

4.2.3. Advanced Relational Algebra

(\bowtie, \bowtie)

3. List descriptions of products that haven't been sold

method1:

$SOLD_PRODUCT = \pi_{PROD_NO} SALE$

$ALL = \pi_{PROD_NO} PRODUCT$

$ANSWER = \pi_{PROD_DESC}((ALL - SOLD_PRODUCT) \bowtie PRODUCT)$

4. List names of clerks who don't have any sales yet

$CUST_NAME = \pi_{CUST_ID, CUST_NAME} CUSTOMER$

$JOIN = CUST_NAME \bowtie SALE$

$ANSWER = \pi_{CUST_NAME}(\sigma_{SALE_DATE=NULL} JOIN)$

5. List categories (positions) of staff who have made sales

$JOIN = \sigma_{SALE_DATE=NULL} (SALE \bowtie STAFF)$

$ANSWER = \pi_{STAFF_POSITION} JOIN$