HOMEWORK # 2: Relational Algebra

Use the tables below to complete this assignment.

EMPLOYEE

EMPNO	EMPNAME	ZIP	HDATE	TITLE
1000	Jones	33157	12-DEC-95	Manager
1001	Smith	33710	15-JAN-96	Sales Rep
1002	Brown	33169	3-JUN-98	Sales Rep
1003	Foust	33048	27-JUL-00	Manager
1004	Garcia	33157	7-NOV-99	Sales Rep

PROSPECT

PROSNO	PROSNAME	STREET	ZIP
001	Yam	1702 Oak Lane	33048
002	Zaresk	21 SW 15th St.	33157
003	Burns	299 Jen St. NE	33169

CUSTOMER

CUSTNO	CUSTNAME	STREET	ZIP
501	Smith	123 Main St.	33710
502	Finney	345 Himes Way	33169
503	Jefferson	9981 Red Road	33157
504	Hamburg	127-A Fiddler St.	33157

PARTS

PARTNO	DESCRIPTION	QOH	PRICE	LEVEL
1501	Vitamin A	50	7.00	20
1502	Vitamin B12	30	10.00	10
1503	Vitamin C	200	8.00	50
1504	Vitamin D	100	8.00	30
1505	Vitamin E	150	10.00	40

1506	Iron	200	10.00	50
1507	Zinc	40	11.00	10
1508	Folic Acid	50	11.00	15
1509	Calcium	200	12.00	50

ORDERS

ORDERNO	CUSTNO	EMPNO	RECEIVED	SHIPPED
1020	502	1002	8-AUG-98	18-AUG-98
1030	501	1001	5-JAN-97	10-JAN-97
1040	503	1004	1-FEB-00	5-FEB-00
1050	504	1004	15-MAR-00	17-MAR-00
1060	501	1001	2-NOV-99	2-DEC-99

ZIPCODE

ZIP	CITY
33157	Miami
33710	St. Petersburg
33169	Tampa
33048	Orlando

Part I: Directions: For Questions 1-10 below, read the Relational Algebra statements and output the query results in table format (tables must have the attribute headings and all applicable tuples).

1. $\sigma_{Level=10}$(parts)
2. Prospect ∪ Customer
3. Prospect ∩ Customer
4. $\Pi_{Empname,\ Title}$(Employee)
5. $\Pi_{Empname,\ Hdate}(\sigma_{Title='Manager'}(Employee))$
6. $\sigma_{Title='Sales\ Rep'}$(Employee) ← Call this resulting table Salesrep
7. Employee - Salesrep (Salesrep table from #6 above)
8. Customer × Orders
9. Customer * Zipcode
10. $\Pi_{Empname}(Employee \bowtie_{zip=zip}(\sigma_{City \neq 'Miami'}(Zipcode))$

Part II: Directions: For questions 1-5 below, read the query and state what the relational algebra statement(s) will be for each question.

1. Get part description of parts that cost less than $10.
2. Get the names of customers who have ordered parts from employees living in Miami.
3. Select all employees who are Sales Reps.

4. Give all employee details for those who live in Miami.
5. Get the Prospect name who lives in Orlando.

Submission Instructions

- If assignments are printed on perforated paper, please separate each sheet prior to submission.
- Do not use any fancy folders. Simply staple the papers together. Please use one staple in the upper left hand corner to bind all sheets together.
- Make sure your name is clearly printed on the first page of the assignment.

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