

Larry Delgado
Juan Villa
Nicholas Wong
4 February 2021

Relational Algebra 1

1. List all rows from Customer

$\pi_{\text{customers}}$

2. List the productName and the ProductLine that the product belongs to for all products.

$\pi_{\text{productname, productline}} \text{products}$

3. List all ProductNames where the ProductLine is 'MotorCycles'.

$\pi_{\text{productname}} \sigma_{\text{productline}='MotorCycles'} \text{products}$

4. List the Vendor for the product whose productName is '1968 Ford Mustang'.

$\pi_{\text{productvendor}} \sigma_{\text{productname}='1968 Ford Mustang'} \text{products}$

5. List the Order Number, Order Status where the Order Status is 'Resolved' or 'Cancelled'

$\pi_{\text{ordernumber, status}} \sigma_{\text{status}='Resolved' \vee \text{status}='Cancelled'} \text{orders}$

6. List the Order Number and Shipped Date for Orders that the Order Status is 'Shipped' **and** the Shipped Date is **greater than** Required Date.

$\pi_{\text{orderNumber, shippedDate}} \sigma_{\text{status}='Shipped' \wedge \text{shippedDate} > \text{requiredDate}} \text{orders}$

7. List the ProductName and Quantity in Stock where the BuyPrice is greater than the MSRP.

$\pi_{\text{productname, quantityinstock}} \sigma_{\text{buyprice} > \text{msrp}} \text{products}$