

3)

```
mysql> CREATE TABLE jbmanager(id INT NOT NULL, bonus INT NOT NULL  
DEFAULT '0');
```

Query OK, 0 rows affected (0.01 sec)

```
mysql> ALTER TABLE jbmanager ADD FOREIGN KEY (id) REFERENCES  
jbemployee(id);
```

Query OK, 0 rows affected (0.03 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> ALTER TABLE jbemployee DROP FOREIGN KEY fk_emp_mgr;
```

Query OK, 25 rows affected (0.10 sec)

Records: 25 Duplicates: 0 Warnings: 0

```
mysql> ALTER TABLE jbemployee DROP FOREIGN KEY fk_emp_mgr;
```

Query OK, 25 rows affected (0.10 sec)

Records: 25 Duplicates: 0 Warnings: 0

```
mysql> ALTER TABLE jbemployee DROP KEY fk_emp_mgr;
```

Query OK, 0 rows affected (0.54 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> INSERT INTO jbmanager (id) SELECT emp1.id FROM jbemployee  
emp1, jbemployee emp2, jbdept WHERE emp1.id = emp2.manager OR  
jbdept.manager = emp1.id group by id;
```

Query OK, 12 rows affected (0.04 sec)

Records: 12 Duplicates: 0 Warnings: 0

```
mysql> ALTER TABLE jbdept DROP FOREIGN KEY fk_dept_mgr;
```

Query OK, 19 rows affected (0.03 sec)

Records: 19 Duplicates: 0 Warnings: 0

```
mysql> ALTER TABLE jbdept DROP KEY fk_dept_mgr;
```

Query OK, 0 rows affected (0.16 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> ALTER TABLE jbdept ADD FOREIGN KEY(manager) REFERENCES  
jbmanager(id) ON DELETE SET NULL;
```

Query OK, 19 rows affected (0.05 sec)

Records: 19 Duplicates: 0 Warnings: 0

WRITTEN ANSWER:

We initilized the bonus value to 0 to avoid it being NULL, so we
can add and subtract from it.

4)

```
mysql> UPDATE jbmanager, jbdept SET bonus = bonus + 10000 WHERE  
jbdept.manager = jbmanager.id ;
```

Query OK, 11 rows affected (0.01 sec)
Rows matched: 11 Changed: 11 Warnings: 0

mysql> SELECT * FROM jbmanager;

id	bonus
10	10000
13	10000
26	10000
32	10000
33	10000
35	10000
37	10000
55	10000
98	10000
129	10000
157	10000
199	0

12 rows in set (0.01 sec)

5)

mysql> CREATE TABLE jbcustomer(id INTEGER NOT NULL, name VARCHAR(40) NOT NULL, address VARCHAR(40), city INTEGER(11) NOT NULL, PRIMARY KEY(id), FOREIGN KEY(city) REFERENCES jbcity(id));
Query OK, 0 rows affected (8.25 sec)

mysql> CREATE TABLE jbaccount(id INTEGER NOT NULL, balance INTEGER NOT NULL, owner INTEGER(11) NOT NULL, PRIMARY KEY(id), FOREIGN KEY(owner) REFERENCES jbcustomer(id));
Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE jbtransaction(id INT NOT NULL DEFAULT '0', date timestamp NOT NULL DEFAULT CURRENT_TIMESTAMP, employee INT NOT NULL, account INT NOT NULL, amount INT NOT NULL, PRIMARY KEY(id), FOREIGN KEY(account) REFERENCES jbaccount(id), FOREIGN KEY(employee) REFERENCES jbempleado(id));
Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE jbdeposit(id INTEGER(11), PRIMARY KEY(id), FOREIGN KEY(id) REFERENCES jbtransaction(id));
Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE jbwithdrawal(id INTEGER(11), PRIMARY KEY(id), FOREIGN KEY(id) REFERENCES jbtransaction(id));
Query OK, 0 rows affected (0.03 sec)

mysql> ALTER TABLE jbsale DROP FOREIGN KEY fk_sale_debit;

Query OK, 8 rows affected (0.02 sec)
Records: 8 Duplicates: 0 Warnings: 0

mysql> TRUNCATE TABLE jbsale;
Query OK, 0 rows affected (0.03 sec)

mysql> ALTER TABLE jbsale ADD FOREIGN KEY(debit) REFERENCES
jbtransaction(id);
Query OK, 0 rows affected (0.03 sec)
Records: 0 Duplicates: 0 Warnings: 0