1)

```
+------------------+
| WORKER_FIRSTNAME |
+------------------+
| MONIKA           |
| NIHARIKA         |
| VISHAL           |
| AMITABH          |
| VIVEK            |
| VIPUL            |
| SATISH           |
| GEETIKA          |
+------------------+
8 rows in set (0.00 sec)
```

2)

```
+--------+
| First3 |
+--------+
| Mon    |
| Nih    |
| Vis    |
| Ami    |
| Viv    |
| Vip    |
| Sat    |
| Gee    |
+--------+
8 rows in set (0.00 sec)
```

3)

```
+---------------+
| Position_of_A |
+---------------+
|             1 |
+---------------+
1 row in set (0.00 sec)
```

4)

```
+-----------------+
| COMPLETE_NAME   |
+-----------------+
| Monika Arora    |
| Niharika Verma  |
| Vishal Singhal  |
| Amitabh Singh   |
| Vivek Bhati     |
| Vipul Diwan     |
| Satish Kumar    |
| Geetika Chauhan |
+-----------------+
8 rows in set (0.00 sec)
```

5)

```
+-----------+------------+-----------+--------+---------------------+------------+
| Worker_ID | First_name | Last_name | Salary | Joining_date        | Department |
+-----------+------------+-----------+--------+---------------------+------------+
|         4 | Amitabh    | Singh     | 500000 | 2014-02-20 09:00:00 | Admin      |
|         8 | Geetika    | Chauhan   |  90000 | 2014-04-11 09:00:00 | Admin      |
|         1 | Monika     | Arora     | 100000 | 2014-02-20 09:00:00 | HR         |
|         2 | Niharika   | Verma     |  80000 | 2014-06-11 09:00:00 | Admin      |
|         7 | Satish     | Kumar     |  75000 | 2014-01-20 09:00:00 | Account    |
|         6 | Vipul      | Diwan     | 200000 | 2014-06-11 09:00:00 | Account    |
|         3 | Vishal     | Singhal   | 300000 | 2014-02-20 09:00:00 | HR         |
|         5 | Vivek      | Bhati     | 500000 | 2014-06-11 09:00:00 | Admin      |
+-----------+------------+-----------+--------+---------------------+------------+
8 rows in set (0.00 sec)
```

6)

```
+-----------+------------+-----------+--------+---------------------+------------+
| Worker_ID | First_name | Last_name | Salary | Joining_date        | Department |
+-----------+------------+-----------+--------+---------------------+------------+
|         1 | Monika     | Arora     | 100000 | 2014-02-20 09:00:00 | HR         |
|         2 | Niharika   | Verma     |  80000 | 2014-06-11 09:00:00 | Admin      |
|         3 | Vishal     | Singhal   | 300000 | 2014-02-20 09:00:00 | HR         |
|         4 | Amitabh    | Singh     | 500000 | 2014-02-20 09:00:00 | Admin      |
|         7 | Satish     | Kumar     |  75000 | 2014-01-20 09:00:00 | Account    |
|         8 | Geetika    | Chauhan   |  90000 | 2014-04-11 09:00:00 | Admin      |
+-----------+------------+-----------+--------+---------------------+------------+
6 rows in set (0.00 sec)
```

7)

```
+-----------+------------+-----------+--------+---------------------+------------+
| Worker_ID | First_name | Last_name | Salary | Joining_date        | Department |
+-----------+------------+-----------+--------+---------------------+------------+
|         1 | Monika     | Arora     | 100000 | 2014-02-20 09:00:00 | HR         |
|         2 | Niharika   | Verma     |  80000 | 2014-06-11 09:00:00 | Admin      |
|         8 | Geetika    | Chauhan   |  90000 | 2014-04-11 09:00:00 | Admin      |
+-----------+------------+-----------+--------+---------------------+------------+
3 rows in set (0.00 sec)
```

8)

```
+-----------+------------+-----------+--------+---------------------+------------+
| Worker_ID | First_name | Last_name | Salary | Joining_date        | Department |
+-----------+------------+-----------+--------+---------------------+------------+
|         1 | Monika     | Arora     | 100000 | 2014-02-20 09:00:00 | HR         |
|         3 | Vishal     | Singhal   | 300000 | 2014-02-20 09:00:00 | HR         |
|         4 | Amitabh    | Singh     | 500000 | 2014-02-20 09:00:00 | Admin      |
|         5 | Vivek      | Bhati     | 500000 | 2014-06-11 09:00:00 | Admin      |
|         6 | Vipul      | Diwan     | 200000 | 2014-06-11 09:00:00 | Account    |
+-----------+------------+-----------+--------+---------------------+------------+
5 rows in set (0.00 sec)
```

9)

```
+----------------+------------+
| NO_OF_EMPLOYEE | DEPARTMENT |
+----------------+------------+
|              4 | Admin      |
+----------------+------------+
1 row in set (0.00 sec)
```

10)

```
+----------------+------------+
| NO_OF_EMPLOYEE | DEPARTMENT |
+----------------+------------+
|              4 | Admin      |
|              2 | HR         |
|              2 | Account    |
+----------------+------------+
3 rows in set (0.00 sec)
```

11)

```
+-----------+------------+-----------+--------+---------------------+------------+
| Worker_ID | First_name | Last_name | Salary | Joining_date        | Department |
+-----------+------------+-----------+--------+---------------------+------------+
|         1 | Monika     | Arora     | 100000 | 2014-02-20 09:00:00 | HR         |
|         5 | Vivek      | Bhati     | 500000 | 2014-06-11 09:00:00 | Admin      |
+-----------+------------+-----------+--------+---------------------+------------+
2 rows in set (0.00 sec)
```

12)

```
+-----------+------------+-----------+--------+---------------------+------------+---------+
| Worker_ID | First_name | Last_name | Salary | Joining_date        | Department | row_num |
+-----------+------------+-----------+--------+---------------------+------------+---------+
|         1 | Monika     | Arora     | 100000 | 2014-02-20 09:00:00 | HR         |       1 |
|         3 | Vishal     | Singhal   | 300000 | 2014-02-20 09:00:00 | HR         |       3 |
|         5 | Vivek      | Bhati     | 500000 | 2014-06-11 09:00:00 | Admin      |       5 |
|         7 | Satish     | Kumar     |  75000 | 2014-01-20 09:00:00 | Account    |       7 |
+-----------+------------+-----------+--------+---------------------+------------+---------+
4 rows in set (0.00 sec)
```

13)

```
+-----------+------------+-----------+--------+---------------------+------------+--------------+------------+--------------+
| Worker_ID | First_name | Last_name | Salary | Joining_date        | Department | Worker_ref_id | Bonus_date | Bonus_amount |
+-----------+------------+-----------+--------+---------------------+------------+--------------+------------+--------------+
|         4 | Amitabh    | Singh     | 500000 | 2014-02-20 09:00:00 | Admin      |         NULL | NULL       |         NULL |
|         5 | Vivek      | Bhati     | 500000 | 2014-06-11 09:00:00 | Admin      |         NULL | NULL       |         NULL |
|         6 | Vipul      | Diwan     | 200000 | 2014-06-11 09:00:00 | Account    |         NULL | NULL       |         NULL |
|         7 | Satish     | Kumar     |  75000 | 2014-01-20 09:00:00 | Account    |         NULL | NULL       |         NULL |
|         8 | Geetika    | Chauhan   |  90000 | 2014-04-11 09:00:00 | Admin      |         NULL | NULL       |         NULL |
+-----------+------------+-----------+--------+---------------------+------------+--------------+------------+--------------+
5 rows in set (0.00 sec)
```

14)

```
+-----------+------------+-----------+--------+---------------------+------------+
| Worker_ID | First_name | Last_name | Salary | Joining_date        | Department |
+-----------+------------+-----------+--------+---------------------+------------+
|         1 | Monika     | Arora     | 100000 | 2014-02-20 09:00:00 | HR         |
|         2 | Niharika   | Verma     |  80000 | 2014-06-11 09:00:00 | Admin      |
|         3 | Vishal     | Singhal   | 300000 | 2014-02-20 09:00:00 | HR         |
|         4 | Amitabh    | Singh     | 500000 | 2014-02-20 09:00:00 | Admin      |
|         5 | Vivek      | Bhati     | 500000 | 2014-06-11 09:00:00 | Admin      |
|         6 | Vipul      | Diwan     | 200000 | 2014-06-11 09:00:00 | Account    |
|         7 | Satish     | Kumar     |  75000 | 2014-01-20 09:00:00 | Account    |
|         8 | Geetika    | Chauhan   |  90000 | 2014-04-11 09:00:00 | Admin      |
+-----------+------------+-----------+--------+---------------------+------------+
8 rows in set (0.00 sec)
```

15)

```
+------------+--------+
| first_name | salary |
+------------+--------+
| Amitabh    | 500000 |
| Vivek      | 500000 |
+------------+--------+
2 rows in set (0.00 sec)
```

16)

```
+------------+-----------------+
| DEPARTMENT | NO_OF_EMPLOYEE  |
+------------+-----------------+
| HR         |               2 |
| Admin      |               4 |
| Account    |               2 |
+------------+-----------------+
3 rows in set (0.00 sec)
```

17)

```
+------------+------------+--------+
| department | first_name | salary |
+------------+------------+--------+
| Account    | Vipul      | 200000 |
| Account    | Satish     |  75000 |
| Admin      | Amitabh    | 500000 |
| Admin      | Vivek      | 500000 |
| Admin      | Geetika    |  90000 |
| Admin      | Niharika   |  80000 |
| HR         | Vishal     | 300000 |
| HR         | Monika     | 100000 |
+------------+------------+--------+
8 rows in set (0.00 sec)
```

18)

```
+--------------+--------------+
| DEPARTMENT   | SUM(SALARY)  |
+--------------+--------------+
| HR           |       400000 |
| Admin        |      1170000 |
| Account      |       275000 |
+--------------+--------------+
3 rows in set (0.00 sec)
```

19)

i)

```
mysql> desc CUSTOMER;
+-------+----------+------+-----+---------+-------+
| Field | Type     | Null | Key | Default | Extra |
+-------+----------+------+-----+---------+-------+
| Cust  | int      | NO   | PRI | NULL    |       |
| Cname | char(25) | YES  |     | NULL    |       |
| City  | char(25) | YES  |     | NULL    |       |
+-------+----------+------+-----+---------+-------+
3 rows in set (0.01 sec)

mysql> desc ORDERR;
+---------+------+------+-----+---------+-------+
| Field   | Type | Null | Key | Default | Extra |
+---------+------+------+-----+---------+-------+
| Orderr  | int  | NO   | PRI | NULL    |       |
| Odate   | date | YES  |     | NULL    |       |
| Cust    | int  | YES  | MUL | NULL    |       |
| Ord_Amt | int  | YES  |     | NULL    |       |
+---------+------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql> desc ORDERR_ITEM;
+--------+------+------+-----+---------+-------+
| Field  | Type | Null | Key | Default | Extra |
+--------+------+------+-----+---------+-------+
| Orderr | int  | NO   | PRI | NULL    |       |
| Item   | int  | YES  |     | NULL    |       |
| qty    | int  | YES  |     | NULL    |       |
+--------+------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> desc ITEM;
+------------+------+------+-----+---------+-------+
| Field      | Type | Null | Key | Default | Extra |
+------------+------+------+-----+---------+-------+
| Item       | int  | YES  |     | NULL    |       |
| Unit_Price | int  | YES  |     | NULL    |       |
+------------+------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> desc SHIPMENT;
+-----------+------+------+-----+---------+-------+
| Field     | Type | Null | Key | Default | Extra |
+-----------+------+------+-----+---------+-------+
| Orderr    | int  | YES  |     | NULL    |       |
| Warehouse | int  | NO   | PRI | NULL    |       |
| Ship_Date | date | YES  |     | NULL    |       |
+-----------+------+------+-----+---------+-------+
3 rows in set (0.00 sec)

mysql> desc WAREHOUSE;
+-----------+----------+------+-----+---------+-------+
| Field     | Type     | Null | Key | Default | Extra |
+-----------+----------+------+-----+---------+-------+
| Warehouse | int      | YES  | MUL | NULL    |       |
| City      | char(25) | YES  |     | NULL    |       |
+-----------+----------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

Ii)

```
mysql> SELECT *FROM CUSTOMER;
+------+---------+-----------+
| Cust | Cname   | City      |
+------+---------+-----------+
|  234 | Jake    | Kolkata   |
|  328 | Mischel | Delhi     |
|  345 | Paul    | Varanashi |
|  457 | Marie   | Jadavpur  |
|  626 | Robie   | Noida     |
+------+---------+-----------+
5 rows in set (0.00 sec)

mysql> SELECT *FROM ORDERR;
+--------+------------+------+---------+
| Orderr | Odate      | Cust | Ord_Amt |
+--------+------------+------+---------+
|    100 | 2023-06-13 |  234 |    5600 |
|    101 | 2023-01-04 |  345 |   45673 |
|    102 | 2023-02-24 |  626 |    9564 |
|    103 | 2023-05-27 |  328 |    3563 |
|    104 | 2023-07-09 |  457 |    8543 |
+--------+------------+------+---------+
5 rows in set (0.00 sec)

mysql> SELECT *FROM ORDERR_ITEM;
+--------+------+------+
| Orderr | Item | qty  |
+--------+------+------+
|    100 |   10 |   12 |
|    101 |   11 |   34 |
|    102 |   12 |   56 |
|    103 |   13 |   76 |
|    104 |   14 |   36 |
+--------+------+------+
5 rows in set (0.00 sec)

mysql> SELECT *FROM ITEM;
+------+------------+
| Item | Unit_Price |
+------+------------+
|   10 |      25000 |
|   11 |      45000 |
|   12 |      35000 |
|   13 |      15000 |
|   14 |      75000 |
+------+------------+
5 rows in set (0.00 sec)

mysql> SELECT *FROM SHIPMENT;
+--------+-----------+------------+
| Orderr | Warehouse | Ship_Date  |
+--------+-----------+------------+
|    104 |      2423 | 2023-07-09 |
|    102 |      2453 | 2023-01-20 |
|    100 |      3546 | 2023-01-16 |
|    103 |      6432 | 2023-06-11 |
|    101 |      7546 | 2023-04-02 |
+--------+-----------+------------+
5 rows in set (0.00 sec)
```

```
mysql> SELECT *FROM WAREHOUSE;
+-----------+-----------+
| Warehouse | City      |
+-----------+-----------+
|      3546 | kolkata   |
|      7546 | Varanashi |
|      2453 | Noida     |
|      6432 | Delhi     |
|      2423 | Jadavpur  |
+-----------+-----------+
5 rows in set (0.00 sec)
```

Iii)

```
+----------+--------------+---------------+
| CUSTNAME | NO_OF_ORDERS | AVG_ORDER_AMT |
+----------+--------------+---------------+
| Jake     |            1 |     5600.0000 |
| Paul     |            1 |    45673.0000 |
| Robie    |            1 |     9564.0000 |
| Mischel  |            1 |     3563.0000 |
| Marie    |            1 |     8543.0000 |
+----------+--------------+---------------+
5 rows in set (0.00 sec)
```

Iv)

```
+----------+
| Order_id |
+----------+
|      100 |
+----------+
1 row in set (0.00 sec)
```

v)

```
mysql> SELECT *FROM ITEM;
+------+------------+
| Item | Unit_Price |
+------+------------+
|   11 |      45000 |
|   12 |      35000 |
|   13 |      15000 |
|   14 |      75000 |
+------+------------+
4 rows in set (0.00 sec)

mysql> SELECT *FROM ORDERR_ITEM;
+--------+------+------+
| Orderr | Item | qty  |
+--------+------+------+
|    100 | NULL |   12 |
|    101 |   11 |   34 |
|    102 |   12 |   56 |
|    103 |   13 |   76 |
|    104 |   14 |   36 |
+--------+------+------+
5 rows in set (0.00 sec)
```

20)

i)

```
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| e_no     | varchar(50)  | YES  |     | NULL    |       |
| e_name   | char(25)     | YES  |     | NULL    |       |
| e_phone  | int          | YES  |     | NULL    |       |
| e_addr   | varchar(100) | YES  |     | NULL    |       |
| e_salary | int          | YES  |     | NULL    |       |
+----------+--------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

Ii)

```
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| e_no     | varchar(50)  | NO   | PRI | NULL    |       |
| e_name   | char(25)     | YES  |     | NULL    |       |
| e_phone  | int          | YES  |     | NULL    |       |
| e_addr   | varchar(100) | YES  |     | NULL    |       |
| e_salary | int          | YES  |     | NULL    |       |
+----------+--------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

Iii)

```
+-----------+---------------+------+-----+---------+-------+
| Field     | Type          | Null | Key | Default | Extra |
+-----------+---------------+------+-----+---------+-------+
| e_no      | varchar(50)   | NO   | PRI | NULL    |       |
| e_name    | char(25)      | YES  |     | NULL    |       |
| e_phone   | int           | YES  |     | NULL    |       |
| e_addr    | varchar(100)  | YES  |     | NULL    |       |
| e_salary  | int           | YES  |     | NULL    |       |
| e_pin     | varchar(25)   | YES  |     | NULL    |       |
+-----------+---------------+------+-----+---------+-------+
6 rows in set (0.00 sec)
```

Iv)

```
+------+--------+----------+------------------------------------+----------+
| e_no | e_name | e_phone  | e_addr                             | e_salary |
+------+--------+----------+------------------------------------+----------+
| 1    | Paul   | 2342424  | 2/4 Uttorpara dumdum kolkata - 42  |   240000 |
| 2    | Raj    | 65794346 | 8 daycare saltlake kolkata - 52    |   670345 |
| 3    | Ram    | 4353456  | 52 old delhi road delhi - 24       |   840000 |
| 4    | Rajju  |  234252  | 56 rajbihari avenue kolkata - 26   |    76000 |
| 5    | Rajdip | 86487988 | 3/4 nagerbazar dumdum kolkata - 42 |   800000 |
+------+--------+----------+------------------------------------+----------+
5 rows in set (0.00 sec)
```

21)

i)

```
+-----------+---------------+------+-----+---------+-------+
| Field     | Type          | Null | Key | Default | Extra |
+-----------+---------------+------+-----+---------+-------+
| e_no      | int           | NO   | PRI | NULL    |       |
| e_name    | char(25)      | YES  |     | NULL    |       |
| e_phone   | int           | YES  |     | NULL    |       |
| e_addr    | varchar(100)  | YES  |     | NULL    |       |
| e_salary  | int           | YES  |     | NULL    |       |
+-----------+---------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

Ii)

```
+-----------+--------------+------+-----+---------+-------+
| Field     | Type         | Null | Key | Default | Extra |
+-----------+--------------+------+-----+---------+-------+
| dept_no   | int          | NO   | PRI | NULL    |       |
| dept_name | char(25)     | YES  |     | NULL    |       |
| e_no      | int          | YES  | MUL | NULL    |       |
| dept_loc  | varchar(25)  | YES  |     | NULL    |       |
| dept_hod  | char(25)     | YES  |     | NULL    |       |
+-----------+--------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

Iii)

```
+---------+-----------+------+-----------+-----------+
| dept_no | dept_name | e_no | dept_loc  | dept_hod  |
+---------+-----------+------+-----------+-----------+
|      10 | CSE       |    1 | Kolkata   | Ram       |
|      20 | CSE IOT   |    2 | Delhi     | Rajju     |
|      30 | CSE AIML  |    3 | Rajasthan | Rajdip    |
|      40 | CSE IT    |    4 | Noida     | Arghya    |
|      50 | ME        |    5 | Chennai   |   Pritish |
+---------+-----------+------+-----------+-----------+
5 rows in set (0.00 sec)
```

Iv)

```
+---------+-----------+------+-----------+-----------+
| dept_no | dept_name | e_no | dept_loc  | dept_hod  |
+---------+-----------+------+-----------+-----------+
|      10 | CSE       |    1 | Kolkata   | Ram       |
|      30 | CSE AIML  |    3 | Rajasthan | Rajdip    |
|      40 | CSE IT    |    4 | Noida     | Arghya    |
|      50 | ME        |    5 | Chennai   |   Pritish |
+---------+-----------+------+-----------+-----------+
4 rows in set (0.00 sec)
```

22)

i)

```
+--------------+----------+
| EmployeeName | dept_hod |
+--------------+----------+
| Ram          | Rajdip   |
+--------------+----------+
1 row in set (0.00 sec)
```

ii)

```
+----------------+
| average_salary |
+----------------+
|    240000.0000 |
+----------------+
1 row in set (0.00 sec)
```