INFO20003 Week 6 Lab Solutions

Section 1: Continuing SQL

◆ **Task 1.1** Find the names of employees who work in the same department as their boss. Report the full name of the employee, the department, and the boss's name.

```
SELECT CONCAT(emp.FirstName, ' ', emp.LastName) AS employee_name,
  emp.departmentID,
  CONCAT(boss.FirstName, ' ', boss.LastName) AS boss_name
FROM employee AS emp INNER JOIN employee AS boss
  ON emp.BossID = boss.employeeID
WHERE emp.departmentID = boss.departmentID;
```

◆ **Task 1.3** Type a query to find the name, salary, and boss's name of the employees of department ID 11 who have a salary over $55,000.

```
SELECT CONCAT(emp.FirstName, ' ', emp.LastName) AS EmployeeName,
  emp.salary, CONCAT(boss.FirstName, ' ', boss.LastName) AS Manager
FROM employee AS emp INNER JOIN employee AS boss
  ON emp.BossID = boss.employeeID
WHERE emp.salary > 55000
  AND emp.departmentid = 11;
```

◆ **Task 1.5** Type a query to return the items that have been sold by at least two departments.

```
SELECT item.Name
FROM item NATURAL JOIN saleitem NATURAL JOIN sale
GROUP BY item.Name
HAVING COUNT(DISTINCT DepartmentID) >= 2;
```

Section 2: SQL self-test: single-table queries

◆ **Task 2.1** How many deliveries have there been in the month of July?
Hint: The only information you have been given is the month name.

```
SELECT COUNT(deliverydate)
FROM delivery
WHERE MONTHNAME(deliverydate) = 'July';
```

◆ **Task 2.2** List the names of the tents available for sale.

```
SELECT name
FROM item
WHERE name LIKE '%tent%';
```

◆ **Task 2.3** What month has had the highest number of sales?

```
SELECT MONTHNAME(saledate) AS month, COUNT(*) AS num_sales
FROM sale
GROUP BY MONTHNAME(saledate)
ORDER BY COUNT(*) DESC
LIMIT 1;
```

◆ **Task 2.4** List the salary total and employee count for each departmentID. Order the results from the smallest salary total to the largest.

```
SELECT departmentid, SUM(salary), COUNT(*)
FROM employee
GROUP BY departmentid
ORDER BY SUM(salary);
```

In a “single-table queries” self-test, the above answer is acceptable.

◆ **Task 2.5** How many sales have been on a Sunday?

```
SELECT COUNT(saleid)
FROM sale
WHERE DAYNAME(saledate) = 'Sunday';
```

◆ **Task 2.6** How many days have elapsed between the first delivery date and most recent delivery date for each supplier?

```
SELECT supplierid,
  DATEDIFF(MAX(deliverydate), MIN(deliverydate)) AS datedif
FROM delivery
GROUP BY supplierid;
```

◆ **Task 2.7** Produce the following output by writing a SQL statement.

```
SELECT CONCAT('The ', name, ' department is on floor number ', floor)
  AS 'Where is each department?'
FROM department
ORDER BY name;
```

◆ **Task 2.8** Find the minimum, maximum, average and standard deviation for salaries in each department.

```
SELECT departmentid, MIN(salary) AS MIN, MAX(salary) AS MAX,
  STDDEV(salary) AS STDDEV
FROM employee
GROUP BY departmentid;
```

◆ **Task 2.9** List the green items of type C.

```
SELECT ItemID, Name
FROM item
WHERE Type = 'C'
  AND Colour = 'Green';
```