1.

A) select distinct department
from worker;

B) Select First_name
,substring (First_name,1,3) as 'first_char'
from worker;

C) Select
charIndex('a', FIRST_NAME, 1) as char_index
from Worker
where FIRST_NAME like 'Amitabh';

doubt(a is placed in two positions how to represent these two positions)

D) Select first_name
,replace (First_name, 'a', 'A') as replace
from worker

E) Select First_name,
worker_id, LAST_NAME
, SALARY, joining_date,
DEPARTMENT
from worker
group by first_name, worker_id, last_name, salary, joining_date, department
order by 1
;

F) Select * from worker
where department like ('admin');

G) Select * from worker
where FIRST_NAME like '%h';

H) Select * from worker
where SALARY between 100000 and 500000;

I) Select * from worker
where JOINING_DATE like '%02/2014%'

J) select department
, count(worker_id) as no_of_workers
from worker
group by department
order by no_of_workers desc

K) select top 10 salary,

```
WORKER_ID, FIRST_NAME, LAST_NAME, JOINING_DATE, DEPARTMENT
from worker
order by SALARY desc;
```

L)
```
select department
, count( worker_id) as no_of_workers
from worker
group by department
having count (WORKER_ID) <5
```

M)
```
select department,
 sum(salary) as tot_amt
from worker
group by DEPARTMENT
```

2 question

1)
```
Select
worker.FIRST_NAME
,Projects.Project_name
from Worker inner join Projects
on Worker.WORKER_ID = projects.worker_ID
order by worker.FIRST_NAME, projects.project_name;
```

2)
```
Select
worker.FIRST_NAME
,Projects.Project_name
from Worker inner join Projects
on Worker.WORKER_ID != projects.worker_ID
order by worker.FIRST_NAME, projects.project_name;
```

3)
```
Select
worker.FIRST_NAME
,Projects.Project_name
from Worker inner join Projects
on Worker.WORKER_ID = projects.worker_ID
order by worker.FIRST_NAME, projects.project_name;
```

4)
```
Select
a.FIRST_NAME
, a.last_name
,b.Project_name
from Worker as a left join Projects as b
on a.WORKER_ID = b.worker_ID
order by a.FIRST_NAME, b.project_name;
```

5)
```
Select
a.FIRST_NAME
,b.Project_name
```

```
from Worker as a left join Projects as b
on a.WORKER_ID != b.worker_ID
order by a.FIRST_NAME, b.project_name;
```

3. Question

1. ```
   SELECT
     country,
      COUNT(*) as no_ofcustomer
   FROM
      Customers
   GROUP BY
      Country;
   ```

2. Primary keys of all table given below
   From customers.csv table- **customer_id, customer_name, contact name**
   From orders.csv table- **orderdetailId**
   From order_details.csv table- **order_id**
   From product_details.csv- **productID, product name**

3. ```
   select a.city, a.country,
   count(a.customername) as customer_count,
   count (b.orderID) as total_orders
   from Customers as a left join Order_Details as b
   on a.customerID = b.CustomerID
   group by a.city, a.country
   ```

4. ```
   SELECT year(Order_Details.OrderDate)as year, count(Order_Details.OrderID) as
   total_orders,
   COUNT(Orders.ProductID) as total_quantity,
   COUNT(Product_Details.ProductID) as total_sales
   FROM ((Order_Details
   INNER JOIN Orders ON Order_Details.OrderID = Orders.OrderID)
   INNER JOIN Product_Details ON Orders.ProductID = Product_Details.ProductID)
   group by year(Order_Details.OrderDate);
   ```

5. ```
   select max(a.productname), count(b.quantity)
   from Product_Details as a inner join Orders as b
   on a.ProductID= b.ProductID
   group by a.ProductName, b.Quantity
   ```

4.Question

```
select a.customer_id, month(b.month) as month, sum(a.sales) as cumalativesales
from Q4 a, Q4 b
WHERE month(a.month) <= month(b.month) and a.customer_id= b.customer_id
GROUP BY a.Customer_ID, month(b.month)
```