

## Basic Database Operations - II

### Session Objectives:

- ✓ Use logical & comparison operators in the WHERE clause
- ✓ Work with wildcards for pattern matching 🗂️
- ✓ Remove duplicates with DISTINCT 📄
- ✓ Sort data using ORDER BY 📊
- ✓ Limit results using LIMIT & OFFSET 🎯
- ✓ Add comments for better documentation 📝
- ✓ Use column aliases for readability 🏷️

-- Customers with more than 2 Children. '>'

SELECT

    FirstName,  
    LastName,  
    TotalChildren

FROM Customers

WHERE TotalChildren > 2;

```
mysql> SELECT
->  FirstName,
->    LastName,
->    TotalChildren
-> FROM Customers
-> WHERE TotalChildren > 2;
```

FirstName	LastName	TotalChildren
EUGENE	HUANG	3
RUBEN	TORRES	3
ELIZABETH	JOHNSON	5
MARCO	MEHTA	3
ROBIN	VERHOFF	4
CURTIS	LU	4
SYDNEY	BENNETT	3
SHANNON	WANG	4
THERESA	RAMOS	4
DENISE	STONE	4
JAIME	NATH	4

-- Find the Customers whose TotalChildren is not equal to 5 .... '<>' !=

SELECT

    FirstName,  
    LastName,  
    TotalChildren

FROM Customers

WHERE TotalChildren != 5;

-- 1913 row(s) returned

SELECT

FirstName,  
LastName,  
TotalChildren

FROM Customers

WHERE TotalChildren <> 5;

```
mysql> SELECT
->   FirstName,
->   LastName,
->   TotalChildren
-> FROM Customers
-> WHERE TotalChildren <> 5 LIMIT 10;
```

FirstName	LastName	TotalChildren
JON	YANG	2
EUGENE	HUANG	3
RUBEN	TORRES	3
CHRISTY	ZHU	0
JULIO	RUIZ	0
MARCO	MEHTA	3
ROBIN	VERHOFF	4
SHANNON	CARLSON	0
JACQUELYN	SUAREZ	0
CURTIS	LU	4

10 rows in set (0.01 sec)

Find the Customers who are Bachelors & Professionals

SELECT

FirstName,  
LastName,  
EmailAddress,  
EducationLevel,  
Occupation

FROM Customers

WHERE EducationLevel = 'Bachelors'

AND Occupation = 'Professional';

-- 196 row(s) returned

```
mysql> SELECT
->   FirstName,
->   LastName,
->   EmailAddress,
->   EducationLevel,
->   Occupation
-> FROM Customers
-> WHERE EducationLevel = 'Bachelors'
-> AND Occupation = 'Professional' LIMIT 10;
```

FirstName	LastName	EmailAddress	EducationLevel	Occupation
JON	YANG	jon24@learnsector.com	Bachelors	Professional
EUGENE	HUANG	eugene10@learnsector.com	Bachelors	Professional
RUBEN	TORRES	ruben35@learnsector.com	Bachelors	Professional
CHRISTY	ZHU	christyl12@learnsector.com	Bachelors	Professional
ELIZABETH	JOHNSON	elizabeth5@learnsector.com	Bachelors	Professional
JULIO	RUIZ	julio1@learnsector.com	Bachelors	Professional
MARCO	MEHTA	marco14@learnsector.com	Bachelors	Professional
ROBIN	VERHOFF	rob4@learnsector.com	Bachelors	Professional
SHANNON	CARLSON	shannon38@learnsector.com	Bachelors	Professional
JACQUELYN	SUAREZ	jacquelyn20@learnsector.com	Bachelors	Professional

10 rows in set (0.01 sec)

-- Find the Customers who are married but 0 TotalChildren

```
SELECT
    FirstName,
    LastName,
    MaritalStatus,
    TotalChildren
FROM Customers
WHERE MaritalStatus = 'M'
AND TotalChildren = 0;
```

```
mysql> SELECT
->   FirstName,
->   LastName,
->   MaritalStatus,
->   TotalChildren
-> FROM Customers
-> WHERE MaritalStatus = 'M'
-> AND TotalChildren = 0
-> LIMIT 10;
```

FirstName	LastName	MaritalStatus	TotalChildren
WYATT	HILL	M	0
ETHAN	ZHANG	M	0
SETH	EDWARDS	M	0
RUSSELL	XIE	M	0
JENNIFER	RUSSELL	M	0
JESSE	MURPHY	M	0
AMANDA	CARTER	M	0
MEGAN	SANCHEZ	M	0
NATHAN	SIMMONS	M	0
ANA	PRICE	M	0

10 rows in set (0.01 sec)

Find the Customer either having 0 Children or a HomeOwner;

```
SELECT
    FirstName,
    LastName,
    TotalChildren,
    HomeOwner
FROM Customers
WHERE TotalChildren = 0 OR
HomeOwner = 'Y';
-- 1809 row(s) returned
```

```
mysql> SELECT
->   FirstName,
->   LastName,
->   TotalChildren,
->   HomeOwner
-> FROM Customers
-> WHERE TotalChildren = 0 OR
-> HomeOwner = 'Y'
-> LIMIT 10;
```

FirstName	LastName	TotalChildren	HomeOwner
JON	YANG	2	Y
RUBEN	TORRES	3	Y
CHRISTY	ZHU	0	N
ELIZABETH	JOHNSON	5	Y
JULIO	RUIZ	0	Y
MARCO	MEHTA	3	Y
ROBIN	VERHOFF	4	Y
SHANNON	CARLSON	0	N
JACQUELYN	SUAREZ	0	N
CURTIS	LU	4	Y

10 rows in set (0.01 sec)

Find the ProductName with red/black Color having ProductPrice >= 1500

```
SELECT
  ProductName,
  ProductColor,
  ProductPrice
FROM Products
WHERE (ProductColor = 'Red' OR ProductColor = 'Black')
AND ProductPrice >= 1500;
```

```
SELECT
  ProductName,
  ProductColor,
  ProductPrice
FROM Products
WHERE ProductColor IN ('Red','Black')
AND ProductPrice >= 1500;
```

```
mysql> SELECT
->   ProductName,
->   ProductColor,
->   ProductPrice
-> FROM Products
-> WHERE ProductColor IN ('Red','Black')
-> AND ProductPrice >= 1500;
```

ProductName	ProductColor	ProductPrice
Road-150 Red, 62	Red	3578.27
Road-150 Red, 44	Red	3578.27
Road-150 Red, 48	Red	3578.27
Road-150 Red, 52	Red	3578.27
Road-150 Red, 56	Red	3578.27
Mountain-100 Black, 38	Black	3374.99
Mountain-100 Black, 42	Black	3374.99
Mountain-100 Black, 44	Black	3374.99
Mountain-100 Black, 48	Black	3374.99
Mountain-200 Black, 38	Black	2049.0982
Mountain-200 Black, 42	Black	2049.0982
Mountain-200 Black, 46	Black	2049.0982
Road-250 Red, 44	Red	2443.35
Road-250 Red, 48	Red	2443.35
Road-250 Red, 52	Red	2443.35
Road-250 Red, 58	Red	2181.5625
Road-250 Black, 44	Black	2181.5625
Road-250 Black, 48	Black	2181.5625
Road-250 Black, 52	Black	2181.5625
Road-250 Black, 58	Black	2181.5625



Find the ProductName without red/black Color having ProductPrice >= 1500

```
SELECT
    ProductName,
    ProductColor,
    ProductPrice
FROM Products
WHERE ProductColor NOT IN ('Red','Black')
AND ProductPrice >= 1500;
```

```
mysql> SELECT
-> ProductName,
-> ProductColor,
-> ProductPrice
-> FROM Products
-> WHERE ProductColor NOT IN ('Red','Black')
-> AND ProductPrice >= 1500;
```

ProductName	ProductColor	ProductPrice
Mountain-100 Silver, 38	Silver	3399.99
Mountain-100 Silver, 42	Silver	3399.99
Mountain-100 Silver, 44	Silver	3399.99
Mountain-100 Silver, 48	Silver	3399.99
Mountain-200 Silver, 38	Silver	2071.4196
Mountain-200 Silver, 42	Silver	2071.4196
Mountain-200 Silver, 46	Silver	2071.4196
Touring-1000 Yellow, 46	Yellow	2384.07
Touring-1000 Yellow, 50	Yellow	2384.07
Touring-1000 Yellow, 54	Yellow	2384.07
Touring-1000 Yellow, 60	Yellow	2384.07
Touring-1000 Blue, 46	Blue	2384.07
Touring-1000 Blue, 50	Blue	2384.07
Touring-1000 Blue, 54	Blue	2384.07
Touring-1000 Blue, 60	Blue	2384.07
Road-350-W Yellow, 40	Yellow	1700.99
Road-350-W Yellow, 42	Yellow	1700.99
Road-350-W Yellow, 44	Yellow	1700.99
Road-350-W Yellow, 48	Yellow	1700.99

19 rows in set (0.01 sec)

Wildcard - % [0 or many characters] or \_ [underscore \_ single character]

Harry Potter and the Philosopher's Stone (1997)  
Harry Potter and the Chamber of Secrets (1998)  
Harry Potter and the Prisoner of Azkaban (1999)  
Harry Potter and the Goblet of Fire (2000)  
Harry Potter and the Order of the Phoenix (2003)  
Harry Potter and the Half-Blood Prince (2005)  
Harry Potter and the Deathly Hallows (2007)



**% Prisoner %**

Harry Potter and the Prisoner of Azkaban (1999)



\_str

LIKE  
NOT LIKE

**% Phoenix %**

Harry Potter and the Order of the Phoenix



%

%ing

Painting	Chilling
Eating	Talking
Swimming	Playing
Dancing	Singing
Working	Hanging
Reading	Sleeping
Waiting	Sketching
Riding	Beating

Play%

Playing  
Played  
Playful  
PlayStation  
Player  
PlayStore  
Playground

-

k\_ng -> King / Kong

De\_d -> Deed / Dead

Country\_code

+( ) -PhoneNo.



91 - India

<https://www.countrycode.org/>

First Name of a Customer Starts with 'K'

```
SELECT
    FirstName,
    LastName,
    Gender
FROM Customers
WHERE FirstName LIKE 'k%';
```

```
mysql> SELECT
->   FirstName,
->   LastName,
->   Gender
-> FROM Customers
-> WHERE FirstName LIKE 'k%';
```

FirstName	LastName	Gender
KARI	ALVAREZ	F
KARLA	GOEL	F
KRISTI	PEREZ	F
KATELYN	HERNANDEZ	F
KATELYN	KELLY	F
KATELYN	CARTER	F
KYLE	FOSTER	M
KATELYN	SANCHEZ	F
KARL	SHAN	M
KURT	PAL	M
KELLI	CAI	F
KATRINA	BECKER	F
KYLE	SCOTT	M
KRISTOPHER	MEHTA	M
KARI	KIM	F
KYLE	PATTERSON	M
KENNETH	KUMAR	M
KATRINA	NATH	F
KATHERINE	BRYANT	F

-- First Name of a Customer Starts with 'K' and ends with 'a'

```
SELECT
  FirstName,
  LastName,
  Gender
FROM Customers
WHERE FirstName LIKE 'k%a';
-- 25 row(s) returned
```

-- First Name of a Customer Starts with 'T' and LastName ends with 'i'

```
260 • SELECT
261     FirstName,
262     LastName,
263     Gender
264 FROM Customers
265 WHERE FirstName LIKE 'T%'
266 AND LastName LIKE '%i';
```

Result Grid			Filter Rows	Exports	Wrap Cell Contents
FirstName	LastName	Gender			
TIFFANY	LI	F			
TODD	LI	M			
TROY	SURI	M			
TARA	RAJI	F			
TAMMY	SAI	F			
THOMAS	JAI	M			

-- Find the customer LastName with 'A' in middle, then one character \_ and 'G' -> '%A\_G'

```
SELECT
    FirstName,
    LastName,
    Gender
FROM Customers
WHERE LastName LIKE '%A_G';
```

FirstName	LastName	Gender
JON	YANG	M
EUGENE	HUANG	M
SHANNON	WANG	F
ETHAN	ZHANG	M
TIFFANY	LIANG	F
TAMARA	LIANG	F
CURTIS	YANG	M
CRYSTAL	WANG	F
MAURICE	TANG	M

-- Find the ProductName where the Product SKU end with 'L' or start with 'HL'

```
SELECT
    ProductName,
    ProductSKU
FROM Products
WHERE ProductSKU LIKE '%L'
OR ProductSKU LIKE 'HL%';
-- 14 row(s) returned
```

ProductName	ProductSKU
Sport-100 Helmet, Red	HL-U509-R
Sport-100 Helmet, Black	HL-U509
Mountain Bike Socks, L	SO-B909-L
Sport-100 Helmet, Blue	HL-U509-B
Long-Sleeve Logo Jersey, L	LJ-0192-L
Men's Sports Shorts, L	SH-M897-L
Women's Tights, L	TG-W091-L
Men's Bib-Shorts, L	SB-M891-L
Half-Finger Gloves, L	GL-H102-L
Full-Finger Gloves, L	GL-F110-L
Classic Vest, L	VE-C304-L
Women's Mountain Shorts, L	SH-W890-L
Racing Socks, L	SO-R809-L
Short-Sleeve Classic Jerse...	SJ-0194-L

-- Find the ProductName where ProductSKU starts with 'TI' or 'ModelName' ends with 'W' or ProductName having Mountain Bike with '3 digit' CC engine.

```
SELECT
    ProductName,
    ProductSKU,
    ModelName
FROM Products
WHERE ProductSKU LIKE 'TI%'
OR ModelName LIKE '%W'
OR ProductName LIKE 'Mountain-___%';
```



ProductName	ProductSKU	ModelName	ProductName	ProductSKU	ModelName
Mountain-100 Silver, 38	BK-M82S-38	Mountain-100	ML Mountain Tire	TI-M602	ML Mountain ...
Mountain-100 Silver, 42	BK-M82S-42	Mountain-100	HL Mountain Tire	TI-M823	HL Mountain ...
Mountain-100 Silver, 44	BK-M82S-44	Mountain-100	LL Road Tire	TI-R092	LL Road Tire
Mountain-100 Silver, 48	BK-M82S-48	Mountain-100	ML Road Tire	TI-R628	ML Road Tire
Mountain-100 Black, 38	BK-M82B-38	Mountain-100	HL Road Tire	TI-R982	HL Road Tire
Mountain-100 Black, 42	BK-M82B-42	Mountain-100	Touring Tire	TI-T723	Touring Tire
Mountain-100 Black, 44	BK-M82B-44	Mountain-100	ML Mountain Frame-W ...	FR-M63S-38	ML Mountain ...
Mountain-100 Black, 48	BK-M82B-48	Mountain-100	Road-350-W Yellow, 40	BK-R.79Y-40	Road-350-W
Mountain-200 Silver, 38	BK-M68S-38	Mountain-200	Road-350-W Yellow, 42	BK-R.79Y-42	Road-350-W
Mountain-200 Silver, 42	BK-M68S-42	Mountain-200	Road-350-W Yellow, 44	BK-R.79Y-44	Road-350-W
Mountain-200 Silver, 46	BK-M68S-46	Mountain-200	Road-350-W Yellow, 48	BK-R.79Y-48	Road-350-W
Mountain-200 Black, 38	BK-M68B-38	Mountain-200	Mountain-400-W Silver...	BK-M38S-38	Mountain-40...
Mountain-200 Black, 42	BK-M68B-42	Mountain-200	Mountain-400-W Silver...	BK-M38S-40	Mountain-40...
Mountain-200 Black, 46	BK-M68B-46	Mountain-200	Mountain-400-W Silver...	BK-M38S-42	Mountain-40...
Mountain-300 Black, 38	BK-M47B-38	Mountain-300	Mountain-400-W Silver...	BK-M38S-46	Mountain-40...
Mountain-300 Black, 40	BK-M47B-40	Mountain-300	Mountain-500 Silver, 40	BK-M18S-40	Mountain-500

IN / NOT IN

```
SELECT * FROM Customers;
SELECT DISTINCT Occupation FROM Customers;
-- Professional
-- Management
-- Skilled Manual
-- Clerical
-- Manual
```

```
SELECT
    FirstName,
    LastName,
    EmailAddress,
    AnnualIncome,
    Occupation
FROM Customers
WHERE Occupation LIKE "Professional" OR
Occupation LIKE "Management" OR
Occupation LIKE "Skilled Manual" OR
Occupation LIKE "Clerical" OR
Occupation LIKE "Manual";
```

```
SELECT
    FirstName,
    LastName,
    EmailAddress,
    AnnualIncome,
    Occupation
FROM Customers
WHERE Occupation = "Professional" OR
Occupation = "Management" OR
Occupation = "Skilled Manual" OR
Occupation = "Clerical" OR
Occupation = "Manual";
```

```
SELECT
    FirstName,
    LastName,
    EmailAddress,
    AnnualIncome,
    Occupation
FROM Customers
WHERE Occupation IN ("Professional", "Management", "Skilled Manual", "Clerical", "Manual");
```

```

351 • SELECT DISTINCT EducationLevel FROM Customers;
352
353

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	EducationLevel			
	Bachelors			
	Partial College			
	High School			
	Partial High School			
	Graduate Degree			

```

-- 'Bachelors' , 'Graduate Degree'
SELECT
    FirstName,
    LastName,
    EmailAddress,
    AnnualIncome,
    EducationLevel,
    Occupation
FROM Customers
WHERE EducationLevel IN ('Bachelors' , 'Graduate Degree');
-- 1013 row(s) returned

```

```

SELECT
    FirstName,
    LastName,
    EmailAddress,
    AnnualIncome,
    EducationLevel,
    Occupation
FROM Customers
WHERE EducationLevel NOT IN ('Partial College','High School','Partial High School');

```

```

-- Find the Customers Having EducationLevel = ['Bachelors','Graduate Degree']
-- AND Occupations = ['Professional', 'Management']

```

```

SELECT
    FirstName,
    LastName,
    EmailAddress,
    AnnualIncome,
    EducationLevel,
    Occupation
FROM Customers
WHERE EducationLevel NOT IN ('Partial College','High School','Partial High School')
AND Occupation IN ('Professional', 'Management') ;
-- 601 row(s) returned

```

```

SELECT
    FirstName,
    LastName,
    EmailAddress,
    AnnualIncome,
    EducationLevel,
    Occupation
FROM Customers
WHERE EducationLevel IN ('Bachelors' , 'Graduate Degree')
AND Occupation IN ('Professional', 'Management') ;

```

Between

Range [Inclusive] -> [ $\geq$  AND  $\leq$ ]  
BETWEEN val AND val;

Filter on Rows

Find the Customer who are having Children Between 1 to 3.

```

SELECT
    FirstName,
    LastName,
    MaritalStatus,
    TotalChildren
FROM Customers
WHERE TotalChildren  $\geq$  1 AND TotalChildren  $\leq$  3;
-- 1061 row(s) returned

```

```

SELECT
    FirstName,
    LastName,
    MaritalStatus,
    TotalChildren
FROM Customers
WHERE TotalChildren BETWEEN 1 AND 3;

```

FirstName	LastName	MaritalStatus	TotalChildren
JON	YANG	M	2
EUGENE	HUANG	S	3
RUBEN	TORRES	M	3
MARCO	MEHTA	M	3
LAUREN	WALKER	M	2
IAN	JENKINS	M	2
SYDNEY	BENNETT	S	3
CLARENCE	RAI	S	2
ALEJANDRO	BECK	M	2
HAROLD	SAI	S	2
JESSIE	ZHAO	M	2
JILL	JIMENEZ	M	2
JIMMY	MORENO	M	2



Find the Products Where the ProductPrice IS BETWEEN 1000 - 3000 Where the ProductCategory = "Bikes"

132 • SELECT \* FROM Products WHERE ProductName LIKE "%Bike%";  
133  
134



ProductKey	ProductSubcategoryKey	ProductSKU	ProductName	ModelName	ProductDescription	ProductColor	ProductSize	ProductStyle	ProductCost	ProductPrice
218	23	SO-B909-M	Mountain Bike Socks, M	Mountain Bike Socks	Combination of natural and synthetic fibers sta...	White	M	U	3.3963	9.5
219	23	SO-B909-L	Mountain Bike Socks, L	Mountain Bike Socks	Combination of natural and synthetic fibers sta...	White	L	U	3.3963	9.5
483	26	RA-H123	Hitch Rack - 4-Bike	Hitch Rack - 4-Bike	Carries 4 bikes securely; steel construction, fits ...	NA	0	0	44.88	120
484	29	CL-9009	Bike Wash - Dissolver	Bike Wash	Washes off the toughest road grime; dissolves ...	NA	0	0	2.9733	7.95
486	27	ST-1401	All-Purpose Bike Stand	All-Purpose Bike Stand	Perfect all-purpose bike stand for working on yo...	NA	0	0	59.466	159

134 • SELECT \* FROM Products WHERE ProductSKU LIKE 'BK%';  
135



ProductKey	ProductSubcategoryKey	ProductSKU	ProductName	ModelName	ProductDescription	ProductColor
310	2	BK-R93R-62	Road-150 Red, 62	Road-150	This bike is ridden by race winners. Developed ...	Red
311	2	BK-R93R-44	Road-150 Red, 44	Road-150	This bike is ridden by race winners. Developed ...	Red
312	2	BK-R93R-48	Road-150 Red, 48	Road-150	This bike is ridden by race winners. Developed ...	Red
313	2	BK-R93R-52	Road-150 Red, 52	Road-150	This bike is ridden by race winners. Developed ...	Red
314	2	BK-R93R-56	Road-150 Red, 56	Road-150	This bike is ridden by race winners. Developed ...	Red
315	2	BK-R68R-58	Road-450 Red, 58	Road-450	A true multi-sport bike that offers streamlined ri...	Red
316	2	BK-R68R-60	Road-450 Red, 60	Road-450	A true multi-sport bike that offers streamlined ri...	Red
317	2	BK-R68R-44	Road-450 Red, 44	Road-450	A true multi-sport bike that offers streamlined ri...	Red
318	2	BK-R68R-48	Road-450 Red, 48	Road-450	A true multi-sport bike that offers streamlined ri...	Red
319	2	BK-R68R-52	Road-450 Red, 52	Road-450	A true multi-sport bike that offers streamlined ri...	Red
320	2	BK-R50R-58	Road-650 Red, 58	Road-650	Value-priced bike with many features of our top...	Red
322	2	BK-R50R-60	Road-650 Red, 60	Road-650	Value-priced bike with many features of our top...	Red
324	2	BK-R50R-62	Road-650 Red, 62	Road-650	Value-priced bike with many features of our top...	Red

```
SELECT
    ProductName,
    ProductSKU,
    ProductColor,
    ProductPrice
FROM Products
WHERE ProductPrice BETWEEN 1000 AND 3000
AND ProductSKU LIKE 'BK%';
-- 44 row(s) returned
```

ProductName	ProductSKU	ProductColor	ProductPrice
Road-450 Red, 48	BK-R68R-48	Red	1457.99
Road-450 Red, 52	BK-R68R-52	Red	1457.99
Mountain-200 Silver, 38	BK-M68S-38	Silver	2071.4196
Mountain-200 Silver, 42	BK-M68S-42	Silver	2071.4196
Mountain-200 Silver, 46	BK-M68S-46	Silver	2071.4196
Mountain-200 Black, 38	BK-M68B-38	Black	2049.0982
Mountain-200 Black, 42	BK-M68B-42	Black	2049.0982
Mountain-200 Black, 46	BK-M68B-46	Black	2049.0982
Mountain-300 Black, 38	BK-M47B-38	Black	1079.99
Mountain-300 Black, 40	BK-M47B-40	Black	1079.99
Mountain-300 Black, 44	BK-M47B-44	Black	1079.99
Mountain-300 Black, 48	BK-M47B-48	Black	1079.99
Road-250 Red, 44	BK-R89R-44	Red	2443.35

```

SELECT
    ProductName,
    ProductSKU,
    ProductColor,
    ProductPrice
FROM Products
WHERE ProductPrice BETWEEN 1000 AND 3000
AND ProductSKU LIKE 'BK%'
AND ProductColor IN ('Red', 'Silver', 'Black');
-- 23 row(s) returned

```

ProductName	ProductSKU	ProductColor	ProductPrice
Road-450 Red, 58	BK-R68R-58	Red	1457.99
Road-450 Red, 60	BK-R68R-60	Red	1457.99
Road-450 Red, 44	BK-R68R-44	Red	1457.99
Road-450 Red, 48	BK-R68R-48	Red	1457.99
Road-450 Red, 52	BK-R68R-52	Red	1457.99
Mountain-200 Silver, 38	BK-M68S-38	Silver	2071.4196
Mountain-200 Silver, 42	BK-M68S-42	Silver	2071.4196
Mountain-200 Silver, 46	BK-M68S-46	Silver	2071.4196
Mountain-200 Black, 38	BK-M68B-38	Black	2049.0982
Mountain-200 Black, 42	BK-M68B-42	Black	2049.0982
Mountain-200 Black, 46	BK-M68B-46	Black	2049.0982
Mountain-300 Black, 38	BK-M47B-38	Black	1079.99
Mountain-300 Black, 40	BK-M47B-40	Black	1079.99
Mountain-300 Black, 44	BK-M47B-44	Black	1079.99
Mountain-300 Black, 48	BK-M47B-48	Black	1079.99
Road-250 Red, 44	BK-R89R-44	Red	2443.35
Road-250 Red, 48	BK-R89R-48	Red	2443.35
Road-250 Red, 52	BK-R89R-52	Red	2443.35
Road-250 Red, 58	BK-R89R-58	Red	2181.5625
Road-250 Black, 44	BK-R89B-44	Black	2181.5625
Road-250 Black, 48	BK-R89B-48	Black	2181.5625

## DISTINCT

```

-- DISTINCT - Bringing a unique information from a single columns
SELECT * FROM Products;
-- ProductColor
SELECT DISTINCT ProductColor FROM Products;
-- ProductSize
SELECT DISTINCT ProductSize FROM Products;
-- ProductStyle
SELECT DISTINCT ProductStyle FROM Products;

```

ProductColor
Red
Black
White
Blue
Multi
Silver
Yellow
NA
Grey
Silver/Black

ProductStyle
0
U
W
M

AnnualIncome
\$90,000
\$60,000
\$80,000
\$70,000
\$100,000
\$30,000
\$20,000
\$40,000
\$10,000
\$160,000
\$170,000
\$130,000
\$110,000
\$120,000
\$150,000
\$50,000

```

-- Distinct Annual Income
SELECT DISTINCT AnnualIncome FROM Customers;

```

ProductSize
0
M
L
S
XL
62
44
48
52
56
58
60
42
46
38
40
70
50
54



## ORDER BY

- Used for Sorting

Categorical Column - ASC [Default] / DESC [Alphabetical Order]  
Numerical Column [Low to High, High to Low]

```
SELECT
    ProductName,
    ProductSKU,
    ProductColor,
    ProductCost
FROM Products
ORDER BY ProductCost DESC;
```

ProductName	ProductSKU	ProductColor	ProductCost
Road-150 Red, 62	BK-R93R-62	Red	2171.2942
Road-150 Red, 44	BK-R93R-44	Red	2171.2942
Road-150 Red, 48	BK-R93R-48	Red	2171.2942
Road-150 Red, 52	BK-R93R-52	Red	2171.2942
Road-150 Red, 56	BK-R93R-56	Red	2171.2942
Mountain-100 Silver, 38	BK-M82S-38	Silver	1912.1544
Mountain-100 Silver, 42	BK-M82S-42	Silver	1912.1544
Mountain-100 Silver, 44	BK-M82S-44	Silver	1912.1544
Mountain-100 Silver, 48	BK-M82S-48	Silver	1912.1544
Mountain-100 Black, 38	BK-M82B-38	Black	1898.0944
Mountain-100 Black, 42	BK-M82B-42	Black	1898.0944
Mountain-100 Black, 44	BK-M82B-44	Black	1898.0944

## 12 • SELECT

```
13     ProductName,
14     ProductSKU,
15     ProductColor,
16     ProductCost
17 FROM Products
18 ORDER BY ProductCost; ASC
```

```
SELECT
    ProductName,
    ProductSKU,
    ProductColor,
    ProductCost
FROM Products
ORDER BY ProductCost ASC;
```

ProductName	ProductSKU	ProductColor	ProductCost
Patch Kit/8 Patches	PK-7098	NA	0.8565
Road Tire Tube	TT-R982	NA	1.4923
Water Bottle - 30 oz.	WB-H098	NA	1.8663
Mountain Tire Tube	TT-M928	NA	1.8663
Touring Tire Tube	TT-T092	NA	1.8663
Bike Wash - Dissolver	CL-9009	NA	2.9733
Road Bottle Cage	BC-R205	NA	3.3623
Racing Socks, M	SO-R809-M	White	3.3623
Racing Socks, L	SO-R809-L	White	3.3623
Mountain Bike Socks, M	SO-B909-M	White	3.3963
Mountain Bike Socks, L	SO-B909-L	White	3.3963
Mountain Bottle Cage	BC-M005	NA	3.7363

```
-- Customer_Name -> Asc And Total Children Desc
SELECT
    FirstName,
    LastName,
    EmailAddress,
    TotalChildren
FROM Customers
ORDER BY TotalChildren DESC,
FirstName; -- ASC
```

FirstName	LastName	EmailAddress	TotalChildren
WHITNEY	LOPEZ	whitney15@learnsector.com	5
WYATT	PRICE	wyatt52@learnsector.com	5
ZACHARY	ANDERSON	zachary39@learnsector.com	5
AARON	WRIGHT	aaron52@learnsector.com	4
AARON	BRYANT	aaron17@learnsector.com	4
ADRIAN	STEWART	adrian21@learnsector.com	4
ADRIENNE	GOMEZ	adrienne1@learnsector.com	4
AIDAN	ROSS	aidan4@learnsector.com	4
ALBERTO	NAVARRO	alberto11@learnsector.com	4
ALEJANDRO	ZHOU	alejandro11@learnsector.com	4
ALEXANDER	WILLIAMS	alexander4@learnsector.com	4
ALFREDO	MORENO	alfredo7@learnsector.com	4

```
SELECT
    FirstName,
    LastName,
    EmailAddress,
    TotalChildren
FROM Customers
ORDER BY FirstName, TotalChildren DESC;
```

FirstName	LastName	EmailAddress	TotalChildren
AARON	WRIGHT	aaron52@learnsector.com	4
AARON	BRYANT	aaron17@learnsector.com	4
AARON	KING	aaron51@learnsector.com	2
AARON	WANG	aaron24@learnsector.com	2
AARON	SHARMA	aaron30@learnsector.com	1
AARON	ROSS	aaron3@learnsector.com	1
AARON	YOUNG	aaron49@learnsector.com	0
ABBY	FERNANDEZ	abby13@learnsector.com	2
ABBY	SAI	abby4@learnsector.com	0
ABIGAIL	JONES	abigail50@learnsector.com	5
ABIGAIL	FOSTER	abigail68@learnsector.com	5
ABIGAIL	PRICE	abigail25@learnsector.com	2

```
SELECT
    FirstName, -- 1
    LastName, -- 2
    EmailAddress, -- 3
    TotalChildren -- 4
FROM Customers
ORDER BY 1,4 DESC;
```

## Sort the Products Based on ProductSubcategoryKey ASC , ProductPrice DESC.

```

Select * FROM Products;
SELECT
    ProductSubcategoryKey,
    ProductName,
    ProductPrice
FROM Products
ORDER BY ProductSubcategoryKey,
ProductPrice DESC;
-- 293 row(s) returned

```

```

SELECT
    ProductSubcategoryKey, -- 1
    ProductName, -- 2
    ProductPrice -- 3
FROM Products
ORDER BY 1,3 DESC;

```

ProductSubcategoryKey	ProductName	ProductPrice
1	Mountain-100 Silver, 38	3399.99
1	Mountain-100 Silver, 42	3399.99
1	Mountain-100 Silver, 44	3399.99
1	Mountain-100 Silver, 48	3399.99
1	Mountain-100 Black, 38	3374.99
1	Mountain-100 Black, 42	3374.99
1	Mountain-100 Black, 44	3374.99
1	Mountain-100 Black, 48	3374.99
1	Mountain-200 Silver, 38	2071.4196
1	Mountain-200 Silver, 42	2071.4196
1	Mountain-200 Silver, 46	2071.4196
1	Mountain-200 Black, 38	2049.0982

ProductSubcategoryKey	ProductName	ProductPrice
2	Road-150 Red, 62	3578.27
2	Road-150 Red, 44	3578.27
2	Road-150 Red, 48	3578.27
2	Road-150 Red, 52	3578.27
2	Road-150 Red, 56	3578.27
2	Road-250 Red, 44	2443.35
2	Road-250 Red, 48	2443.35
2	Road-250 Red, 52	2443.35
2	Road-250 Red, 58	2181.5625
2	Road-250 Black, 44	2181.5625
2	Road-250 Black, 48	2181.5625
2	Road-250 Black, 52	2181.5625