

BigBasket Product & Pricing Data Model



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BigBasket Product & Pricing Data Model

The **BigBasket Product & Pricing Data Model** project focuses on designing and implementing a normalized, relational database to manage BigBasket's diverse product catalog and pricing information.

It organizes products, their categories and subcategories, brand details, and pricing & ratings into a well-structured schema that ensures data integrity, minimizes redundancy, and supports meaningful queries and analysis.

This data model helps stakeholders explore the product portfolio, analyze pricing trends, and evaluate brand performance effectively.

It serves as the backbone for reporting, analytics, and future scalability of BigBasket's data infrastructure.

PROJECT AIM:

The aim of this project, **BigBasket Product & Pricing Data Model**, is to design, develop, and implement a normalized, relational database that effectively manages BigBasket's diverse product catalog and pricing information.

This project seeks to create a structured data model that organizes products, their categories, subcategories, brands, and corresponding pricing & ratings into a cohesive and scalable schema.

The primary objective is to ensure data integrity, consistency, and minimal redundancy through proper normalization and the establishment of primary and foreign key relationships between tables.

Furthermore, the data model aims to support efficient SQL queries, enabling users to explore the product hierarchy, analyze pricing differences (sale price vs. market price), evaluate brand performance based on ratings, and retrieve meaningful insights from the data.

By implementing this relational data model, the project lays the foundation for reliable data management, supports future analytics and reporting needs, and provides a maintainable and extensible database structure for BigBasket's product portfolio and pricing ecosystem.

OBJECTIVES:

- To design and implement a relational database schema specifically for BigBasket's product and pricing data.
- To create a normalized data model that organizes information into five interconnected tables: Products, Categories, Subcategories, Brands, and Pricing & Ratings.
- To establish primary keys and foreign keys to ensure data integrity and maintain referential consistency.
- To apply normalization principles to eliminate redundancy and improve data organization.
- To populate the database with ~2000 realistic sample records for testing and demonstration purposes.
- To demonstrate the schema's capabilities through SQL queries, allowing retrieval and analysis of product hierarchy, pricing trends, and brand/category performance.
- To deliver a scalable, reliable, and maintainable SQL database suitable as the foundation for data storage and querying.

SCOPE:

- This project focuses on the design and implementation of a relational database to manage BigBasket's product and pricing information.
- The scope includes creating a normalized schema, defining relationships and constraints, and inserting realistic sample data (~2000 records).
- The database captures essential details about products, categories, subcategories, brands, and pricing & ratings in a structured and connected way.
- It enables efficient SQL queries for exploring the product hierarchy, analyzing pricing trends, and evaluating brand and category performance.
- The database is designed to be scalable, reliable, and maintainable, providing a strong foundation for future querying, analysis, and decision-making.

ER Diagram BigBasket Product & Pricing Data Model

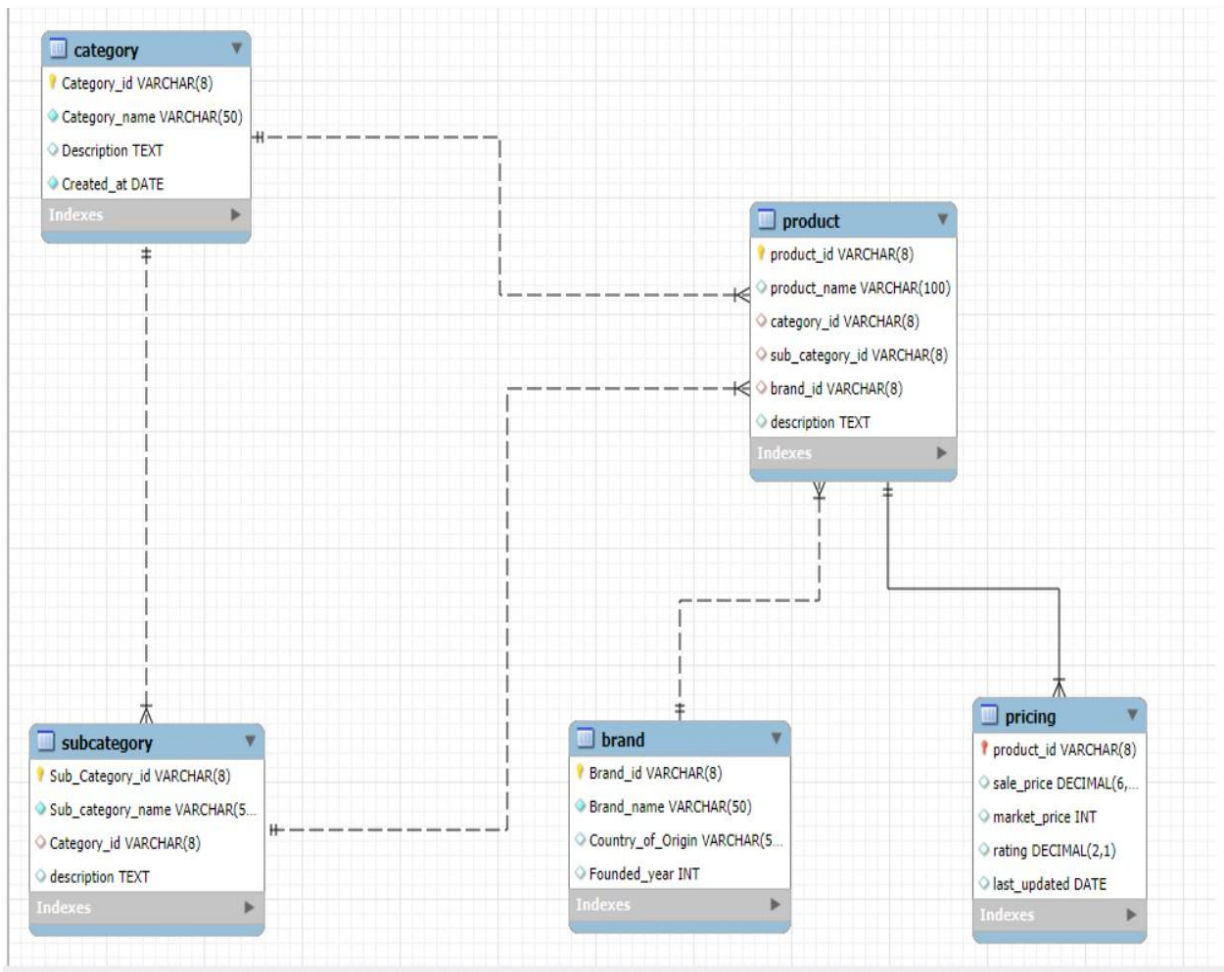


Table Description:

(1) Category

Field	Type	Null	Key	Default	Extra
Category_id	varchar(8)	NO	PRI	NULL	
Category_name	varchar(50)	NO		NULL	
Description	text	YES		NULL	
Created_at	date	NO		NULL	

(2) Subcategory

Field	Type	Null	Key	Default	Extra
sub_category_id	varchar(8)	NO	PRI	NULL	
sub_category_name	varchar(50)	YES		NULL	
category_id	varchar(8)	YES	MUL	NULL	
description	text	YES		NULL	

(3) Brand

Field	Type	Null	Key	Default	Extra
Brand_id	varchar(8)	NO	PRI	NULL	
Brand_name	varchar(50)	NO		NULL	
Country_of_Origin	varchar(50)	YES		NULL	
Founded_year	int	YES		NULL	

(4) Product

Field	Type	Null	Key	Default	Extra
product_id	varchar(8)	NO	PRI	NULL	
product_name	varchar(100)	YES		NULL	
category_id	varchar(8)	YES	MUL	NULL	
sub_category_id	varchar(8)	YES	MUL	NULL	
brand_id	varchar(8)	YES	MUL	NULL	
description	text	YES		NULL	

(5) Pricing

Result Grid		Filter Rows:	Export:		Wrap Cell Content:	
	Field	Type	Null	Key	Default	Extra
▶	product_id	varchar(8)	NO	PRI	NULL	
	sale_price	decimal(6,2)	YES		NULL	
	market_price	int	YES		NULL	
	rating	decimal(2,1)	YES		NULL	
	last_updated	date	YES		NULL	

CREATING DATABASE:

create database Project;

use Project;

Table Creation & Insertion Commands:

(1) Create Table Category

```
CREATE TABLE Category (  
    Category_id VARCHAR(8) PRIMARY KEY,  
    Category_name VARCHAR(50) NOT NULL,  
    Description TEXT,  
    Created_at DATE NOT NULL  
);
```

Inserting Values into Category

INSERT INTO Category

VALUES

('CAT_1', 'Beauty & Hygiene', 'This Product contains Garlic Oil that is known to help proper digestion...', '2021-03-22'),

('CAT_2', 'Kitchen, Garden & Pets', 'Each product is microwave safe (without lid), refrigerator safe...', '2020-11-08'),

('CAT_3', 'Beauty & Hygiene', 'Satinance multani matti is an excellent skin toner and astringent...', '2022-04-20'),

('CAT_4', 'Beauty & Hygiene', '70%Alcohol based is gentle of hand leaves skin soft ... ', '2021-11-26'),

('CAT_5', 'Cleaning & Household', 'Scotch Brite Anti- Bacterial Scrub Pad thoroughly cleanses dishes...', '2023-10-28'),

('CAT_6', 'Gourmet & World Food', 'Enjoy a tin full of delicious butter cookies made with .. ', '2021-06-09'),

('CAT_7', 'Beauty & Hygiene', 'This face wash deeply cleanses dirt and impurities...', '2023-04-26'),

('CAT_8', 'Cleaning & Household', 'This formula has been scientifically proven to kill 99.9% of germs...', '2020-10-23'),

('CAT_9', 'Cleaning & Household', 'Strategi Just Spray is a very effective 100% Herbal Mosquito...', '2021-10-13'),

('CAT_10', 'Gourmet & World Food', 'Graminway Salted Pumpkin Seeds are the perfect snack....', '2023-01-03'),







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SELECT * FROM Category;

OUTPUT:

Result Grid				
Filter Rows:		Edit:   		
Export/Import:  		Wrap Cell Content: 		
Category_id	Category_name	Description	Created_at	
CAT_1	Beauty & Hygiene	This Product contains Garlic Oil that is known to help proper digestion, maintain proper cholesterol...	2021-03-22	
CAT_2	Kitchen, Garden & Pets	Each product is microwave safe (without lid), refrigerator safe, dishwasher safe and can also be...	2020-11-08	
CAT_3	Beauty & Hygiene	Satinance multani matti is an excellent skin toner and astringent. reduces oiliness and while nour...	2022-04-20	
CAT_4	Beauty & Hygiene	70%Alcohol based is gentle of hand leaves skin soft and moist with a good fragrance. It is really...	2021-11-26	
CAT_5	Cleaning & Household	Scotch Brite Anti-Bacterial Scrub Pad thoroughly cleanses dishes and keeps the kitchen utensils ...	2023-10-28	
CAT_6	Gourmet & World Food	Enjoy a tin full of delicious butter cookies made with pure Danish recipe. Enjoy them as an energ...	2021-06-09	
CAT_7	Beauty & Hygiene	This face wash deeply cleanses dirt and impurities. Active ingredients help remove excess oil and...	2023-04-26	
CAT_8	Cleaning & Household	This formula has been scientifically proven to kill 99.9% of germs. It removes mold & mildew pow...	2020-10-23	
CAT_9	Cleaning & Household	Strategi Just Spray is a very effective 100% Herbal Mosquito Repellent Room Spray completed f...	2021-10-13	
CAT_10	Gourmet & World Food	Graminway Salted Pumpkin Seeds are the perfect snack for your family. These are ancient food,...	2023-01-03	
CAT_11	Gourmet & World Food	We at Wellness Foods, manufacture dairy and non-dairy products, Fresh Cheese, Tofu, and But...	2020-06-09	
CAT_12	Beauty & Hygiene	This Ceramic Barrel Brush by Bronson Professional is lightweight and the rubber grip ensures eas...	2020-08-05	
CAT_13	Foodgrains, Oil & Ma...	Raw Chia seeds, naturally gluten free, lyva raw chia seeds are a whole, vegetarian food, natur...	2022-06-26	
CAT_14	Gourmet & World Food	This beautiful box of Cambridge Tea Party Cleanse has 50g, 25 servings of Whole leaf Green Te...	2021-10-26	
CAT_15	Kitchen, Garden & Pets	Stop your worries about keeping your food warm during your dinner. Aesthetically designed, Cel...	2020-10-06	
CAT_16	Snacks & Branded Fo...	Fit & Flex granola is not just crunchy and tasty, it is also incredibly great for you. It is the perfec...	2023-04-17	
CAT_17	Foodgrains, Oil & Ma...	Super-nutritious and good for your heart, flaxseed is also a rich source of fibre and Omega-3 fat...	2020-12-20	
CAT_18	Snacks & Branded Fo...	Switz Puff Parathas are made with the highest quality ingredients through a specialized layering ...	2020-01-26	
CAT_19	Beauty & Hygiene	Reload the dry and chapped lips with Organic Lip Butter Rose. The ideal mixture of organic butte...	2022-01-09	
CAT_20	Bakery, Cakes & Dairy	Experience new exciting chocolatey centre filled cookie from Cadbury. Perfect as an indulgent "...	2022-06-16	
CAT_21	Beauty & Hygiene	Smellcome to Magic with Old Spice's New Launch Deodorant range. 0% Gas and for long-lasting ...	2022-12-27	

(2) Create Table Subcategory

```
CREATE TABLE Subcategory (  
    Sub_Category_id VARCHAR(8) PRIMARY KEY,  
    Sub_category_name VARCHAR(50) NOT NULL,  
    Category_id VARCHAR(8),  
    description TEXT,  
    FOREIGN KEY (category_id) REFERENCES category(category_id)  
);
```

Inserting Values into Subcategory

```
INSERT INTO Subcategory
```

VALUES

('SUB_1', 'Hair Care', 'CAT_1', 'This Product contains Garlic Oil that is known to help proper digestion....'),

('SUB_2', 'Storage & Accessories', 'CAT_2', 'Each product is microwave safe (without lid), refrigerator safe....'),

('SUB_3', 'Skin Care', 'CAT_3', 'Satinance multani matti is an excellent skin toner and astringent....'),

('SUB_4', 'Bath & Hand Wash', 'CAT_4', '70%Alcohol based is gentle of hand leaves skin soft....'),

('SUB_5', 'Mops, Brushes & Scrubs', 'CAT_5', 'Scotch Brite Anti- Bacterial Scrub Pad thoroughly cleanses dishes....'),

('SUB_6', 'Chocolates & Biscuits', 'CAT_6', 'Enjoy a tin full of delicious butter cookies made with....'),

('SUB_7', 'Skin Care', 'CAT_7', 'This face wash deeply cleanses dirt and impurities....'),

('SUB_8', 'All Purpose Cleaners', 'CAT_8', 'This formula has been scientifically proven to kill 99.9% of germs.... '),

('SUB_9', 'Fresheners & Repellents', 'CAT_9', 'Strategi Just Spray is a very effective 100% Herbal Mosquito....'),

('SUB_10', 'Snacks, Dry Fruits, Nuts', 'CAT_10', 'Graminway Salted Pumpkin Seeds are the perfect snack....'),

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SELECT * FROM Subcategory;

OUTPUT:

sub_category_id	sub_category_name	category_id	description
SUB_1	Hair Care	CAT_1	This Product contains Garlic Oil that is known to help proper digestion, maintain proper cholesterol levels, support cardiovascular and ...
SUB_2	Storage & Accessories	CAT_2	Each product is microwave safe (without lid), refrigerator safe, dishwasher safe and can also be used for re-heating food and not fo...
SUB_3	Skin Care	CAT_3	Satinance multani matti is an excellent skin toner and astringent. reduces oiliness and while nourishing the skin, keeps it soft and grim...
SUB_4	Bath & Hand Wash	CAT_4	70%Alcohol based is gentle of hand leaves skin soft and moist with a good fragrance. It is really safe for the skin.
SUB_5	Mops, Brushes & Scrubs	CAT_5	Scotch Brite Anti- Bacterial Scrub Pad thoroughly cleanses dishes and keeps the kitchen utensils squeaky clean with a pleasant neem ...
SUB_6	Chocolates & Biscuits	CAT_6	Enjoy a tin full of delicious butter cookies made with pure Danish recipe. Enjoy them as an energy snack. or with tea and coffee. Sap...
SUB_7	Skin Care	CAT_7	This face wash deeply cleanses dirt and impurities. Active ingredients help remove excess oil and other pimple causing germs, leaving...
SUB_8	All Purpose Cleaners	CAT_8	This formula has been scientifically proven to kill 99.9% of germs. It removes mold & mildew powerfully, leaving no residue behind. d...
SUB_9	Fresheners & Repellents	CAT_9	Strategi Just Spray is a very effective 100% Herbal Mosquito Repellent Room Spray completed from a distinctive mix of plant extract...
SUB_10	Snacks, Dry Fruits, Nuts	CAT_10	Graminway Salted Pumpkin Seeds are the perfect snack for your family. These are ancient food, lost with time. These are tiny nutriti...
SUB_11	Dairy & Cheese	CAT_11	We at Wellness Foods, manufacture dairy and non-dairy products, Fresh Cheese, Tofu, and Butter. Our tofu is 100% organic witho...
SUB_12	Hair Care	CAT_12	This Ceramic Barrel Brush by Bronson Professional is lightweight and the rubber grip ensures easy handling. It distributes the heat ea...
SUB_13	Dry Fruits	CAT_13	Raw Chia seeds, naturally gluten free, lyva raw chia seeds are a whole, vegetarian food, naturally rich in omega-3 and omega-6 ess...
SUB_14	Drinks & Beverages	CAT_14	This beautiful box of Cambridge Tea Party Cleanse has 50g, 25 servings of Whole leaf Green Tea. This tea will give the antioxidant b...
SUB_15	Flask & Casserole	CAT_15	Stop your worries about keeping your food warm during your dinner. Aesthetically designed, Cello's vibrant casseroles are an absolu...
SUB_16	Breakfast Cereals	CAT_16	Fit & Flex granola is not just crunchy and tasty, it is also incredibly great for you. It is the perfect start to your every morning and p...
SUB_17	Dry Fruits	CAT_17	Super-nutritious and good for your heart, flaxseed is also a rich source of fibre and Omega-3 fatty acids. We procure our flax seeds ...
SUB_18	Frozen Veggies & Snacks	CAT_18	Switz Puff Parathas are made with the highest quality ingredients through a specialized layering process that makes them fluffy and ...
SUB_19	Skin Care	CAT_19	Reload the dry and chapped lips with Organic Lip Butter Rose. The ideal mixture of organic butter and waxes instantly brightens you...
SUB_20	Cookies, Rusk & Khari	CAT_20	Experience new exciting chocolatey centre filled cookie from Cadbury. Perfect as an indulgent "me time" treat or to relish happy mom...
SUB_21	Fragrances & Deos	CAT_21	Smellcome to Magic with Old Spice's New Launch Deodorant range. 0% Gas and for long-lasting 24-hour freshness. A fruity fragranc...

(3) Create Table Brand

```
CREATE TABLE Brand (  
    Brand_id VARCHAR(8) PRIMARY KEY,  
    Brand_name VARCHAR(50) NOT NULL,  
    Country_of_Origin VARCHAR(50),  
    Founded_year INT  
);
```

Inserting Values into Brand:

```
INSERT INTO Brand
```

```
VALUES
```

```
('BRD_1', 'Sri Sri Ayurveda ', 'India', 2017),
```

```
('BRD_2', 'Mastercook', 'India', 1942),
```

```
('BRD_3', 'Satinance', 'India', 1972),
```

```
('BRD_4', 'Bionova', 'India', 1977),
```

```
('BRD_5', 'Scotch brite', 'USA', 2007),
```

```
('BRD_6', 'Sapphire', 'India', 1981),
```

```
('BRD_7', 'Oxy', 'USA', 1980),
```

```
('BRD_8', 'Clorox', 'USA', 1986),
```

```
('BRD_9', 'Herbal Strategi', 'India', 2001),
```

```
('BRD_10', 'Graminway', 'India', 1959),
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```

```
SELECT * FROM Brand;
```

OUTPUT:

Result Grid		Filter Rows:	Edit:	Export/Import:
	Brand_id	Brand_name	Country_of_Origin	Founded_year
▶	BRD_1	Sri Sri Ayurveda	India	2017
	BRD_2	Mastercook	India	1942
	BRD_3	Satinance	India	1972
	BRD_4	Bionova	India	1977
	BRD_5	Scotch brite	USA	2007
	BRD_6	Sapphire	India	1981
	BRD_7	Oxy	USA	1980
	BRD_8	Clorox	USA	1986
	BRD_9	Herbal Strategi	India	2001
	BRD_10	Graminway	India	1959
	BRD_11	Murginns	India	2002
	BRD_12	Bronson Professional	USA	1962
	BRD_13	NaturoBell	India	1950
	BRD_14	Cambridge Tea Party	UK	1988
	BRD_15	Cello	India	2020
	BRD_16	Fit & Flex	India	2007
	BRD_17	Safe Harvest	India	2002
	BRD_18	Switz	Switzerland	1971
	BRD_19	Organic Harvest	India	1953
	BRD_20	Cadbury	India	1941
	BRD_21	Old Spice	India	1964

(4) Create Table Product

```
CREATE TABLE product (  
    product_id VARCHAR(8) PRIMARY KEY,  
    product_name VARCHAR(100),  
    category_id VARCHAR(8),  
    sub_category_id VARCHAR(8),  
    brand_id VARCHAR(8),  
    description TEXT,  
    FOREIGN KEY (category_id) REFERENCES category(category_id),  
    FOREIGN KEY (sub_category_id) REFERENCES subcategory(sub_category_id),  
    FOREIGN KEY (brand_id) REFERENCES brand(brand_id)  
);
```

Inserting Values into Product:

INSERT INTO Product

VALUES

('PRD_1', 'Garlic Oil - Vegetarian Capsule 500 mg', 'CAT_1', 'SUB_1', 'BRD_1', 'This Product contains Garlic Oil that is known to help proper digestion...'),

('PRD_2', 'Water Bottle - Orange', 'CAT_2', 'SUB_2', 'BRD_2', 'Each product is microwave safe (without lid), refrigerator safe...'),

('PRD_3', 'Multani Mati', 'CAT_3', 'SUB_3', 'BRD_3', 'Satinance multani matti is an excellent skin toner and astringent...'),

('PRD_4', 'Hand Sanitizer - 70% Alcohol Base', 'CAT_4', 'SUB_4', 'BRD_4', '70%Alcohol based is gentle of hand leaves skin soft...'),

('PRD_5', 'Scrub Pad - Anti- Bacterial, Regular', 'CAT_5', 'SUB_5', 'BRD_5', 'Scotch Brite Anti- Bacterial Scrub Pad thoroughly cleanses dishes...'),

('PRD_6', 'Butter Cookies Gold Collection', 'CAT_6', 'SUB_6', 'BRD_6', 'Enjoy a tin full of delicious butter cookies made with...'),

('PRD_7', 'Face Wash - Oil Control, Active', 'CAT_7', 'SUB_7', 'BRD_7', 'This face wash deeply cleanses dirt and impurities...'),

('PRD_8', 'Mold & Mildew Remover with Bleach', 'CAT_8', 'SUB_8', 'BRD_8', 'This formula has been scientifically proven to kill 99.9% of germs...'),

('PRD_9', 'Just Spray - Mosquito Repellent Room Spray', 'CAT_9', 'SUB_9', 'BRD_9', 'Strategi Just Spray is a very effective 100% Herbal Mosquito...'),

('PRD_10', 'Salted Pumpkin', 'CAT_10', 'SUB_10', 'BRD_10', 'Graminway Salted Pumpkin Seeds are the perfect snack...'),

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SELECT * FROM product;

OUTPUT:

Result Grid		Filter Rows:		Edit:	Export/Import:	Wrap Cell Content:
	product_id	product_name	category_id	sub_category_id	brand_id	description
▶	PRD_1	Garlic Oil - Vegetarian Capsule 500 mg	CAT_1	SUB_1	BRD_1	This Product contains Garlic Oil that is known to help proper digestion...
	PRD_2	Water Bottle - Orange	CAT_2	SUB_2	BRD_2	Each product is microwave safe (without lid), refrigerator safe, dishw...
	PRD_3	Multani Mati	CAT_3	SUB_3	BRD_3	Satinance multani matti is an excellent skin toner and astringent. red...
	PRD_4	Hand Sanitizer - 70% Alcohol Base	CAT_4	SUB_4	BRD_4	70%Alcohol based is gentle of hand leaves skin soft and moist with a ...
	PRD_5	Scrub Pad - Anti- Bacterial, Regular	CAT_5	SUB_5	BRD_5	Scotch Brite Anti- Bacterial Scrub Pad thoroughly cleanses dishes and...
	PRD_6	Butter Cookies Gold Collection	CAT_6	SUB_6	BRD_6	Enjoy a tin full of delicious butter cookies made with pure Danish recip...
	PRD_7	Face Wash - Oil Control, Active	CAT_7	SUB_7	BRD_7	This face wash deeply cleanses dirt and impurities. Active ingredients...
	PRD_8	Mold & Mildew Remover with Bleach	CAT_8	SUB_8	BRD_8	This formula has been scientifically proven to kill 99.9% of germs. It r...
	PRD_9	Just Spray - Mosquito Repellent Room Spray	CAT_9	SUB_9	BRD_9	Strategi Just Spray is a very effective 100% Herbal Mosquito Repelle...
	PRD_10	Salted Pumpkin	CAT_10	SUB_10	BRD_10	Graminway Salted Pumpkin Seeds are the perfect snack for your famil...
	PRD_11	Organic Tofu - Soy Paneer	CAT_11	SUB_11	BRD_11	We at Wellness Foods, manufacture dairy and non-dairy products, Fr...
	PRD_12	Ceramic Barrel Brush - Colour May Vary	CAT_12	SUB_12	BRD_12	This Ceramic Barrel Brush by Bronson Professional is lightweight and t...
	PRD_13	Chia Seeds	CAT_13	SUB_13	BRD_13	Raw Chia seeds, naturally gluten free, lyva raw chia seeds are a who...
	PRD_14	Cleanse Green Tea - Whole Leaf Loose Tea	CAT_14	SUB_14	BRD_14	This beautiful box of Cambridge Tea Party Cleanse has 50g, 25 servi...
	PRD_15	Insulated Hot Fresh Casserole For Roti/Cha...	CAT_15	SUB_15	BRD_15	Stop your worries about keeping your food warm during your dinner. ...
	PRD_16	Granola - Happy Berries	CAT_16	SUB_16	BRD_16	Fit & Flex granola is not just crunchy and tasty, it is also incredibly gr...
	PRD_17	Flaxseed - Pesticide Free	CAT_17	SUB_17	BRD_17	Super-nutritious and good for your heart, flaxseed is also a rich sour...
	PRD_18	Paratha Puff	CAT_18	SUB_18	BRD_18	Switz Puff Parathas are made with the highest quality ingredients thr...
	PRD_19	Lip Butter - Rose	CAT_19	SUB_19	BRD_19	Reload the dry and chapped lips with Organic Lip Butter Rose. The id...
	PRD_20	Chocobakes Choc Filled Cookies	CAT_20	SUB_20	BRD_20	Experience new exciting chocolatey centre filled cookie from Cadbury...
	PRD_21	Amber - Deodorant Body Spray	CAT_21	SUB_21	BRD_21	Smellcome to Magic with Old Spice's New Launch Deodorant range. 0...

(5) Create Table Pricing

```
CREATE TABLE pricing (  
    product_id VARCHAR(8) PRIMARY KEY,  
    sale_price DECIMAL(6,2),  
    market_price INT,  
    rating DECIMAL(2,1),  
    last_updated DATE,  
    FOREIGN KEY (product_id) REFERENCES product(product_id)  
);
```

Inserting Values into Pricing

```
INSERT INTO Pricing
```

```
VALUES
```

```
('PRD_1', 363.33, 403, 2.2, '2025-07-07'),  
('PRD_2', 54.41, 94, 4.3, '2025-07-07'),  
('PRD_3', 635.88, 653, 4.5, '2025-07-07'),  
('PRD_4', 190.22, 237, 4.5, '2025-07-07'),  
('PRD_5', 298.94, 341, 2.3, '2025-07-07'),  
('PRD_6', 688.07, 714, 2.6, '2025-07-07'),  
('PRD_7', 35.87, 44, 3.9, '2025-07-07'),  
('PRD_8', 951.37, 962, 4.4, '2025-07-07'),  
('PRD_9', 941.65, 963, 3.3, '2025-07-07'),  
('PRD_10', 130.79, 170, 1.6, '2025-07-07'),
```





```
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```
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```


SELECT * FROM Pricing;

OUTPUT:

Result Grid   Filter Rows: <input type="text"/> Export:  Wrap Cell Content: 					
	Product_id	Sale_price	Market_price	Rating	Last_updated
▶	PRD_1	363.33	403	2.2	2025-07-07
	PRD_2	54.41	94	4.3	2025-07-07
	PRD_3	635.88	653	4.5	2025-07-07
	PRD_4	190.22	237	4.5	2025-07-07
	PRD_5	298.94	341	2.3	2025-07-07
	PRD_6	688.07	714	2.6	2025-07-07
	PRD_7	35.87	44	3.9	2025-07-07
	PRD_8	951.37	962	4.4	2025-07-07
	PRD_9	941.65	963	3.3	2025-07-07
	PRD_10	130.79	170	1.6	2025-07-07
	PRD_11	437.18	448	3.3	2025-07-07
	PRD_12	252.11	259	3.3	2025-07-07
	PRD_13	108.32	114	4.8	2025-07-07
	PRD_14	877.45	926	5.0	2025-07-07
	PRD_15	869.42	881	2.6	2025-07-07
	PRD_16	999.10	1044	3.5	2025-07-07
	PRD_17	903.02	914	3.4	2025-07-07
	PRD_18	865.74	910	2.8	2025-07-07
	PRD_19	145.43	169	1.4	2025-07-07
	PRD_20	452.84	480	2.8	2025-07-07
	PRD_21	747.76	778	1.6	2025-07-07

BASIC QUESTIONS

1. List brands whose names start and end with the same letter, ordered by brand ID.

```
SELECT brand_id, brand_name
```

```
FROM brand
```

```
WHERE LOWER(LEFT(brand_name,1)) = LOWER(RIGHT(brand_name,1))
```

```
order by cast(substring(brand_id, 5) as unsigned) ASC;
```

Output:



The screenshot shows a database result grid with two columns: brand_id and brand_name. The results are ordered by brand_id, starting from BRD_25 and ending at BRD_506. The brands listed are: Engage, Engage, Liril, Ambica, Akshayakalpa, Aloe Veda, Engage, ENE, MyGlamm, Ezy Be, Anmara, LOreal Professionnel, LOreal Professionnel, Engage, Nissin, Nirlon, C&S Electric, and Engage.

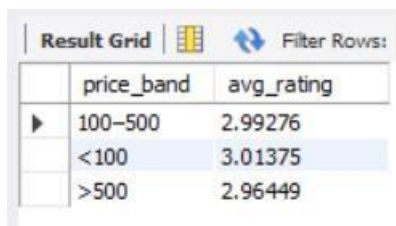
brand_id	brand_name
BRD_25	Engage
BRD_26	Engage
BRD_28	Liril
BRD_70	Ambica
BRD_84	Akshayakalpa
BRD_150	Aloe Veda
BRD_167	Engage
BRD_187	ENE
BRD_198	MyGlamm
BRD_239	Ezy Be
BRD_277	Anmara
BRD_299	LOreal Professionnel
BRD_317	LOreal Professionnel
BRD_325	Engage
BRD_374	Nissin
BRD_392	Nirlon
BRD_447	C&S Electric
BRD_506	Engage

2. Find the average rating of products in the pricing table, grouped by these price bands:

<100, 100–500, >500. Show price_band and avg_rating.

```
SELECT
CASE
  WHEN sale_price < 100 THEN '<100'
  WHEN sale_price BETWEEN 100 AND 500 THEN '100–500'
ELSE '>500'
END AS price_band,
AVG(rating) AS avg_rating
FROM pricing
GROUP BY price_band;
```

Output:



The screenshot shows a 'Result Grid' window with a table containing three rows of data. The columns are 'price_band' and 'avg_rating'. The rows represent the price bands: '100–500', '<100', and '>500'. The average ratings are 2.99276, 3.01375, and 2.96449 respectively. The row for '<100' is highlighted in blue.

	price_band	avg_rating
▶	100–500	2.99276
	<100	3.01375
	>500	2.96449

3. List all product_id and product_name where the description is longer than 150 characters, ordered by length descending.

```
SELECT product_id, product_name, LENGTH(description) AS desc_length
FROM product
WHERE LENGTH(description) > 150
ORDER BY desc_length Desc;
```

Output:

product_id	product_name	desc_length
PRD_624	Lusciously Thick & Long Shampoo	4175
PRD_849	Hair growth Oil With Dandruff & Hair Fall Treatment - Argan & Almond	3568
PRD_944	Onion Herbal Hair Growth Oil	3368
PRD_724	Ayurvedic Tea Tree & Activated Charcoal Face Pack	2938
PRD_284	Deluxe Granite Non-Stick Omni Tawa, 250 mm (36301)	2502
PRD_1577	Cube Storage Glass Jar	2455
PRD_166	Cube Storage Glass Jar	2455
PRD_557	Keto Noodles	1951
PRD_1015	Skin Lightening De-Tan Bleach For Fresh Lively Skin	1942
PRD_1621	Cool, Swag & Thrill Avatar Deodorant Spray Perfume	1899
PRD_1466	Spray Glass Water Bottle With Cork - Violet	1877
PRD_559	Dried Shiitake Mushrooms	1874
PRD_942	Golden Glow Kit - Single Time Use	1814
PRD_675	Vegan Parmesan Cheezy Seasoning	1743
PRD_991	Ultimate Choco Almond Bar	1665
PRD_531	Thai Premium Jasmine Rice	1608
PRD_693	Recover Effervescent Tablets with Essential Amino Acids - Raspberry Flavour	1580
PRD_632	Steel Lunch/Tiffin Box - Large, InsuLock	1564

4. Show all brands where the country_of_origin is either 'India' or 'USA'.

```
select brand_id, brand_name, country_of_origin
from brand
where Country_of_Origin In ("India", "USA")
order by cast(substring(brand_id, 5) As unsigned) asc;
```

Output:



The screenshot shows a database interface with a 'Result Grid' tab. It displays a table with three columns: 'brand_id', 'brand_name', and 'country_of_origin'. The data is filtered to show only brands from India and the USA, ordered by the last four digits of the brand ID. The table contains 20 rows of data.

brand_id	brand_name	country_of_origin
BRD_1	Sri Sri Ayurveda	India
BRD_2	Mastercook	India
BRD_3	Satinance	India
BRD_4	Bionova	India
BRD_5	Scotch brite	USA
BRD_6	Sapphire	India
BRD_7	Oxy	USA
BRD_8	Clorox	USA
BRD_9	Herbal Strategi	India
BRD_10	Graminway	India
BRD_11	Murginns	India
BRD_12	Bronson Professional	USA
BRD_13	NaturoBell	India
BRD_15	Cello	India
BRD_16	Fit & Flex	India
BRD_17	Safe Harvest	India
BRD_19	Organic Harvest	India
BRD_20	Cadbury	India

5. List all products where the product_name starts and ends with the letter 'a', and display the results sorted in ascending order.

```
SELECT product_id, product_name
```

```
FROM product
```

```
WHERE product_name LIKE 'a%' and product_name like "a%"
```

```
ORDER BY CAST(SUBSTRING(product_id, 5) AS UNSIGNED) ASC;
```

Output:





The screenshot shows a 'Result Grid' window with a toolbar at the top containing icons for grid view, refresh, filter rows, and edit. The grid displays the results of the SQL query. It has two columns: 'product_id' and 'product_name'. The results are sorted by the 5th character of the product_id in ascending order. The data rows are: PRD_41 (Argan-Liquid Gold Hair Spa), PRD_331 (Atta Noodles - Masala), PRD_671 (Assam Black Tea), PRD_810 (Aloevera Litchi Ice Tea), PRD_1106 (Assam Tea), and PRD_1841 (Artisanal Tricolore Orechiette Pasta). A final row with NULL values is also present.

product_id	product_name
PRD_41	Argan-Liquid Gold Hair Spa
PRD_331	Atta Noodles - Masala
PRD_671	Assam Black Tea
PRD_810	Aloevera Litchi Ice Tea
PRD_1106	Assam Tea
PRD_1841	Artisanal Tricolore Orechiette Pasta
NULL	NULL

6. Find brands where brand_name starts and ends with the same letter (case-insensitive), ordered by brand_id ascending.

```
SELECT brand_id, brand_name
FROM brand
WHERE LOWER(LEFT(brand_name,1)) = LOWER(RIGHT(brand_name,1))
ORDER BY CAST(SUBSTRING(brand_id, 5) AS UNSIGNED) ASC;
```

Output:

Result Grid   Filter Rows: <input type="text"/>		
	brand_id	brand_name
▶	BRD_25	Engage
	BRD_26	Engage
	BRD_28	Liril
	BRD_70	Ambica
	BRD_84	Akshayakalpa
	BRD_150	Aloe Veda
	BRD_167	Engage
	BRD_187	ENE
	BRD_198	MyGlam
	BRD_239	Ezy Be
	BRD_277	Anmara
	BRD_299	L'Oreal Professionnel
	BRD_317	L'Oreal Professionnel
	BRD_325	Engage
	BRD_374	Nissin
	BRD_392	Nirlon
	BRD_447	C&S Electric
	BRD_506	Engage
	BRD_518	Lotus Professional

7. List all brands where brand_name has more than 8 characters and ends with 'n' ordered by brand_id ascending.

```
SELECT brand_id, brand_name
```

```
FROM brand
```

```
WHERE LENGTH(brand_name) > 8 AND RIGHT(brand_name,1) = 'n'
```

```
ORDER BY CAST(SUBSTRING(brand_id, 5) AS UNSIGNED) ASC;
```

Output:

Result Grid   Filter Rows: <input type="text"/>		
	brand_id	brand_name
▶	BRD_58	Gowardhan
	BRD_112	The Baker's Dozen
	BRD_154	Garnier Men
	BRD_236	Skinn by Titan
	BRD_242	Yardley London
	BRD_266	Tong Garden
	BRD_305	MeraKisan
	BRD_333	Blue Dragon
	BRD_342	Fackelmann
	BRD_347	RiteBite Max Protein
	BRD_380	It's Skin
	BRD_446	It's Skin
	BRD_449	Yardley London
	BRD_484	Jus Amazin
	BRD_502	Shahnaz Husain
	BRD_539	Tata Sampann
	BRD_631	Himalaya Men
	BRD_678	Tong Garden

8. Find the average sale price of products whose market price is above 500.

```
SELECT AVG(sale_price) AS avg_high_market  
FROM pricing  
WHERE market_price > 500;
```

Output:




The screenshot shows a 'Result Grid' window with a single column labeled 'avg_high_market' and one row containing the value '738.739526'.

avg_high_market
738.739526

9. Find the top 5 most expensive products (sale_price), showing product_id, sale_price.

```
SELECT product_id, sale_price  
FROM pricing  
ORDER BY sale_price DESC  
LIMIT 5;
```

Output:



The screenshot shows a 'Result Grid' window with two columns: 'product_id' and 'sale_price'. It lists the top 5 most expensive products, ordered by sale price in descending order. The products are PRD_954 (999.98), PRD_1850 (999.13), PRD_16 (999.10), PRD_1321 (998.35), and PRD_1668 (998.35). A final row shows 'NULL' for both columns.

product_id	sale_price
PRD_954	999.98
PRD_1850	999.13
PRD_16	999.10
PRD_1321	998.35
PRD_1668	998.35
NULL	NULL

10. Find the total sale price of products where the sale price is less than the market price.

```
SELECT SUM(sale_price) AS discounted_sales
FROM pricing
WHERE sale_price < market_price;
```

Output:



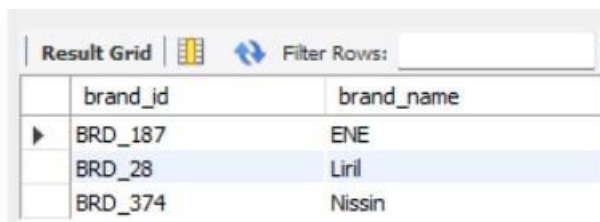
The screenshot shows a 'Result Grid' window with a 'Filter Rows' button. The grid contains one column named 'discounted_sales' and one row with the value '1010963.74'.

	discounted_sales
▶	1010963.74

11. Show all brands where the brand_name is a palindrome (reads the same forward and backward).

```
SELECT brand_id, brand_name
FROM brand
WHERE LOWER(brand_name) = REVERSE(LOWER(brand_name));
```

Output:



The screenshot shows a 'Result Grid' window with a 'Filter Rows' button. The grid contains two columns: 'brand_id' and 'brand_name'. There are three rows of data: 'BRD_187' with 'ENE', 'BRD_28' with 'Liril', and 'BRD_374' with 'Nissin'. The row for 'BRD_28' is highlighted.

	brand_id	brand_name
▶	BRD_187	ENE
	BRD_28	Liril
	BRD_374	Nissin

SUB-QUERIES

1. Find all products with sale_price above the average, and display them in decending order of sale_price.

```
SELECT product_id, sale_price  
FROM pricing  
WHERE sale_price > (SELECT AVG(sale_price) FROM pricing)  
ORDER BY sale_price DESC;
```

Output:

Result Grid	Filter Rows:
product_id	sale_price
PRD_954	999.98
PRD_1850	999.13
PRD_16	999.10
PRD_1321	998.35
PRD_1668	998.35
PRD_709	998.30
PRD_1308	998.14
PRD_978	998.14
PRD_1486	997.65
PRD_1647	997.01
PRD_1043	996.35
PRD_1053	996.06
PRD_503	995.96
PRD_968	995.49
PRD_768	995.09
PRD_129	994.96
PRD_1498	994.76
PRD_1164	994.67

2. Find products whose sale_price is equal to the second-highest sale_price.

```
SELECT product_id, sale_price
FROM pricing
WHERE sale_price = (SELECT MAX(sale_price)
FROM pricing
WHERE sale_price < (SELECT MAX(sale_price) FROM pricing)
);
```

Output:



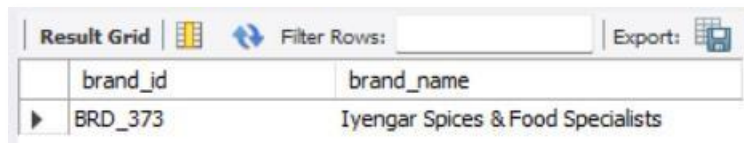
The screenshot shows a 'Result Grid' window with a 'Filter Rows' field. The grid contains two columns: 'product_id' and 'sale_price'. The first row is highlighted with a blue background and contains the values 'PRD_1850' and '999.13'. The second row contains 'NULL' and 'NULL'.

	product_id	sale_price
▶	PRD_1850	999.13
•	NULL	NULL

3. Find the brands where the length of the brand_name is equal to the maximum length of any brand_name.

```
SELECT brand_id, brand_name
FROM brand
WHERE LENGTH(brand_name) = (SELECT MAX(LENGTH(brand_name))
FROM brand);
```

Output:



The screenshot shows a 'Result Grid' window with a 'Filter Rows' field and an 'Export' button. The grid contains two columns: 'brand_id' and 'brand_name'. The first row is highlighted with a blue background and contains the values 'BRD_373' and 'Iyengar Spices & Food Specialists'.

	brand_id	brand_name
▶	BRD_373	Iyengar Spices & Food Specialists

4. Find the brand_id and founded_year of the earliest founded brand(s), and display them ordered by brand_id ascending.

```
select brand_id, founded_year
```

```
from brand
```

```
where Founded_year = (select min(Founded_year) from brand)
```

```
order by cast(substring(brand_id, 5) as unsigned) asc;
```

Output:



The screenshot shows a 'Result Grid' window with a 'Filter Rows' button. The grid contains two columns: 'brand_id' and 'founded_year'. The data is as follows:

brand_id	founded_year
BRD_93	1940
BRD_145	1940
BRD_195	1940
BRD_338	1940
BRD_345	1940
BRD_710	1940
BRD_796	1940
BRD_898	1940
BRD_981	1940
BRD_1064	1940
BRD_1124	1940
BRD_1164	1940
BRD_1271	1940
BRD_1341	1940
BRD_1461	1940
BRD_1483	1940
BRD_1555	1940
BRD_1798	1940

5. Find products where the sale_price is below the minimum market_price or the rating is below the average rating.

```
SELECT product_id, sale_price, rating
FROM pricing
WHERE sale_price < (SELECT MIN(market_price) FROM pricing)
OR rating < (SELECT AVG(rating) FROM pricing)
order by cast(substring(product_id, 5) as unsigned) ASC;
```

Output:

	product_id	sale_price	rating
▶	PRD_1	363.33	2.2
	PRD_5	298.94	2.3
	PRD_6	688.07	2.6
	PRD_10	130.79	1.6
	PRD_15	869.42	2.6
	PRD_18	865.74	2.8
	PRD_19	145.43	1.4
	PRD_20	452.84	2.8
	PRD_21	747.76	1.6
	PRD_22	516.78	2.6
	PRD_24	184.24	1.0
	PRD_26	210.72	1.1
	PRD_27	580.93	1.9
	PRD_32	358.08	1.7
	PRD_33	469.94	1.5
	PRD_34	590.31	2.6
	PRD_38	507.40	2.7
	PRD_40	261.02	1.8

JOINS

1. List all products with their brand names, ordered by the numeric part of product ID.

```
select P.product_id, P.product_name, B.brand_name
from
product as P
Inner join
brand as B
on P.brand_id = B.Brand_id
order by cast(substring(Product_id, 5) as unsigned) ASC;
```

Output:

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
product_id	product_name	brand_name	
PRD_1	Garlic Oil - Vegetarian Capsule 500 mg	Sri Sri Ayurveda	
PRD_2	Water Bottle - Orange	Mastercook	
PRD_3	Multani Mati	Satinance	
PRD_4	Hand Sanitizer - 70% Alcohol Base	Bionova	
PRD_5	Scrub Pad - Anti- Bacterial, Regular	Scotch brite	
PRD_6	Butter Cookies Gold Collection	Sapphire	
PRD_7	Face Wash - Oil Control, Active	Oxy	
PRD_8	Mold & Mildew Remover with Bleach	Clorox	
PRD_9	Just Spray - Mosquito Repellent Room Spray	Herbal Strategi	
PRD_10	Salted Pumpkin	Graminway	
PRD_11	Organic Tofu - Soy Paneer	Murginns	
PRD_12	Ceramic Barrel Brush - Colour May Vary	Bronson Professional	
PRD_13	Chia Seeds	NaturoBell	
PRD_14	Cleanse Green Tea - Whole Leaf Loose Tea	Cambridge Tea Party	
PRD_15	Insulated Hot Fresh Casserole For Roti/Chapati - White	Cello	
PRD_16	Granola - Happy Berries	Fit & Flex	
PRD_17	Flaxseed - Pesticide Free	Safe Harvest	
PRD_18	Paratha Puff	Switz	

2. List all products with their category names, including uncategorized products, ordered by product ID.

```
select P.product_id, P.product_name, C.Category_name
from
Product as P
left join
category as C
on P.category_id = C.category_id
order by cast(substring(Product_id, 5) as unsigned) ASC;
```

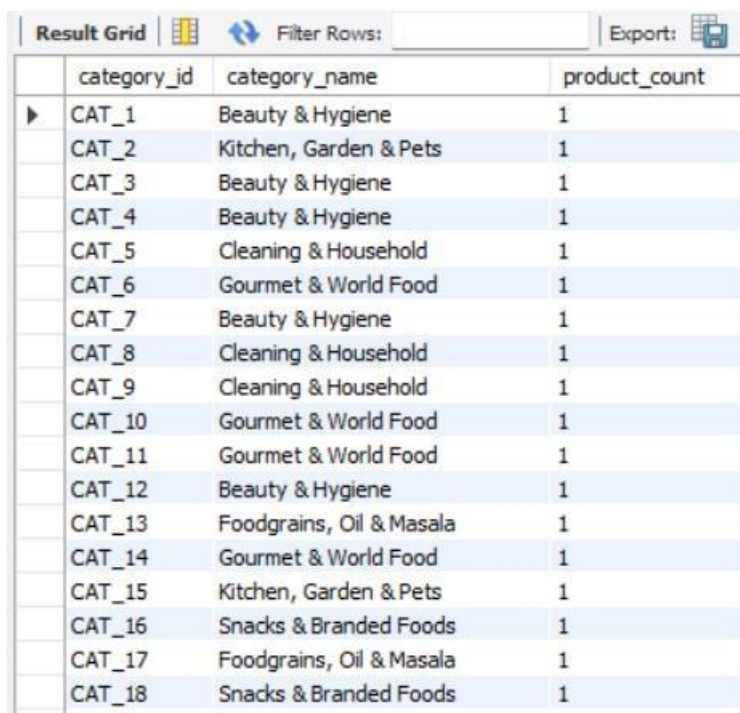
Output:

product_id	product_name	Category_name
PRD_1	Garlic Oil - Vegetarian Capsule 500 mg	Beauty & Hygiene
PRD_2	Water Bottle - Orange	Kitchen, Garden & Pets
PRD_3	Multani Mati	Beauty & Hygiene
PRD_4	Hand Sanitizer - 70% Alcohol Base	Beauty & Hygiene
PRD_5	Scrub Pad - Anti-Bacterial, Regular	Cleaning & Household
PRD_6	Butter Cookies Gold Collection	Gourmet & World Food
PRD_7	Face Wash - Oil Control, Active	Beauty & Hygiene
PRD_8	Mold & Mildew Remover with Bleach	Cleaning & Household
PRD_9	Just Spray - Mosquito Repellent Room Spray	Cleaning & Household
PRD_10	Salted Pumpkin	Gourmet & World Food
PRD_11	Organic Tofu - Soy Paneer	Gourmet & World Food
PRD_12	Ceramic Barrel Brush - Colour May Vary	Beauty & Hygiene
PRD_13	Chia Seeds	Foodgrains, Oil & Masala
PRD_14	Cleanse Green Tea - Whole Leaf Loose Tea	Gourmet & World Food
PRD_15	Insulated Hot Fresh Casserole For Roti/Chapati - White	Kitchen, Garden & Pets
PRD_16	Granola - Happy Berries	Snacks & Branded Foods
PRD_17	Flaxseed - Pesticide Free	Foodgrains, Oil & Masala
PRD_18	Paratha Puff	Snacks & Branded Foods

3. Show each category and its product count, sorted by category ID in ascending order.

```
SELECT C.category_id, C.category_name, COUNT(P.product_id) AS product_count
FROM
product As P
RIGHT JOIN
category as C
ON P.category_id = C.category_id
GROUP BY C.category_id, C.category_name
ORDER BY CAST(SUBSTRING(C.category_id, 5) AS UNSIGNED) ASC;
```

Output:



	category_id	category_name	product_count
▶	CAT_1	Beauty & Hygiene	1
	CAT_2	Kitchen, Garden & Pets	1
	CAT_3	Beauty & Hygiene	1
	CAT_4	Beauty & Hygiene	1
	CAT_5	Cleaning & Household	1
	CAT_6	Gourmet & World Food	1
	CAT_7	Beauty & Hygiene	1
	CAT_8	Cleaning & Household	1
	CAT_9	Cleaning & Household	1
	CAT_10	Gourmet & World Food	1
	CAT_11	Gourmet & World Food	1
	CAT_12	Beauty & Hygiene	1
	CAT_13	Foodgrains, Oil & Masala	1
	CAT_14	Gourmet & World Food	1
	CAT_15	Kitchen, Garden & Pets	1
	CAT_16	Snacks & Branded Foods	1
	CAT_17	Foodgrains, Oil & Masala	1
	CAT_18	Snacks & Branded Foods	1

4. List all categories and their subcategories where the category name starts with 'B', ordered by category ID.

```
SELECT C.category_id, C.category_name, S.sub_category_id, S.sub_category_name
FROM
category As C
JOIN
subcategory as S
ON C.category_id = S.category_id
WHERE c.category_name LIKE 'B%'
ORDER BY CAST(SUBSTRING(C.category_id, 5) AS UNSIGNED) ASC;
```

Output:

category_id	category_name	sub_category_id	sub_category_name
CAT_1	Beauty & Hygiene	SUB_1	Hair Care
CAT_3	Beauty & Hygiene	SUB_3	Skin Care
CAT_4	Beauty & Hygiene	SUB_4	Bath & Hand Wash
CAT_7	Beauty & Hygiene	SUB_7	Skin Care
CAT_12	Beauty & Hygiene	SUB_12	Hair Care
CAT_19	Beauty & Hygiene	SUB_19	Skin Care
CAT_20	Bakery, Cakes & Dairy	SUB_20	Cookies, Rusk & Khari
CAT_21	Beauty & Hygiene	SUB_21	Fragrances & Deos
CAT_22	Beverages	SUB_22	Tea
CAT_25	Beauty & Hygiene	SUB_25	Fragrances & Deos
CAT_26	Beauty & Hygiene	SUB_26	Men's Grooming
CAT_27	Beauty & Hygiene	SUB_27	Fragrances & Deos
CAT_28	Beauty & Hygiene	SUB_28	Bath & Hand Wash
CAT_33	Beauty & Hygiene	SUB_33	Men's Grooming
CAT_37	Beauty & Hygiene	SUB_37	Men's Grooming
CAT_41	Beauty & Hygiene	SUB_41	Hair Care
CAT_42	Baby Care	SUB_42	Baby Bath & Hygiene
CAT_46	Beauty & Hygiene	SUB_46	Hair Care

5. For each subcategory, display the total and average sale price of its products.

```
select S.sub_category_id, S.sub_category_name,  
Sum(Pr.sale_price) As Total_sales,  
Avg(Pr.sale_price) AS Avg_sales  
from  
subcategory as S  
join  
product as P  
on S.Sub_Category_id = P.sub_category_id  
join  
pricing as Pr  
on P.product_id = Pr.product_id  
group by S.Sub_Category_id, Sub_category_name  
order by Total_sales;
```

Output:

Result Grid					Filter Rows:		Export:	Wrap Cell Content:
	sub_category_id	sub_category_name	Total_sales	Avg_sales				
▶	SUB_1701	Crockery & Cutlery	20.52	20.520000				
	SUB_1588	Bins & Bathroom Ware	20.53	20.530000				
	SUB_105	Appliances & Electricals	21.04	21.040000				
	SUB_164	Cooking & Baking Needs	21.16	21.160000				
	SUB_1603	Storage & Accessories	21.75	21.750000				
	SUB_1877	Storage & Accessories	22.40	22.400000				
	SUB_314	Indian Mithai	22.51	22.510000				
	SUB_1005	Cookware & Non Stick	22.72	22.720000				
	SUB_470	Hair Care	23.28	23.280000				
	SUB_382	Frozen Veggies & Snacks	23.92	23.920000				
	SUB_1953	Coffee	24.09	24.090000				
	SUB_826	Breakfast Cereals	24.26	24.260000				
	SUB_112	Gourmet Breads	24.79	24.790000				
	SUB_223	Drinks & Beverages	25.69	25.690000				
	SUB_1694	Baby Bath & Hygiene	26.26	26.260000				
	SUB_29	Chocolates & Biscuits	26.57	26.570000				
	SUB_701	Salt, Sugar & Jaggery	27.25	27.250000				
	SUB_429	Hair Care	27.28	27.280000				

CONCLUSION

The BigBasket Product & Pricing Data Model project successfully achieves its goal of designing, developing, and implementing a normalized relational database to manage BigBasket's diverse product catalog and pricing information.

By organizing data into five well-structured and interconnected tables — Products, Categories, Subcategories, Brands, and Pricing & Ratings — the project ensures data integrity, eliminates redundancy, and maintains referential consistency through the use of primary and foreign keys.

The database schema not only supports efficient storage and retrieval of data but also enables meaningful analysis of product hierarchies, pricing trends, and brand performance through SQL queries. With approximately 2000 realistic sample records, it demonstrates the capability to handle real-world data volumes effectively.

Furthermore, the database has been designed with scalability, reliability, and maintainability in mind, making it a solid foundation for future analytics, reporting, and decision-making needs.

In summary, this project delivers a robust and extensible data infrastructure that meets BigBasket's current and future requirements for managing and analyzing product and pricing information.