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CSC 134

Assignment 3

1) Find the business name of all contractors who have worked at least 10 hours for a customer in the 95819 zip code.

10HOURS $\quad \leftarrow \quad \sigma_{hours >=10}$(HIRE)

95819 $\quad \leftarrow \quad \sigma_{zip = '95819'}$(CUSTOMER)

95819CONT $\quad \leftarrow \quad$ 10HOURS $\bowtie_{cust\_id = cust\_id}$ 95819

RESULT $\quad \leftarrow \quad \Pi_{bus\_name}$(95819CONT)

2) Find the first and last names of all customers who have between 100 and 1000 rewards points.

REWARDSPOINTS $\leftarrow \sigma_{rewards >100\ AND\ rewards <1000}$(REWARDS)

CUSTREW $\quad \leftarrow \quad$ REWARDSPOINTS $\bowtie_{cust\_id = cust\_id}$ CUSTOMER

RESULT $\quad \leftarrow \Pi_{fliirst,\ last}$(CUSTREW)

3) Find the names of all paint colors that have not been used in a room.

PAINTEDCOLOR $\leftarrow$ PAINTED $\bowtie_{mfg\_id = mfg\_id\ and\ color\_id = color\_id}$(PAINT_COLOR)

GETCOLORS $\quad \leftarrow \Pi_{mfg\_id,\ color\_id,\ name}$(PAINTEDCOLOR)

DIFFERENCE $\quad \leftarrow$ PAINT_COLOR - GETCOLORS

RESULT $\quad \leftarrow \Pi_{name}$(DIFFERENCE)

4) Find the business name, discount, and phone number of all contractors who have worked at least 1 hour for customers with the last name of 'Valdez'.

1HOUR $\quad \leftarrow \sigma_{hours >=1}$(HIRE)

VALDEZ $\quad \leftarrow \sigma_{last = 'Valdez'}$(CUSTOMER)

1HOURVALDEZ $\quad \leftarrow$ 1HOUR $\bowtie_{cust\_id = cust\_id}$ VALDEZ

VALCONTRACTORS $\leftarrow$ 1HOURVALDEZ $\bowtie_{bus\_name = bus\_name}$(CONTRACTOR)

1HOURVALPHONE $\quad \leftarrow$ VALCONTRACTORS $\bowtie_{bus\_name = bus\_name}$ CONTRACTOR_PHONE

RESULT $\quad \leftarrow \Pi_{bus\_name,\ discount,phone}$(1HOURVALPHONE)

5) Find the first and last names of all customers who have used a paint color named "Blushing Pink" in a room named "Bedroom 1"

BLUSHINGPINK $\quad \leftarrow \quad \sigma_{name = 'Blushing\ Pink'}$ (PAINT_COLOR)

PAINTEDWITHBP $\quad \leftarrow \quad$ PAINTED $\bowtie_{color\_id = color\_id}$ BLUSHINGPINK

BEDROOM1 $\quad \leftarrow \sigma_{room = "Bedroom\ 1'}$ (ROOM)

BEDROOM1CUST $\leftarrow$ CUSTOMER $\bowtie_{cust\_id = cust\_id}$ BEDROOM1

BPINKCUSTBR1 $\quad \leftarrow$ BEDROOM1CUST $\bowtie_{cust\_id =cust\_id}$ PAINTEDWITHBP

RESULT $\quad \leftarrow \Pi_{first,last}$(BPINKCUSTBR1)