**Database Management**

<Part I>

SQL> START C:\DBM\SQL\_HW1\_PART1.txt

SQL> ALTER TABLE Grade\_Score

2 ADD CONSTRAINT Grade\_Score\_Grade\_PK

3 PRIMARY KEY (Grade);

Table altered.

SQL> ALTER TABLE Department

2 ADD CONSTRAINT Department\_DeptMngr\_FK

3 FOREIGN KEY (Dept\_Mngr)

4 REFERENCES Employee (Emp\_ID);

Table altered.

SQL> ALTER TABLE Training

2 ADD CONSTRAINT Training\_Grade\_FK

3 FOREIGN KEY (Grade)

4 REFERENCES Grade\_Score (Grade);

Table altered.

SQL> ALTER TABLE training

2 ADD CONSTRAINT Training\_ClassInfo\_FK

3 FOREIGN KEY (Crs\_ID, Section, Sem\_Cmpltd)

4 REFERENCES Class (Crs\_ID, Section, Sem\_Cmpltd);

Table altered.

SQL> SPOOL OFF

<Part II>

SQL> START C:\DBM\SQL\_HW1\_PART2.txt

SQL> --SQL HW1 PART2

SQL>

SQL> --Q1

SQL> SELECT DISTINCT training.emp\_id AS "Employee ID",

2 emp\_lname||' '||emp\_fname AS "Employee Name"

3 FROM employee, training

4 WHERE (training.emp\_id = employee.emp\_id)

5 AND (grade IN ('B', 'B+', 'A-', 'A', 'A+'))

6 MINUS

7 SELECT DISTINCT training.emp\_id,

8 emp\_lname||' '||emp\_fname

9 FROM employee, training

10 WHERE (training.emp\_id = employee.emp\_id)

11 AND (grade IN ('R', 'C-', 'C', 'C+', 'B-'));

Employee ID Employee Name

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162 Nelson Ray

171 Belli Willam

314 Gates Bob

317 Newton Steve

SQL>

SQL> --Q2

SQL> SELECT DISTINCT s.emp\_lname || ' '|| s.emp\_fname AS "Supervisor's Name"

2 FROM employee e JOIN employee s

3 ON e.sup\_id = s.emp\_id

4 MINUS

5 SELECT DISTINCT s.emp\_lname || ' '|| s.emp\_fname

6 FROM employee e NATURAL JOIN training

7 JOIN employee s ON s.emp\_id = e.sup\_id

8 WHERE appr\_date LIKE '%16%';

Supervisor's Name

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Harris Scott

Jones Amelia

Evans Stan

SQL>

SQL> --Q3

SQL> SELECT emp\_id AS "Employee ID",

2 emp\_lname||' '||emp\_fname AS "Employee Name",

3 crs\_title AS "Course",

4 sem\_cmpltd AS "Semester"

5 FROM employee JOIN training USING (emp\_id)

6 JOIN course USING (crs\_id)

7 WHERE grade = 'R';

Employee ID Employee Name Course Semester

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128 Boon Pat C++ Spr 2012

168 Corman Chris Corporate Finance Fall 2014

SQL>

SQL> --Q4

SQL> SELECT emp\_id AS "Employee ID",

2 emp\_lname||' '||emp\_fname AS "Employee Name",

3 crs\_title AS "Course",

4 tuition AS "Tuition",

5 dept\_name AS "Department"

6 FROM employee JOIN department USING (dept\_id)

7 JOIN training USING (emp\_id)

8 JOIN course USING (crs\_id)

9 WHERE (crs\_title LIKE '%ing')

10 AND tuition <3000

11 ORDER BY dept\_name, emp\_lname;

Employee ID Employee Name Course Tuition Department

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128 Boon Pat Accounting 2500 Administration

137 Hall Jim Mobile Computing 2500 IT

162 Nelson Ray Mobile Computing 2500 IT

153 Roditi Adam Mobile Computing 2500 IT

171 Belli Willam Marketing 2000 Sales

100 Krall Mary Mobile Computing 2500 Sales

172 Swift Lisa Marketing 2000 Sales

7 rows selected.

SQL>

SQL> --Q5

SQL> SELECT DISTINCT instr\_id AS "Instructor ID",

2 instr\_lname||' '||instr\_fname AS "Instructor Name",

3 specialty AS "Specialty",

4 college\_name AS "College"

5 FROM instructor JOIN class USING (instr\_id)

6 JOIN course USING (crs\_id)

7 WHERE college\_name = 'Oakland' OR specialty = 'Programming';

Instructor ID Instructor Name Specialty College

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521 Hall Steve OO Programming Oakland

533 Jones Carol Cloud Computing Oakland

503 Miller Adam eBusiness Oakland

SQL>

SQL> --Q6

SQL> SELECT emp\_id AS "Employee ID",

2 emp\_lname||' '||emp\_fname AS "Employee Name",

3 section||' ' AS "Section",

4 sem\_cmpltd AS "Semester",

5 grade||' ' AS "Grade"

6 FROM training JOIN employee USING (emp\_id)

7 JOIN class USING (crs\_id, section, sem\_cmpltd)

8 JOIN course USING (crs\_id)

9 WHERE sem\_cmpltd LIKE '%Spr%'

10 AND grade IN ('B', 'B+', 'A-', 'A', 'A+')

11 AND crs\_title = 'Database Management'

12 ORDER BY sem\_cmpltd DESC, emp\_lname;

Employee ID Employee Name Section Semester Grade

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100 Krall Mary A Spr 2015 A+

137 Hall Jim B Spr 2012 B

153 Roditi Adam B Spr 2012 B

SQL>

SQL> --Q7

SQL> SELECT crs\_id AS "Course ID",

2 crs\_title AS "Course",

3 section||' ' AS "Section",

4 sem\_cmpltd AS "Semester"

5 FROM employee JOIN department USING (dept\_id)

6 JOIN training USING (emp\_id)

7 JOIN course USING (crs\_id)

8 WHERE dept\_name = 'IT'

9 AND (sem\_cmpltd LIKE '%2016%' OR sem\_cmpltd LIKE '%2015%')

10 ORDER BY sem\_cmpltd DESC, crs\_title;

Course ID Course Section Semester

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IS 750 Web Applications A Spr 2016

20 325 Social Networks B Spr 2015

20 325 Social Networks B Fall 2015

SQL>

SQL> SPOOL OFF