**Stocks:**

|  |  |  |
| --- | --- | --- |
| stock\_date | Item id | Quantity |
|  |  |  |

**Manager:**

|  |
| --- |
| Manager id |
|  |

Schema: Manager (Manager id)

**Sales:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Status | Order\_id | Sale\_id | Date | Transporter name | Vehicle number | Billing amount | Pending payment |
|  |  |  |  |  |  |  |  |

**Employee:**

|  |
| --- |
| Employee id |
|  |

**Orders:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Order-ID | Customer-ID | Advance | Item-ID | Quantity | Status | Expected Delivery Date | Placement Date |
|  |  |  |  |  |  |  |  |

**Person:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Joining serial  num | Aadhar  num | First  name | Last  name | DOJ | JOB | Phone  Num | DOB | Fath’s  name | Salary | Age | layoff  date | Pass | Zip  code | state | Street  Addr |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Customer:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Customer  Id | First  name | Last  name | Phone  Num | Zip  code | state | Street  Addr | Tin no |
|  |  |  |  |  |  |  |  |

**Purchase:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Purchase  id | Item  desc | Date | Billing  amount | Quantity | Payment  status | Phone  Num | Zip  code | state | Street  Addr | GST |
|  |  |  |  |  |  |  |  |  |  |  |

**Payment:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bank name | Description | Benificiary | Amount | Date | Payment id |
|  |  |  |  |  |  |

**Credit:**

|  |
| --- |
| Sale id |
|  |

**Debit:**

|  |
| --- |
| Purchase id |
|  |

**Relationships-table:**

**Manager updates payroll: (one to many relationship)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Manager id | Employee id | Payout | year | month | Paid on |
|  |  |  |  |  |  |

Schema: Payroll - updates (Manager id, Employee id, Payout, year, month, Paid on)

**Employee sees payroll: (one to many relationship)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Employee id | Payout | year | month | Paid on |
|  |  |  |  |  |

**Attendance-updates:(one to many relationship)**

|  |  |  |  |
| --- | --- | --- | --- |
| Manager id | Employee id | Date | Presence |
|  |  |  |  |

**Employee sees attendance:(one to many relationship)**

|  |  |  |
| --- | --- | --- |
| Employee id | Date | Presence |
|  |  |  |

**Manager is a person ( one to one relation )**

|  |  |
| --- | --- |
| Manager id | Joining serial number |
|  |  |

**Employee is a person ( one to one relation )**

|  |  |
| --- | --- |
| Employee id | Joining serial number |
|  |  |

**Manager updates production (one to many relationship):**

|  |  |  |  |
| --- | --- | --- | --- |
| Manager id | Item id | Date | Quantity |
|  |  |  |  |

**Production - (production-sales) (many to one):**

|  |  |  |  |
| --- | --- | --- | --- |
| Item id | stock\_date | Quantity | date |
|  |  |  |  |

**Sales - (production-sales): (many to one relation)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| stock\_date | Status | Sale\_id | Order\_id | Date | Transporter name | Vehicle number | Billing amount | Pending payment |
|  |  |  |  |  |  |  |  |  |

**Order Upon being sold( one to one relation):**

|  |  |
| --- | --- |
| Sale\_id | Order\_id |
|  |  |

**Customer gives order( one to one relation):**

|  |  |
| --- | --- |
| Customer\_id | Order\_id |
|  |  |

**Customer selects items (one to many relationship):**

|  |  |  |
| --- | --- | --- |
| Customer\_id | Item id | Item description |
|  |  |  |

**Order contains items (one to many relationship):**

|  |  |  |
| --- | --- | --- |
| Item id | Item description | Order id |
|  |  |  |

**Sales payment credit( one to one relation):**

|  |
| --- |
| Sale id |
|  |

**Credit is a payment: (one to one relationship)**

|  |  |
| --- | --- |
| Sale id | Paymeny id |
|  |  |

**Debit is a payment: (one to one relationship)**

|  |  |
| --- | --- |
| Purchase id | Payment id |
|  |  |

**Payment made for purchase (one to one relation):**

|  |
| --- |
| Purchase id |
|  |

**Normalization**

**1nf:**

**Stocks:**

|  |  |  |
| --- | --- | --- |
| stock\_date | Item id | Quantity |
| 12-11-2020 | 1,2,3 | 40,30,25 |
| 13-11-2020 | 1,4 | 30,35 |

1nf

Stocks:

|  |  |  |
| --- | --- | --- |
| stock\_date | Item id | Quantity |
| 12-11-2020 | 1 | 40 |
| 12-11-2020 | 2 | 30 |
| 12-11-2020 | 3 | 25 |
| 13-11-2020 | 1 | 30 |
| 13-11-2020 | 4 | 35 |

**Orders:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Order-ID | Customer-ID | Advance | Item-ID | Quantity | Status | Expected Delivery Date | Placement Date |
| 1 | 1 | 2000 | 3,5 | 10,15 | UNSOLD | 1-1-2021 | NULL |
| 2 | 2 | 1500 | 4 | 20 | SOLD | 19-12-2020 | 21-12-2020 |

1NF(ORDER**):**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Order-ID | Customer-ID | Advance | Status | Expected Delivery Date | Placement Date |
| 1 | 1 | 2000 | UNSOLD | 1-1-2021 | NULL |
| 2 | 2 | 1500 | SOLD | 19-12-2020 | 21-12-2020 |

|  |  |  |
| --- | --- | --- |
| ORDER\_ID | Item id | Quantity |
| 1 | 3 | 10 |
| 1 | 5 | 15 |
| 2 | 3 | 25 |

**Person:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Joining serial  num | Aadhar  num | First  name | Last  name | DOJ | JOB | Phone  Num | DOB | Fath’s  name | Salary | Age | layoff  date | Pass | Zip  code | state | Street  Addr |
| 1 | 1236 | Abhi | Pan | 12-11-2011 | Mana-ger | 75..434,  54..725 | 14-11-1986 | Sunil | 50000 | 36 | NULL | \*\*\*\* | 1324 | UP |  |
| 2 | 3546 | Tan | Kool | 15-12-2011 | Empl-  oyee | 82..365 | 12-01-1996 | Arman | 10000 | 26 | NULL | \*\*\*\* | 3448 | UP |  |

**1nf of person:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Joining serial  num | Aadhar  num | First  name | Last  name | DOJ | JOB | DOB | Fath’s  name | Salary | Age | layoff  date | Pass | Zip  code | state |
| 1 | 1236 | Abhi | Pan | 12-11-2011 | Mana-ger | 14-11-1986 | Sunil | 50000 | 26 | NULL | \*\*\*\* | 1324 | Punjab |
| 2 | 3546 | Tan | Kool | 15-12-2011 | Empl-  oyee | 12-01-1996 | Arman | 10000 | 26 | NULL | \*\*\*\* | 3448 | UP |

|  |  |
| --- | --- |
| Joining serial num | Phone num |
| 1 | 75..434 |
| 1 | 54..725 |
| 2 | 82..365 |

**Purchase:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Purchase  id | Item  desc | Date | Billing  amount | Quantity | Payment  status | Phone  Num | Zip  code | state | Street  Addr | GST |
| 12 | Plates | 16-12-2020 | 6000 | 400 | Done | 789753789,  789462131 | 54664 | Punjab | Sohna road,block4 | 18 |
| 13 | cups | 17-12-2020 | 5450 | 350 | Done | 9875612436 | 65188 | Haryana | Mall road | 18 |

**1nf: (Purchase)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Purchase  id | Item  desc | Date | Billing  amount | Quantity | Payment  status | Zip  code | state | Street  Addr | GST |
| 12 | Plates | 16-12-2020 | 6000 | 400 | Done | 54664 | Punjab | Sohna road,block4 | 18 |
| 12 | Plates | 16-12-2020 | 6000 | 400 | Done | 54664 | Punjab | Sohna road,block4 | 18 |
| 13 | cups | 17-12-2020 | 5450 | 350 | Done | 65188 | Haryana | Mall road | 18 |

|  |  |
| --- | --- |
| Purchase\_id | Phone Num |
| 12 | 789753789 |
| 12 | 789462131 |
| 13 | 9875612436 |

**Customer:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Customer  Id | First  name | Last  name | Phone  Num | Zip  code | state | Street  Addr | Tin no |
| 1 | Abhishek | Pandey | 7528857334,  8128279933 | 110038 | Haryana | 203/3 tejas | 12456541235 |
| 2 | Tanmay | Garg | 9875647812 | 214314 | UP | H.No. 55 lane 2 | 41257562573 |

**1nf of customer:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Customer  Id | First  Name | Last  name | Zip  code | state | Street  Addr | Tin no |
| 1 | Abhishek | Pandey | 110038 | Haryana | 203/3 tejas | 12456541235 |
| 2 | Tanmay | Garg | 214314 | UP | H.No. 55 lane 2 | 41257562573 |

|  |  |
| --- | --- |
| Customer  Id | Phone Num |
| 1 | 7528857334 |
| 1 | 8128279933 |
| 2 | 9875647812 |

**Manager updates production (one to many relationship):**

|  |  |  |  |
| --- | --- | --- | --- |
| Manager id | Item id | Date | Quantity |
| 1 | 1,2 | 12-12-2020 | 30,35 |
| 2 | 1,3 | 13-12-2020 | 20,20 |
| 3 | 3 | 14-12-2020 | 25 |

**1nf of manager updates production :**

|  |  |  |  |
| --- | --- | --- | --- |
| Manager id | Item id | Date | Quantity |
| 1 | 1 | 12-12-2020 | 30 |
| 1 | 2 | 12-12-2020 | 35 |
| 2 | 1 | 13-12-2020 | 20 |
| 2 | 3 | 13-12-2020 | 20 |
| 3 | 3 | 14-12-2020 | 25 |

**Production - (production-sales) (many to one):**

|  |  |  |  |
| --- | --- | --- | --- |
| stock\_date | item id | Quantity | date |
| 12-12-2020 | 1,2 | 30,40 | 8-12-2020 |
| 13-12-2020 | 1,3 | 25,30 | 9-12-2020 |
| 14-12-2020 | 2 | 20 | 10-12-2020 |

**1nf of Production - (production-sales) relation:**

|  |  |  |  |
| --- | --- | --- | --- |
| stock\_date | item id | Quantity | date |
| 12-12-2020 | 1 | 30 | 8-12-2020 |
| 12-12-2020 | 2 | 40 | 8-12-2020 |
| 13-12-2020 | 1 | 25 | 9-12-2020 |
| 13-12-2020 | 3 | 30 | 9-12-2020 |
| 14-12-2020 | 2 | 20 | 10-12-2020 |

**Customer selects items (one to many relationship):**

|  |  |  |
| --- | --- | --- |
| Customer\_id | Item id | Item description |
| 1 | 1,2 | ……… |
| 2 | 1,3 | ………. |
| 3 | 2 | ……….. |

**1nf of Customer selects items relation:**

|  |  |  |
| --- | --- | --- |
| Customer\_id | Item id | Item description |
| 1 | 1 | ……… |
| 1 | 2 | ………. |
| 2 | 1 | ……….. |
| 2 | 3 | ……… |
| 3 | 2 | ………… |