1a.

```
UPDATE professor SET salary = CASE WHEN salary > 100000 THEN salary * 1.03
                                   CASE WHEN salary < 100001 THEN salary * 1.04
                    END
```

1b.

```
SELECT student_ID from advisement where professor_id='P001' Intersect select student_id
from advisement where professor_id='P002'
```

1c.

```
SELECT distinct zip_code COUNT from student GROUP BY zip_code having COUNT(*) > 100
```

1d.

```
SELECT professor.professor_id from professor WHERE professor.professor_id NOT IN
(SELECT professor_ID from advisement)
```

1e.

```
SELECT professor.professor_id from professor left outer join advisement ON
professor.professor_id = advisement.professor_id WHERE advisement.professor_id is NULL
```

1f.

```
SELECT distinct student_ID from advisement WHERE professor_id in (Select professor_id from
advisement where student_id = 'S001')
```

1g.

```
SELECT distinct S.student_id from student as S where not exists ((select  distinct professor_id
from advisement WHERE student_id = 'S001')
except (SELECT A.professor_id from advisement as A where S.student_ID = A.student_id))
```

1h.

```
SELECT distinct pid FROM (SELECT professor_id as pid, count(professor_id) as total from
advisement group by pid) as counted
WHERE total =
(SELECT max(maximums) FROM (SELECT professor_id as pidtwo, count(professor_id) as
maximums from advisement group by professor_id) as themax)
```