H.W-2.

#1

(a)

```
SELECT  ~~name~~ company-name.
FROM . Company                    NOT
WHERE . company-name IN(
        SELECT. company-name.
        FROM  Work.
        WHERE  salary <= 150,000.
)
```

(b) . $\Pi_{Company-Name}(Company) - \Pi_{company-name}(\sigma_{salary <= 15000}(Work))$

(c) . They are the same since we use set operator, so duplicate is eliminated.

WHERE EXISIS
译：出现在.

#2. (a) ~~SELECT~~.

(a) SELECT ~~name~~ person-name.
(i) FROM ~~Employee~~ Work.
WHERE Salary > ALL (
SELECT Salary
FROM Employee
WHERE city = "Los Angeles"
);

(ii) SELECT ~~name~~ person-name
FROM Work,
WHERE Salary > (
SELECT ~~Max~~ MAX (Salary)
FROM Employee,
WHERE city = "Los Angeles".
);

#2) (b) (i).

```
SELECT  persone-name
FROM    Work
WHERE   person-name IN (
    SELECT  person-name  manager-Name
    FROM    Manager
    WHERE   EXISTS (
        SELECT  person-name
        FROM
        WHERE.  Manager. manager-name =
                person-Work. person-name.
```

Manager. person-name = Work. person-name.

```
SELECT.  person-name  Salary
FROM.    Work  Manage.
WHERE    Work. person-name = Manage. manage-name
    AND  Salary > some (
        SELECT.  Salary  FROM.
        FROM  Work  Manage
        WHERE
)
```

#3 (b)(i)

```
SELECT manager-name
FROM Manage.
WHERE EXISTS (
    SELECT Salary
    FROM Work.
    WHERE manager.person-name = Work.person-na
        AND

)
```

person who is in Manager Set.

and Exists 1 row whose salary lower than him

```
SELECT person-name
FROM Work
WHERE ~~person-name IN~~ Salary > (
    SELECT

)
```

```
=========================================
3.a.1
(SELECT name
FROM MovieStar
WHERE gender='F') INTERSECT(
SELECT name
FROM MovieExec
WHERE net worth > 1,000,000
)

3.a.2
SELECT MovieStar.name
FROM MovieStar MovieExec
WHERE MovieStar.name = MovieExec.name
  AND net worth > 1,000,1000;

3.b.1
(SELECT name
FROM MovieStar) EXCEPT(
        (SELECT name
        FROM MovieStar
        WHERE gender='F') INTERSECT(
        SELECT name
        FROM MovieExec
        WHERE net worth > 1,000,000
        )
);

3.b.2
SELECT name
FROM MovieStar
WHERE name NOT IN (
        SELECT MovieExec.name
        FROM MovieExec
);

=========================================
```

```
========================================
4.a.
SELECT AVG(speed)
FROM Desktop;


4.b.
SELECT AVG(price)
FROM ComputerProduct
WHERE manufacturer = 'Dell';

4.c.
SELECT speed AVG(price)
FROM Laptop
WHERE weight > 3;

4.d.
SELECT speed AVG(price)
FROM Laptop
GROUP BY speed;

4.e.
SELECT manufacturer
FROM (
        SELECT manufacturer count(model)
        FROM ComputerProduct
        GROUP BY manufacturer)
WHERE count(model) >=3;



========================================
```

```
========================================


5.A
INSERT INTO Desktop(model, speed, ran, hdd)
VALUES(1100, '1.2Ghz', '256MB', '40GB');


5.B
DELETE FROM Desktop
WHERE price < 1000
  AND model IN (
        SELECT DISTINCT model
        FROM ComputerProduct
        WHERE manufacturer = 'IBM'
); --Why do I need two delete??




5. C
UPDATE Laptop
SET hdd = hdd -1
WHERE model in (
        SELECT DISTINCT model
        FROM ComputerProduct
        WHERE manufacturer = 'Gateway'
);

========================================
```