

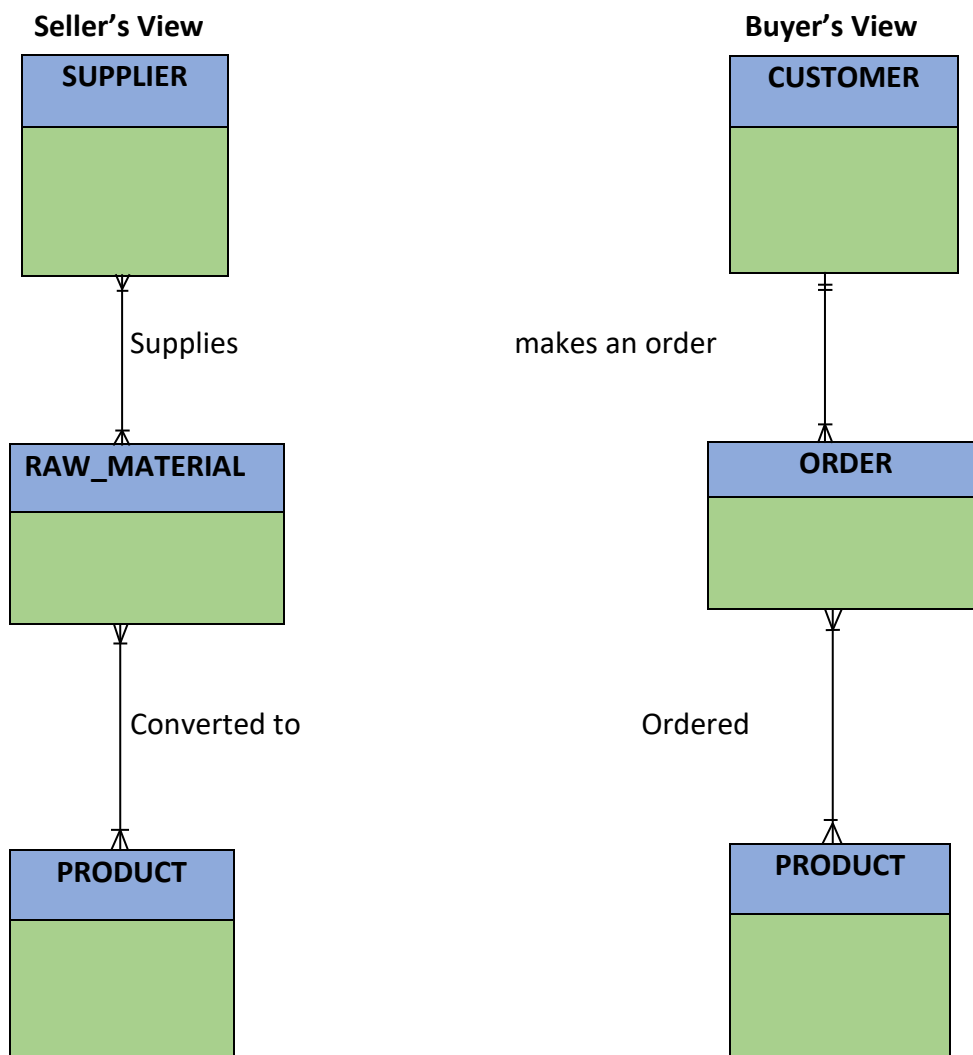
## JUA KALI DATABASE MANAGEMENT SYSTEM

### 1. ENTITIES

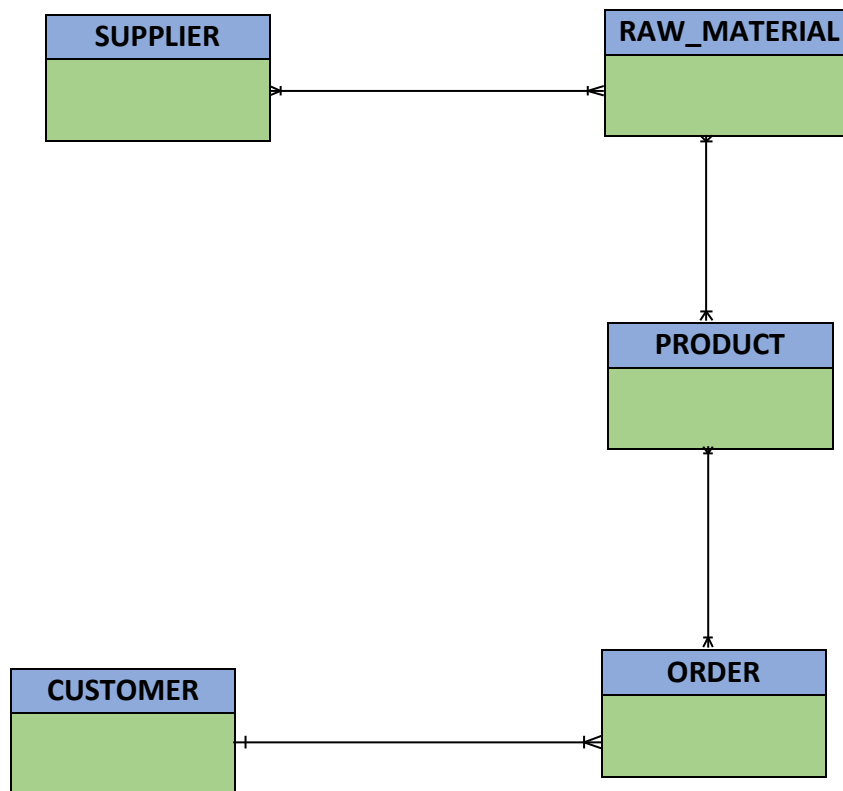
- **RAW MATERIAL table** (RM\_ID primary key, RM\_NAME, RM\_QUANTITY, RM\_PRICE, RM\_IN\_DATE, PROD\_ID Foreign key);
- **ORDER table** (ORD\_ID Primary key, ORD\_DATE, ORD\_QUANTITY, PAYMENT\_METHOD, CUS\_ID Foreign key);
- **CUSTOMER table** (CUS\_ID Primary key, CUS\_LNAME, CUS\_FNAME, CUS\_PHONE, CUS\_ADDRESS, ORD\_ID Foreign key);
- **SUPPLIER table** (SUP\_ID Primary key, SUP\_LNAME, SUP\_FNAME, SUP\_CONTACT, SUP\_LOCATION, SUP\_DATE, RM\_ID Foreign key);
- **PRODUCT table** (PROD\_ID Primary key, PROD\_DESCRIPTION, PROD\_QUANTITY, PROD\_PRICE, PROD\_DISCOUNT, ORD\_ID Foreign key);

### 2. The External, Conceptual and Internal Schema

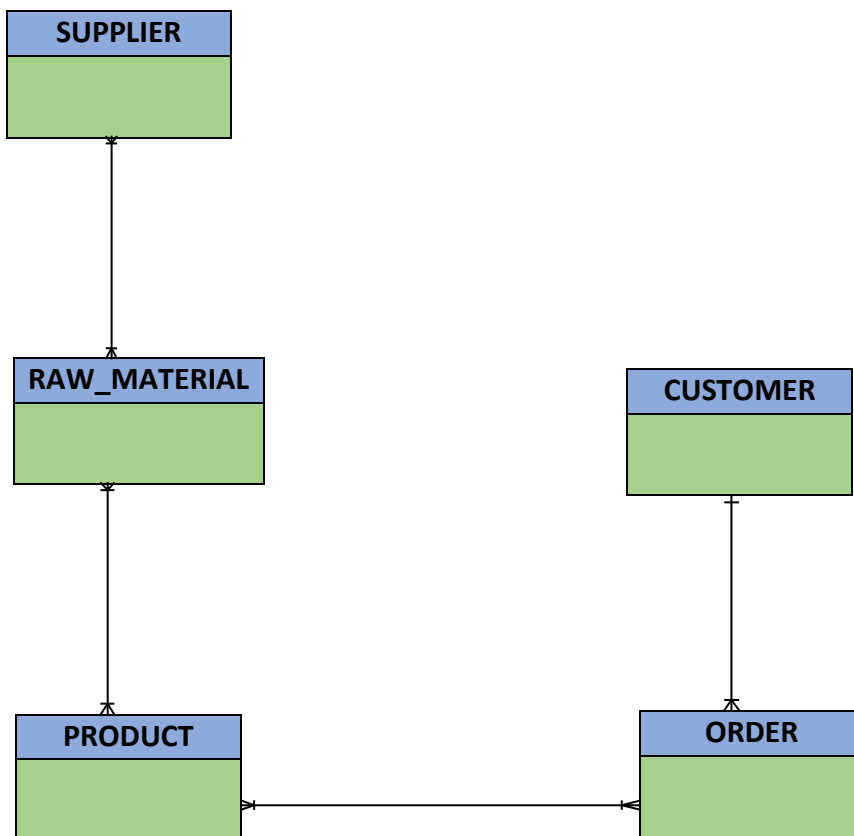
#### External schema



## Conceptual schema



## Internal schema



### 3. Some reports

✓ Select query:

The order table with 10 entries;

```
SQL> select * from order_jk;
```

| ORD_ID | ORD_DATE  | ORD_QUANTITY | PAYMENT_M | CUS_ID |
|--------|-----------|--------------|-----------|--------|
| 1      | 07-JAN-22 | 157          | Cash      | 701    |
| 2      | 12-JAN-22 | 121          | Cash      | 702    |
| 3      | 22-JAN-22 | 471          | Cheque    | 703    |
| 4      | 01-FEB-22 | 251          | Cheque    | 704    |
| 5      | 05-FEB-22 | 541          | Cheque    | 706    |
| 6      | 15-FEB-22 | 571          | Cheque    | 709    |
| 7      | 19-FEB-22 | 231          | Mpesa     | 707    |
| 8      | 22-FEB-22 | 731          | Mpesa     | 705    |
| 9      | 28-FEB-22 | 865          | Mpesa     | 708    |
| 10     | 08-MAR-22 | 185          | Mpesa     | 702    |

```
10 rows selected.
```

✓ Insert query:

```
SQL> insert into order_jk values('7', '19-FEB-22', '231','Mpesa', '707');
1 row created.

SQL> insert into order_jk values('8', '22-FEB-22', '731','Mpesa', '705');
1 row created.
```

✓ Alter query:

```
SQL> alter table customer_jk add constraint fk_ord_id foreign key (ord_id) references order_jk (ord_id);
Table altered.

SQL> _
```

✓ Describe query:

```
SQL> describe order_jk;
```

| Name           | Null?    | Type        |
|----------------|----------|-------------|
| ORD_ID         | NOT NULL | NUMBER(3)   |
| ORD_DATE       |          | DATE        |
| ORD_QUANTITY   |          | NUMBER(6,2) |
| PAYMENT_METHOD |          | VARCHAR2(9) |
| CUS_ID         |          | NUMBER(4)   |