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Chapter 8 Review

1.

a) R <- ΠFname(σSsn = Essn AND Fname = Dependent\_nam(EMPLOYEE x DEPENDENT))

b) Project\_Employee <- ΠPno, Essn(WORKS\_ON)

Project\_Number <- ΠPnumber(PROJECTS)

Employee\_On\_All <- Project\_Employee ÷ Project\_Number

RESULT <- ΠFname, Lname(EMPLOYEE x Employee\_On\_All)

c) RESULT <- ℑAVERAGE Salary (σ Sex='Female' (EMPLOYEE) )

d) Managers <- Π Mgr\_ssn(DEPARTMENT)

Employee\_With\_Dep <- Π Essn (DEPENDENT)

RESULT <- Π Fname,Lname (EMPLOYEE \* (Managers – Employee\_With\_Dep)

2.

a) RESULT <- σ Flight\_number = ‘co197’ (FARE)

b) RESULT <- ΠFlight\_number, Weekdays(σDeparture\_airport\_code = ‘iah’ AND Arrival\_airport\_code = ‘lax’ (FLIGHT\_LEG))

c) RESULT <- ΠNumber\_of\_available\_seats(σFlight\_number = ‘co197’ AND Date = ‘2009-10-09’ (LEG\_INSTANCE))

3.

a) RESULT <- ΠOrder#, Ship\_date(σWarehouse# = 2(SHIPMENT))

b) RESULT <- ΠCname, No\_of\_orders, Avg\_order\_amt( ℑCname, No\_of\_orders, Avg\_order\_amt ( Cust# ℱ COUNT Order# AVERAGE Ord\_amt (ORDER) x Customer)

c) RESULT <- ΠOrder#( σ City = ‘New York’ AND SHIPMENT.WareHouse# = WAREHOUSE.WareHouse# (SHIPMENT x WAREHOUSE) )