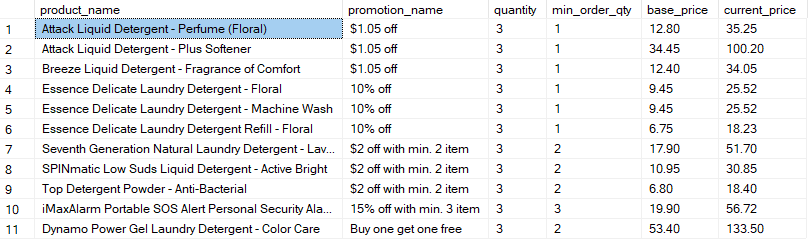
JOIN product\_pricing AS pp ON pp.product\_id = p.product\_id

RIGHT JOIN product\_promotion AS ppro ON ppro.product\_id = p.product\_id

RIGHT JOIN promotion AS promo ON promo.promotion\_id = ppro.promotion\_id

WHERE pp.is\_active = 1 AND p.is\_in\_stock = 1 AND is\_available = 1 AND GETDATE() > promo.valid\_from AND GETDATE() < promo.valid\_to  
ORDER BY promo.promotion\_id

Result:



promotion\_name, quantity, and min\_order\_qty are provided as context for the current\_price

1. List product information and price in ascending order of the price. (Refer to Fig 1).

Query:

SELECT

p.\*,

pp.base\_price

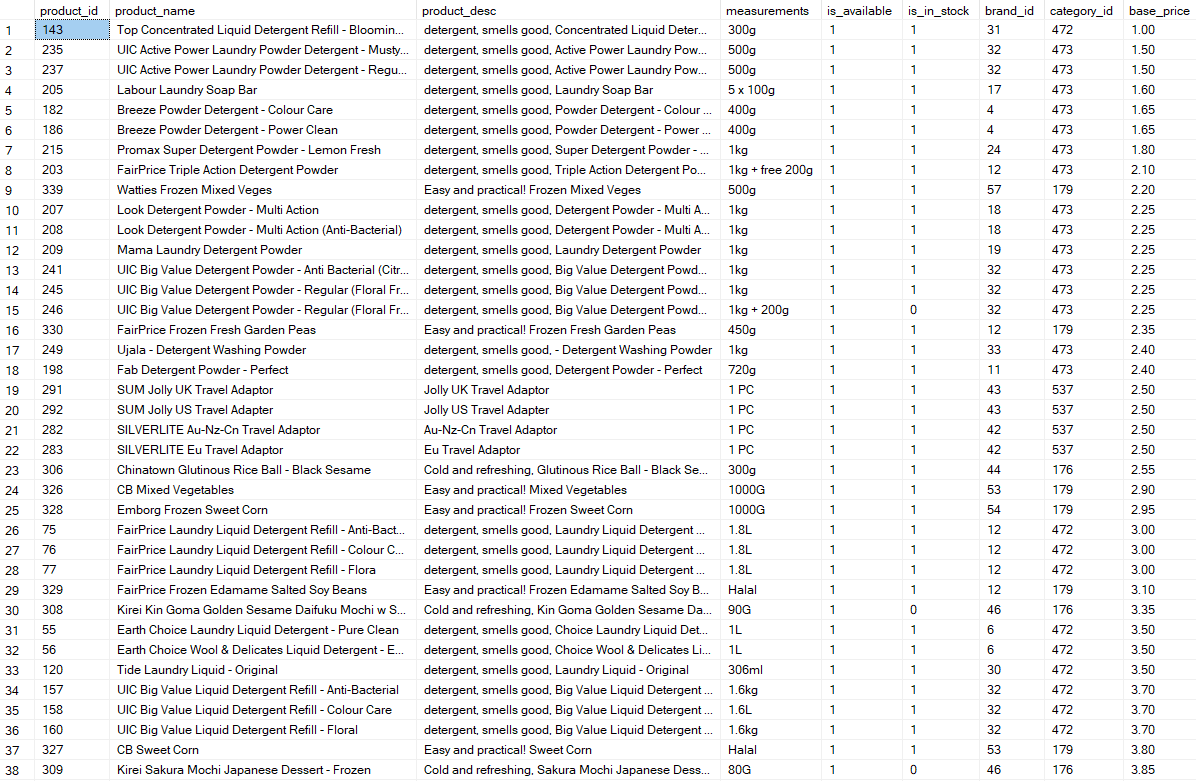
FROM

product AS p

JOIN product\_pricing AS pp ON pp.product\_id = p.product\_id

ORDER BY pp.base\_price ASC;

Result:



1. How many products belong to Household / Detergent and belong to either Breeze or Dynamo?

Query:

SELECT

pc3.category\_name AS category\_name,

pc2.category\_name AS sub\_category\_name,

COUNT(\*) AS 'count'

FROM product

JOIN product\_category AS pc1 ON pc1.category\_id = product.category\_id

LEFT OUTER JOIN product\_category AS pc2 ON pc1.parent\_id = pc2.category\_id

LEFT OUTER JOIN product\_category AS pc3 ON pc2.parent\_id = pc3.category\_id

WHERE pc2.category\_name = 'Detergents'

GROUP BY pc3.category\_name, pc2.category\_name;

Result:



A screenshot of a social media post

Description automatically generated

1. What is the current price of a given product? (You can decide which product you want to find out.)

Query:

DECLARE @quantity INT;

SET @quantity = 3;

SELECT

p.product\_id,

p.product\_name,

promo.promotion\_name,

@quantity AS quantity,

promo.min\_order\_qty,

pp.base\_price,

dbo.discounted\_price(pp.base\_price, promo.discount\_value, promo.discount\_unit, promo.min\_order\_qty, @quantity) AS current\_price,

promo.valid\_from,

promo.valid\_to

FROM

product AS p

JOIN product\_pricing AS pp ON pp.product\_id = p.product\_id

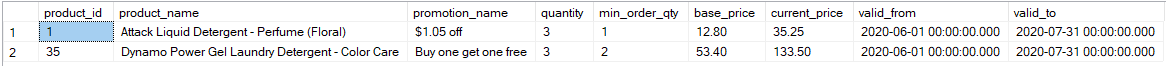
RIGHT JOIN product\_promotion AS ppro ON ppro.product\_id = p.product\_id

RIGHT JOIN promotion AS promo ON promo.promotion\_id = ppro.promotion\_id

WHERE pp.is\_active = 1 AND p.is\_in\_stock = 1 AND is\_available = 1 AND (p.product\_id = 35 OR p.product\_id = 1) AND GETDATE() > promo.valid\_from AND GETDATE() < promo.valid\_to

ORDER BY promo.promotion\_id

Result:



Product 1 is a direct discounted item, and

Product 2 is a quantity based discounted item.