



# customer and product project



## 1 select specific column with join


```
SELECT
    c.customerkey, c.lastname, s.orderquantity
FROM
    custlookup AS c
    JOIN
    sales AS s ON c.customerkey = s.customerkey;
```

Result Grid		Filter Rows:	
	customerkey	lastname	orderquantity
▶	11090	BRYANT	1
	11129	WRIGHT	1
	11171	HILL	1
	11175	WANG	1
	11191	PEREZ	1
	11216	TORRES	1

## 2 filtering with where

```
SELECT
    *
FROM
    custlookup
WHERE
    Annualincome > 100000
    OR MaritalStatus != 'M';
```

Result Grid



Filter Rows:

	CustomerKey	Prefix	FirstName	LastName
▶	11001	MR.	EUGENE	HUANG
	11003	MS.	CHRISTY	ZHU
	11004	MRS.	ELIZABETH	JOHNSON
	11005	MR.	JULIO	RUIZ
	11008	MRS.	ROBIN	VERHOFF

3 sorting with order by

```
SELECT
    P.ProductName, (s.orderdate) AS date
FROM
    prolookup AS P
    JOIN
    sales AS s ON P.ProductKey = s.ProductKey
ORDER BY ProductName DESC;
```

Result Grid			Filter Rows:
	ProductName	date	
	Road-650 Red, 62	2020-09-20	
	Road-650 Red, 62	2020-07-26	
	Road-650 Red, 62	2020-10-07	
	Road-650 Red, 62	2020-10-05	
	Road-650 Red, 62	2020-10-02	
	Road-650 Red, 62	2020-10-13	



4 aggregate functions

```
SELECT
    ProductSubcategoryKey, COUNT(ProductCategoryKey)
FROM
    subcategory
GROUP BY ProductSubcategoryKey
ORDER BY COUNT(ProductCategoryKey) DESC;
```

Result Grid			Filter Rows:	Export
	ProductSubcategoryKey	COUNT(ProductCategoryKey)		
	1	1		
	2	1		
	3	1		
	4	1		
	5	1		
	6	1		



## 5.group by sales

```
SELECT
    ProductKey, COUNT(*)
FROM
    sales
GROUP BY ProductKey;
```

Result Grid     Filter F		
	ProductKey	COUNT(*)
▶	332	31
	312	179
	350	31
	338	30
	310	169
	314	157

## 6 having with group by

```
SELECT
    Occupation, COUNT(EducationLevel)
FROM
    custlookup
GROUP BY Occupation
HAVING COUNT(EducationLevel) > 1;
```

Result Grid     Filter Rows: <input data-bbox="2715 1003 2948 1116" type="text"/>		
	Occupation	COUNT(EducationLevel)
▶	Professional	5424
	Management	3011
	Skilled Manual	4501
	Clerical	2859
	Manual	2353

7 inner join product category by subcategory

```
SELECT
    p.ProductName, s.SubcategoryName
FROM
    subcategory AS s
    INNER JOIN
    prolookup AS p ON p.ProductSubCategoryKey = s.Product
```

8 left join sales by customerlookup

```
SELECT
    s.orderdate, c.AnnualIncome
FROM
    custlookup AS c
    LEFT JOIN
    sales AS s ON s.CustomerKey = c.CustomerKey;
```

Result Grid			Filter Rows:
	ProductName	SubcategoryName	
▶	Sport-100 Helmet, Red	Helmets	
	Sport-100 Helmet, Black	Helmets	
	Mountain Bike Socks, M	Socks	
	Mountain Bike Socks, L	Socks	
	Sport-100 Helmet, Blue	Helmets	
	AWC Logo Cap	Caps	

Result Grid			Filter Rows:
	orderdate	AnnualIncome	
▶	NULL	90000	
	NULL	60000	
	NULL	60000	
	NULL	70000	
	NULL	80000	
	NULL	70000	



9. retrieve the second highest annulincome from the customerlookup

```
SELECT
    FirstName, MAX(AnnualIncome) AS highest_annulincome
FROM
    custlookup
WHERE
    AnnualIncome < (SELECT
        MAX(AnnualIncome)
        FROM
            custlookup)
GROUP BY Firstname
ORDER BY MAX(AnnualIncome) DESC
LIMIT 2;
```

Result Grid			Filter Rows:
	FirstName	highest_annulincome	
▶	OLIVIA	160000	
	CEDRIC	160000	

10 find duplicate from the customer

```
SELECT
    COUNT(AnnualIncome)
FROM
    custlookup
GROUP BY AnnualIncome
HAVING COUNT(AnnualIncome) > 1;
```

Result Grid     Filter Rows: <input data-bbox="2815 947 3145 1073" type="text"/>		
	Occupation	COUNT(EducationLevel)
▶	Professional	5424
	Management	3011
	Skilled Manual	4501
	Clerical	2859
	Manual	2353

## 7 inner join product category by subcategory

```
SELECT
    p.ProductName, s.SubcategoryName
FROM
    subcategory AS s
    INNER JOIN
    prolookup AS p ON p.ProductSubCategoryKey = s.ProductSubCategoryKey;
```

Result Grid			Filter Rows:	
	ProductName	SubcategoryName		
▶	Sport-100 Helmet, Red	Helmets		
	Sport-100 Helmet, Black	Helmets		
	Mountain Bike Socks, M	Socks		
	Mountain Bike Socks, L	Socks		
	Sport-100 Helmet, Blue	Helmets		
	AWC Logo Cap	Caps		



9 left join sales by customerlookup

```
SELECT
    s.orderdate, c.AnnualIncome
FROM
    custlookup AS c
    LEFT JOIN
    sales AS s ON s.CustomerKey = c.CustomerKey;
```

Result Grid		Filter
	orderdate	AnnualIncome
	NULL	90000
	NULL	60000
	NULL	60000
	NULL	70000
	NULL	80000
	NULL	70000

10 retrieve the second highest annulincome from the customer

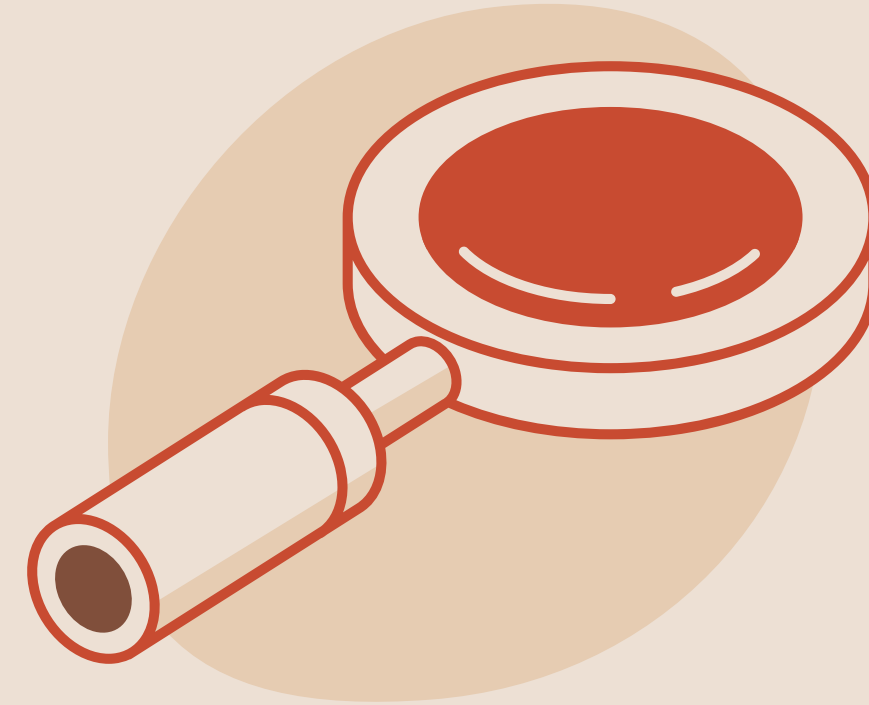
```
SELECT
    FirstName, MAX(AnnualIncome) AS highest_annulincome
FROM
    custlookup
WHERE
    AnnualIncome < (SELECT
        MAX(AnnualIncome)
        FROM
            custlookup)
GROUP BY Firstname
ORDER BY MAX(AnnualIncome) DESC
LIMIT 2;
```

Result Grid		Filter Rows:
	FirstName	highest_annulincome
	OLIVIA	160000
	CEDRIC	160000



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INSTITUTION OR  
UNIVERSITY

Thank you  
for listening!

**Advisor**

Full Name

**Student**

Full Name