JOINS

cdac=# CREATE TABLE locations ( LOCATION\_ID decimal(4,0) NOT NULL DEFAULT 0, STREET\_ADDRESS varchar(40) DEFAULT NULL, POSTAL\_CODE varchar(12) DEFAULT NULL, CITY varchar(30) NOT NULL, STATE\_PROVINCE varchar(25) DEFAULT NULL, COUNTRY\_ID varchar(2) DEFAULT NULL, PRIMARY KEY (LOCATION\_ID));

CREATE TABLE

cdac=# select \* from locations ;

location\_id | street\_address | postal\_code | city | state\_province | country\_id

-------------+----------------+-------------+------+----------------+------------

(0 rows)

cdac=# INSERT INTO locations VALUES (1000,'1297 Via Cola di Rie','989','Roma','','IT'),(1100,'93091 Calle della Testa','10934','Venice','','IT'),(1200,'2017 Shinjuku-ku','1689','Tokyo','Tokyo Prefecture','JP'),(1300,'9450 Kamiya-cho','6823','Hiroshima','','JP'),(1400,'2014 Jabberwocky Rd','26192','Southlake','Texas','US'),(1500,'2011 Interiors Blvd','99236','South San Francisco','California','US'),(1600,'2007 Zagora St','50090','South Brunswick','New Jersey','US'),(1700,'2004 Charade Rd','98199','Seattle','Washington','US'),(1800,'147 Spadina Ave','M5V 2L7','Toronto','Ontario','CA'),(1900,'6092 Boxwood St','YSW 9T2','Whitehorse','Yukon','CA'),(2000,'40-5-12 Laogianggen','190518','Beijing','','CN'),(2100,'1298 Vileparle (E)','490231','Bombay','Maharashtra','IN'),(2200,'12-98 Victoria Street','2901','Sydney','New South Wales','AU'),(2300,'198 Clementi North','540198','Singapore','','SG'),(2400,'8204 Arthur St','','London','','UK'),(2500,'Magdalen Centre',' The Oxford ','OX9 9ZB','Oxford','Ox'),(2600,'9702 Chester Road','9629850293','Stretford','Manchester','UK'),(2700,'Schwanthalerstr. 7031','80925','Munich','Bavaria','DE'),(2800,'Rua Frei Caneca 1360','01307-002','Sao Paulo','Sao Paulo','BR'),(2900,'20 Rue des Corps-Saints','1730','Geneva','Geneve','CH'),(3000,'Murtenstrasse 921','3095','Bern','BE','CH'),(3100,'Pieter Breughelstraat 837','3029SK','Utrecht','Utrecht','NL'),(3200,'Mariano Escobedo 9991','11932','Mexico City','\"Distrito Federal','\"');

INSERT 0 23

cdac=# select \* from locations ;

location\_id | street\_address | postal\_code | city | state\_province | country\_id

-------------+---------------------------+--------------+---------------------+--------------------+------------

1000 | 1297 Via Cola di Rie | 989 | Roma | | IT

1100 | 93091 Calle della Testa | 10934 | Venice | | IT

1200 | 2017 Shinjuku-ku | 1689 | Tokyo | Tokyo Prefecture | JP

1300 | 9450 Kamiya-cho | 6823 | Hiroshima | | JP

1400 | 2014 Jabberwocky Rd | 26192 | Southlake | Texas | US

1500 | 2011 Interiors Blvd | 99236 | South San Francisco | California | US

1600 | 2007 Zagora St | 50090 | South Brunswick | New Jersey | US

1700 | 2004 Charade Rd | 98199 | Seattle | Washington | US

1800 | 147 Spadina Ave | M5V 2L7 | Toronto | Ontario | CA

1900 | 6092 Boxwood St | YSW 9T2 | Whitehorse | Yukon | CA

2000 | 40-5-12 Laogianggen | 190518 | Beijing | | CN

2100 | 1298 Vileparle (E) | 490231 | Bombay | Maharashtra | IN

2200 | 12-98 Victoria Street | 2901 | Sydney | New South Wales | AU

2300 | 198 Clementi North | 540198 | Singapore | | SG

2400 | 8204 Arthur St | | London | | UK

2500 | Magdalen Centre | The Oxford | OX9 9ZB | Oxford | Ox

2600 | 9702 Chester Road | 9629850293 | Stretford | Manchester | UK

2700 | Schwanthalerstr. 7031 | 80925 | Munich | Bavaria | DE

2800 | Rua Frei Caneca 1360 | 01307-002 | Sao Paulo | Sao Paulo | BR

2900 | 20 Rue des Corps-Saints | 1730 | Geneva | Geneve | CH

3000 | Murtenstrasse 921 | 3095 | Bern | BE | CH

3100 | Pieter Breughelstraat 837 | 3029SK | Utrecht | Utrecht | NL

3200 | Mariano Escobedo 9991 | 11932 | Mexico City | \"Distrito Federal | \"

(23 rows)

cdac=# select \* from departments ;

department\_id | department\_name | manager\_id | location\_id

---------------+----------------------+------------+-------------

10 | Administration | 200 | 1700

20 | Marketing | 201 | 1800

30 | Purchasing | 114 | 1700

40 | Human Resources | 203 | 2400

50 | Shipping | 121 | 1500

60 | IT | 103 | 1400

70 | Public Relations | 204 | 2700

80 | Sales | 145 | 2500

90 | Executive | 100 | 1700

100 | Finance | 108 | 1700

110 | Accounting | 205 | 1700

120 | Treasury | 0 | 1700

130 | Corporate Tax | 0 | 1700

140 | Control And Credit | 0 | 1700

150 | Shareholder Services | 0 | 1700

160 | Benefits | 0 | 1700

170 | Manufacturing | 0 | 1700

180 | Construction | 0 | 1700

190 | Contracting | 0 | 1700

200 | Operations | 0 | 1700

210 | IT Support | 0 | 1700

220 | NOC | 0 | 1700

230 | IT Helpdesk | 0 | 1700

240 | Government Sales | 0 | 1700

250 | Retail Sales | 0 | 1700

260 | Recruiting | 0 | 1700

270 | Payroll | 0 | 1700

(27 rows)

**1.** From the following tables, write a SQL query to find the first name, last name, department number, and department name for each employee.

cdac=# select e.first\_name, e.last\_name, d.department\_name, l.city, l.state\_province from employees e join departments d on d.department\_id = e.department\_id join locations l on l.location\_id = d.location\_id ;

first\_name | last\_name | department\_name | city | state\_province

-------------+-------------+------------------+---------------------+----------------

Steven | King | Executive | Seattle | Washington

Neena | Kochhar | Executive | Seattle | Washington

Lex | De Haan | Executive | Seattle | Washington

Alexander | Hunold | IT | Southlake | Texas

Bruce | Ernst | IT | Southlake | Texas

David | Austin | IT | Southlake | Texas

Valli | Pataballa | IT | Southlake | Texas

Diana | Lorentz | IT | Southlake | Texas

Nancy | Greenberg | Finance | Seattle | Washington

Daniel | Faviet | Finance | Seattle | Washington

John | Chen | Finance | Seattle | Washington

Ismael | Sciarra | Finance | Seattle | Washington

Jose Manuel | Urman | Finance | Seattle | Washington

Luis | Popp | Finance | Seattle | Washington

Den | Raphaely | Purchasing | Seattle | Washington

Alexander | Khoo | Purchasing | Seattle | Washington

Shelli | Baida | Purchasing | Seattle | Washington

Sigal | Tobias | Purchasing | Seattle | Washington

Guy | Himuro | Purchasing | Seattle | Washington

Karen | Colmenares | Purchasing | Seattle | Washington

Matthew | Weiss | Shipping | South San Francisco | California

Adam | Fripp | Shipping | South San Francisco | California

Payam | Kaufling | Shipping | South San Francisco | California

Shanta | Vollman | Shipping | South San Francisco | California

Kevin | Mourgos | Shipping | South San Francisco | California

Julia | Nayer | Shipping | South San Francisco | California

Irene | Mikkilineni | Shipping | South San Francisco | California

James | Landry | Shipping | South San Francisco | California

Steven | Markle | Shipping | South San Francisco | California

Laura | Bissot | Shipping | South San Francisco | California

Mozhe | Atkinson | Shipping | South San Francisco | California

James | Marlow | Shipping | South San Francisco | California

TJ | Olson | Shipping | South San Francisco | California

Jason | Mallin | Shipping | South San Francisco | California

Michael | Rogers | Shipping | South San Francisco | California

Ki | Gee | Shipping | South San Francisco | California

Hazel | Philtanker | Shipping | South San Francisco | California

Renske | Ladwig | Shipping | South San Francisco | California

Stephen | Stiles | Shipping | South San Francisco | California

John | Seo | Shipping | South San Francisco | California

Joshua | Patel | Shipping | South San Francisco | California

Trenna | Rajs | Shipping | South San Francisco | California

Curtis | Davies | Shipping | South San Francisco | California

Randall | Matos | Shipping | South San Francisco | California

Peter | Vargas | Shipping | South San Francisco | California

John | Russell | Sales | OX9 9ZB | Oxford

Karen | Partners | Sales | OX9 9ZB | Oxford

Alberto | Errazuriz | Sales | OX9 9ZB | Oxford

Gerald | Cambrault | Sales | OX9 9ZB | Oxford

Eleni | Zlotkey | Sales | OX9 9ZB | Oxford

Peter | Tucker | Sales | OX9 9ZB | Oxford

David | Bernstein | Sales | OX9 9ZB | Oxford

Peter | Hall | Sales | OX9 9ZB | Oxford

Christopher | Olsen | Sales | OX9 9ZB | Oxford

Nanette | Cambrault | Sales | OX9 9ZB | Oxford

Oliver | Tuvault | Sales | OX9 9ZB | Oxford

Janette | King | Sales | OX9 9ZB | Oxford

Patrick | Sully | Sales | OX9 9ZB | Oxford

Allan | McEwen | Sales | OX9 9ZB | Oxford

Lindsey | Smith | Sales | OX9 9ZB | Oxford

Louise | Doran | Sales | OX9 9ZB | Oxford

Sarath | Sewall | Sales | OX9 9ZB | Oxford

Clara | Vishney | Sales | OX9 9ZB | Oxford

Danielle | Greene | Sales | OX9 9ZB | Oxford

Mattea | Marvins | Sales | OX9 9ZB | Oxford

David | Lee | Sales | OX9 9ZB | Oxford

Sundar | Ande | Sales | OX9 9ZB | Oxford

Amit | Banda | Sales | OX9 9ZB | Oxford

Lisa | Ozer | Sales | OX9 9ZB | Oxford

Harrison | Bloom | Sales | OX9 9ZB | Oxford

Tayler | Fox | Sales | OX9 9ZB | Oxford

William | Smith | Sales | OX9 9ZB | Oxford

Elizabeth | Bates | Sales | OX9 9ZB | Oxford

Sundita | Kumar | Sales | OX9 9ZB | Oxford

Ellen | Abel | Sales | OX9 9ZB | Oxford

Alyssa | Hutton | Sales | OX9 9ZB | Oxford

Jonathon | Taylor | Sales | OX9 9ZB | Oxford

Jack | Livingston | Sales | OX9 9ZB | Oxford

Charles | Johnson | Sales | OX9 9ZB | Oxford

Winston | Taylor | Shipping | South San Francisco | California

Jean | Fleaur | Shipping | South San Francisco | California

Martha | Sullivan | Shipping | South San Francisco | California

Girard | Geoni | Shipping | South San Francisco | California

Nandita | Sarchand | Shipping | South San Francisco | California

Alexis | Bull | Shipping | South San Francisco | California

Julia | Dellinger | Shipping | South San Francisco | California

Anthony | Cabrio | Shipping | South San Francisco | California

Kelly | Chung | Shipping | South San Francisco | California

Jennifer | Dilly | Shipping | South San Francisco | California

Timothy | Gates | Shipping | South San Francisco | California

Randall | Perkins | Shipping | South San Francisco | California

Sarah | Bell | Shipping | South San Francisco | California

Britney | Everett | Shipping | South San Francisco | California

Samuel | McCain | Shipping | South San Francisco | California

Vance | Jones | Shipping | South San Francisco | California

Alana | Walsh | Shipping | South San Francisco | California

Kevin | Feeney | Shipping | South San Francisco | California

Donald | OConnell | Shipping | South San Francisco | California

Douglas | Grant | Shipping | South San Francisco | California

Jennifer | Whalen | Administration | Seattle | Washington

Michael | Hartstein | Marketing | Toronto | Ontario

Pat | Fay | Marketing | Toronto | Ontario

Susan | Mavris | Human Resources | London |

Hermann | Baer | Public Relations | Munich | Bavaria

Shelley | Higgins | Accounting | Seattle | Washington

William | Gietz | Accounting | Seattle | Washington

(106 rows)

**2.** From the following tables, write a SQL query to find the first name, last name, department, city, and state province for each employee.

cdac=# select e.first\_name , e.last\_name , e.department\_id , d.department\_name from employees e join departments d on e.department\_id = d.department\_id;

**3.** From the following table, write a SQL query to find the first name, last name, salary, and job grade for all employees.

cdac=# select e.first\_name, e.last\_name, e.salary, j.grade\_level from employees e join job\_grades j on e.salary between j.lowest\_sal and j.highest\_sal;

**4.** From the following tables, write a SQL query to find all those employees who work in department ID 80 or 40. Return first name, last name, department number and department name.

cdac=# select e.first\_name , e.last\_name, e.department\_id , d.department\_name from employees e join departments d on e.department\_id = d.department\_id and e.department\_id in (80 , 40) order by e.last\_name;

**6.** From the following table, write a SQL query to find all departments including those without any employee. Return first name, last name, department ID, department name.

cdac=# select e.first\_name, e.last\_name, d.department\_id, d.department\_name from employees e right outer join departments d on e.department\_id = d.department\_id;

**7.** From the following table, write a SQL query to find those employees who earn less than the employee of ID 182. Return first name, last name and salary.

cdac=# select e.first\_name, e.last\_name, e.salary from employees e join employees s on e.salary < s.salary and s.employee\_id = 182;

**8.** From the following table, write a SQL query to find the employees and their managers. Return the first name of the employee and manager.

cdac=# select e.first\_name as "Employee Name", m.first\_name as "Manager" from employees e join employees m on e.manager\_id = m.employee\_id;