Oracle **SINGLE ROW FUNCTIONS** syntax

Here you will see many Examples of using SINGLE ROW FUNCTIONS with Oracle server, and you may try these primers on your own and play with them to grasp this material.

**1) CHARACTER FUNCTIONS**

1. Display name of the Product and last 5 characters of its Description if the name starts on ASUS and listed price is less than $300.

SELECT INITCAP(product\_name), SUBSTR(description),-5) "Last 5"

FROM products

WHERE UPPER(product\_name) LIKE 'ASUS%'

AND list\_price < 300

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| **PRODUCT\_NAME** | **Last 5** |
| Asus Maximus Ix Code | :64gb |
| Asus Sabertooth 990fx | :32gb |
| Asus Vanguard B85 | :32gb |

1. Display name of the Product and how many characters is in its Description if the name starts on ASUS and also contains string MAXIMUS.

SELECT product\_name , LENGTH(description) "Length"

FROM products

WHERE UPPER(product\_name) LIKE 'ASUS%'

AND INSTR(UPPER(product\_name),'MAXIMUS') > 0

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| |  |  | | --- | --- | | **PRODUCT\_NAME** | **Length** | | Asus ROG MAXIMUS IX EXTREME | 53 | | Asus MAXIMUS IX FORMULA | 52 | | Asus MAXIMUS VIII EXTREME/ASSEMBLY | 53 | | Asus MAXIMUS IX CODE | 52 | |  |
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1. Display name of the Product, listed Price, then padded price with $ from the left to the length of 10, also padded with \* from the right to the same length. Condition is same as in Example #2.

SELECT product\_name, list\_price, LPAD(list\_price, 10, '$'), RPAD(list\_price, 10, '\*')

FROM products

WHERE UPPER(product\_name) LIKE 'ASUS%'

AND INSTR(UPPER(product\_name),'MAXIMUS') > 0

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| **PRODUCT\_NAME** | **LIST\_PRICE** | **LPAD(LIST\_PRICE,10,'$')** | **RPAD(LIST\_PRICE,10,'\*')** |
| Asus ROG MAXIMUS IX EXTREME | 573.99 | $$$$573.99 | 573.99\*\*\*\* |
| Asus MAXIMUS IX FORMULA | 388.99 | $$$$388.99 | 388.99\*\*\*\* |
| Asus MAXIMUS VIII EXTREME/ASSEMBLY | 353.98 | $$$$353.98 | 353.98\*\*\*\* |
| Asus MAXIMUS IX CODE | 298.98 | $$$$298.98 | 298.98\*\*\*\* |

**2) CONVERSION FUNCTIONS with CHARACTER FUNCTIONS**

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1. Display name of the Employee, his/her date of hiring like 12/15/2016, job title, also first 5 characters of job title, but only if he/she was hired after December 12, 2016, sorted by date of hiring ascending.

SELECT last\_name, TO\_CHAR(hire\_date, 'MM/DD/YYYY'), job\_title, SUBSTR(job\_title,1,5) "First 5"

FROM employees

WHERE hire\_date > TO\_DATE( 'December 12, 2016','Month dd, YYYY')

ORDER BY hire\_date

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| **LAST\_NAME** | **Hire Date** | **JOB\_TITLE** | **First 5** |
| Ortiz | 12/15/2016 | Sales Representativ | Sales |
| Palmer | 12/19/2016 | Shipping Clerk | Shipp |
| Price | 12/24/2016 | Purchasing Clerk | Purch |

1. Display name of the Employee, his/her date of hiring like 23rd of November , 2016,

Phone, also Phone where instead of dots are shown hyphens, but only if he/she was hired after 20-November-2016 sorted by date of hiring ascending.

SELECT last\_name, TO\_CHAR(hire\_date, 'ddTH "of" Month, YYYY') “Hire Date”, phone, replace(phone, '.', '-') “Phone”

FROM employees

WHERE hire\_date > '20-nov-16'

ORDER BY hire\_date

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| **LAST\_NAME** | **Hire Date** | **PHONE** | **Phone#** |
| Harrison | 23rd of November , 2016 | 011.44.1344.486508 | 011-44-1344-486508 |
| Kelly | 07th of December , 2016 | 515.127.4561 | 515-127-4561 |
| Brooks | 07th of December , 2016 | 515.124.4567 | 515-124-4567 |
| Ellis | 09th of December , 2016 | 011.44.1344.987668 | 011-44-1344-987668 |
| Bryant | 12th of December , 2016 | 650.127.1734 | 650-127-1734 |
| Ortiz | 15th of December , 2016 | 011.44.1345.629268 | 011-44-1345-629268 |
| Palmer | 19th of December , 2016 | 650.505.4876 | 650-505-4876 |
| Price | 24th of December , 2016 | 515.127.4563 | 515-127-4563 |

1. Display first 15 characters of product Description, then listed price like $789.8, if the description contains string CPU and listed price is greater than $600.

SELECT SUBSTR(description,1,15), TO\_CHAR(list\_price, '$99,999.9') “Price”

FROM products

WHERE INSTR(UPPER(description), 'CPU') > 0

AND list\_price > 600

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| **Descr** | **Price** |
| CPU:Xeon D-1541 | $949.0 |
| CPU:LGA775,Form | $789.8 |
| CPU:LGA2011-3,F | $649.0 |
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**3. DATE FUNCTIONS with CHARACTER FUNCTIONS**

1. Display Order number, Order status, Date of ordering, Customer name and its Credit limit like $100.0 , only for orders placed in last 3 years (or 36 months) with the Orders status not starting on S (like Shipped). Sort your result by the most recent orders first and then by Order number.

SELECT order\_id, status, order\_date, name, TO\_CHAR(credit\_limit, '$9,999.0') "Limit"

FROM orders JOIN customers

USING (customer\_id)

WHERE MONTHS\_BETWEEN(sysdate, order\_date) < 36

AND SUBSTR(status,1,1) <> 'S'

ORDER BY 3 desc, 1;

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| **ORDER\_ID** | **STATUS** | **ORDER\_DATE** | **NAME** | **Limit** |
| 1 | Pending | 15-OCT-17 | AbbVie | $100.0 |
| 28 | Canceled | 15-AUG-17 | Community Health Systems | $100.0 |
| 31 | Canceled | 12-AUG-17 | Supervalu | $500.0 |

1. Display Order number, Order status, Date of ordering, Date of first Monday after ordering, also Date after exactly 3 months after ordering, Product number and its Unit price. only for orders placed in last 3 years (or 36 months) with the Orders status starting on C (like Cancelled). Sort your result by the most recent orders first and then by most expensive products.

SELECT order\_id, status, order\_date, NEXT\_DAY(order\_date,'MONDAY') "Monday", ADD\_MONTHS(order\_date,3) "In 3 Months", product\_id, unit\_price "Unit"

FROM orders

JOIN order\_items USING (order\_id)

WHERE MONTHS\_BETWEEN(sysdate, order\_date) < 36

AND SUBSTR(status,1,1) = 'C'

ORDER BY 3 desc, 5 desc

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| **ORDER\_ID** | **STATUS** | **ORDER\_DATE** | **Monday** | **In 3 Months** | **PRODUCT\_ID** | **Unit** |
| 28 | Canceled | 15-AUG-17 | 21-AUG-17 | 15-NOV-17 | 31 | 443.72 |
| 28 | Canceled | 15-AUG-17 | 21-AUG-17 | 15-NOV-17 | 121 | 721.99 |
| 28 | Canceled | 15-AUG-17 | 21-AUG-17 | 15-NOV-17 | 41 | 299.89 |
| 28 | Canceled | 15-AUG-17 | 21-AUG-17 | 15-NOV-17 | 208 | 1199.99 |
| 28 | Canceled | 15-AUG-17 | 21-AUG-17 | 15-NOV-17 | 27 | 800.74 |
| 28 | Canceled | 15-AUG-17 | 21-AUG-17 | 15-NOV-17 | 210 | 1029.99 |
| 28 | Canceled | 15-AUG-17 | 21-AUG-17 | 15-NOV-17 | 54 | 1019.99 |
| 28 | Canceled | 15-AUG-17 | 21-AUG-17 | 15-NOV-17 | 40 | 299.89 |
| 31 | Canceled | 12-AUG-17 | 14-AUG-17 | 12-NOV-17 | 101 | 635.99 |
| 31 | Canceled | 12-AUG-17 | 14-AUG-17 | 12-NOV-17 | 176 | 939.49 |
| 31 | Canceled | 12-AUG-17 | 14-AUG-17 | 12-NOV-17 | 191 | 573.99 |
| 31 | Canceled | 12-AUG-17 | 14-AUG-17 | 12-NOV-17 | 226 | 309.85 |
| 31 | Canceled | 12-AUG-17 | 14-AUG-17 | 12-NOV-17 | 79 | 659.99 |
| 31 | Canceled | 12-AUG-17 | 14-AUG-17 | 12-NOV-17 | 171 | 382.98 |

**4. NUMERIC FUNCTIONS**

9. Display Order number, Order status, Date of ordering, Product number and its Unit price, then price rounded to a closer integer, also price truncated to an integer, then price rounded to a nearest Ten value, also price truncated to a Ten value, but only for orders placed in last 3 years (or 36 months) with the Orders status starting on C (like Cancelled). Sort your result by the most recent orders first and then by most expensive products.

SELECT order\_id, status, order\_date, product\_id,

unit\_price "Unit", ROUND(unit\_price) "Rnd Int", TRUNC(unit\_price) "Trn Int", Round(unit\_price, -1) "Rnd 10" , TRUNC(unit\_price,-1) "Trn 10"

FROM orders

JOIN order\_items USING (order\_id)

WHERE MONTHS\_BETWEEN(sysdate, order\_date) < 36

AND SUBSTR(status,1,1) = 'C'

ORDER BY 3 desc, 5 desc ;

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| **ORDER\_ID** | **STATUS** | **ORDER\_DATE** | **PRODUCT\_ID** | **Unit** | **Rnd Int** | **Trn Int** | **Rnd 10** | **Trn 10** |
| 28 | Canceled | 15-AUG-17 | 208 | 1199.99 | 1200 | 1199 | 1200 | 1190 |
| 28 | Canceled | 15-AUG-17 | 210 | 1029.99 | 1030 | 1029 | 1030 | 1020 |
| 28 | Canceled | 15-AUG-17 | 54 | 1019.99 | 1020 | 1019 | 1020 | 1010 |
| 28 | Canceled | 15-AUG-17 | 27 | 800.74 | 801 | 800 | 800 | 800 |
| 28 | Canceled | 15-AUG-17 | 121 | 721.99 | 722 | 721 | 720 | 720 |
| 28 | Canceled | 15-AUG-17 | 31 | 443.72 | 444 | 443 | 440 | 440 |
| 28 | Canceled | 15-AUG-17 | 40 | 299.89 | 300 | 299 | 300 | 290 |
| 28 | Canceled | 15-AUG-17 | 41 | 299.89 | 300 | 299 | 300 | 290 |
| 31 | Canceled | 12-AUG-17 | 176 | 939.49 | 939 | 939 | 940 | 930 |
| 31 | Canceled | 12-AUG-17 | 79 | 659.99 | 660 | 659 | 660 | 650 |
| 31 | Canceled | 12-AUG-17 | 101 | 635.99 | 636 | 635 | 640 | 630 |
| 31 | Canceled | 12-AUG-17 | 191 | 573.99 | 574 | 573 | 570 | 570 |
| 31 | Canceled | 12-AUG-17 | 171 | 382.98 | 383 | 382 | 380 | 380 |
| 31 | Canceled | 12-AUG-17 | 226 | 309.85 | 310 | 309 | 310 | 300 |

1. Display Order number, Order status, Date of ordering, Product number and its Unit price, then price rounded to a nearest Hundred value, also an integer amount after dividing price by 200, but only for orders placed in last 3 years (or 36 months) with the Orders status starting on C (like Cancelled). Sort your result by the most recent orders first and then by most expensive products.

SELECT order\_id, status, order\_date, product\_id,

unit\_price "Unit", ROUND(unit\_price,-2) "Rnd 100", MOD(unit\_price,200) "Mod 200"

FROM orders

JOIN order\_items USING (order\_id)

WHERE MONTHS\_BETWEEN(sysdate, order\_date) < 36

AND SUBSTR(status,1,1) = 'C'

ORDER BY 3 desc, 5 desc

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| **ORDER\_ID** | **STATUS** | **ORDER\_DATE** | **PRODUCT\_ID** | **Unit** | **Rnd 100** | **Mod 200** |
| 28 | Canceled | 15-AUG-17 | 208 | 1199.99 | 1200 | 199.99 |
| 28 | Canceled | 15-AUG-17 | 210 | 1029.99 | 1000 | 29.99 |
| 28 | Canceled | 15-AUG-17 | 54 | 1019.99 | 1000 | 19.99 |
| 28 | Canceled | 15-AUG-17 | 27 | 800.74 | 800 | 0.74 |
| 28 | Canceled | 15-AUG-17 | 121 | 721.99 | 700 | 121.99 |
| 28 | Canceled | 15-AUG-17 | 31 | 443.72 | 400 | 43.72 |
| 28 | Canceled | 15-AUG-17 | 41 | 299.89 | 300 | 99.89 |
| 28 | Canceled | 15-AUG-17 | 40 | 299.89 | 300 | 99.89 |
| 31 | Canceled | 12-AUG-17 | 176 | 939.49 | 900 | 139.49 |
| 31 | Canceled | 12-AUG-17 | 79 | 659.99 | 700 | 59.99 |
| 31 | Canceled | 12-AUG-17 | 101 | 635.99 | 600 | 35.99 |
| 31 | Canceled | 12-AUG-17 | 191 | 573.99 | 600 | 173.99 |
| 31 | Canceled | 12-AUG-17 | 171 | 382.98 | 400 | 182.98 |
| 31 | Canceled | 12-AUG-17 | 226 | 309.85 | 300 | 109.85 |