**AUM SRI SAIRAM**

**STORE MANAGEMENT SYSTEM**

(for hostel stores)

* The hostel stores function for Students, Staff, HSBC, Bakery, Essentials, Orders etc.
* Each store will have customers in our case they are staff & students.
* Each student & staff will have only one HSBC account through which he can purchase or place orders for items. If there was no HSBC balance the student or staff cannot purchase anything.
* Bakery: stores will be bringing bakery items on Monday, Wednesday and Friday. The bakery contains food items such as cool drinks, burgers, puffs, veg rolls , paneer rolls, pastries, ice-creams. And the money will be deducted from the student’s account as soon as the student makes a purchase.
* Essentials, the essentials for the students will be sold on all working days except sunday. The essentials are such as grooming items, snacks, stationary and eatables.
* Orders the stores will be collecting orders from the students and will be delivering the order to that student within a fixed period of the time. The students can place orders during the working days only.
* The stores has to maintain a record of the inventories
* The stores will be managed by a Student HOD. A teacher in-charge will be shouldering the responsibility of ensuring the needs of the staff & students.
* The Accountant of the Institute will be managing the store’s accounts.

**Entities:**

1. Student
2. Staff
3. Bakery
4. Essentials
5. Order
6. Stores Department
7. HSBC

**Relationship between my entities:**

**Persons:** Student, Staff, Delivery boy, Teacher-in -charge, HOD,Accountant\_of\_Institute.

**Place:** Hostel, Institute, Warehouse.

**Event:** Purchasing, Selling, Recharging, Deducting, Updating, Deleting, Arranging the items in store, Budget allowing, Collecting orders, Placing orders, Delivering orders.

**Concept:** Providing essentials for the student’s in the hostel. Accounting, Selling, Collecting Orders, Delivering Order.

**Object:** Computer, items, bakery items, delivery-item-request.

**ATTRIBUTES FOR MY ENTITIES:**

| **ENTITY TYPE** | **ATTRIBUTES** | **TYPE** |
| --- | --- | --- |
| **Student HSBC** | Student\_id | Simple |
|  | Name | composite |
|  | Phone number | Simple |
|  | Email id | Simple |
|  | Customer feedback | Simple |

| **ENTITY TYPE** | **ATTRIBUTES** | **TYPE** |
| --- | --- | --- |
| **Staff HSBC** | Staff name | composite |
|  | Phone number | Simple |
|  | Email id | Simple |

|  | Staff\_id | simple |
| --- | --- | --- |

| **ENTITY** | **ATTRIBUTES** | **TYPE** |
| --- | --- | --- |
| **Essentials** | Grooming\_item\_id | Single |
|  | grooming\_item\_price | Single |
|  | Stationary\_item\_id | Single |
|  | Stationary\_item\_price | Single |

|  | hygiene\_item | Single |
| --- | --- | --- |
|  | hygiene\_item\_price | Single |
|  | customer\_id | Single |
|  | Stores\_department  \_id | Single |
|  | transaction\_id | Single |

| **ENTITY** | **ATTRIBUTES** | **TYPE** |
| --- | --- | --- |
| Bakery | The total no of bakery items | single |
|  | The total no of bakery items sold | single |
|  | The no of bakery items left out | single |
|  | The no of items purchased by individual student | single |
|  | The total collection from bakery items for that day | single |

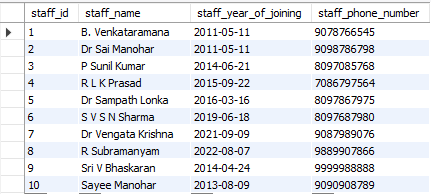
| ENTITY | **ATTRIBUTES** | **TYPE** |
| --- | --- | --- |
| **Orders** | Personal orders | Single |
|  | Group Orders | Composite |
|  | Birthday Orders | Single |
|  | Ordered by | single |
|  | Ordered date | Composite |
|  | Ordered to be delivered by | Composite |
|  | Brand of the item | Single |

| ENTITY TYPE | ATTRIBUTES | TYPE |
| --- | --- | --- |
| Snacks | customer\_id | simple |
|  | Snack\_barcode | simple |
|  | Snack\_type | simple |
|  | snack\_price | simple |
|  | t\_id | simple |

| ENTITY TYPE | ATTRIBUTES | TYPE |
| --- | --- | --- |
| HSBC | student\_id | simple |
|  | staff\_id | simple |
|  | recharged\_amount | simple |
|  | Current\_balance | simple |
|  | Defaulters\_list | simple |

| **ENTITY** | **ATTRIBUTES** | **TYPE** |
| --- | --- | --- |
| Department | staff\_name | COMPOSITE |
|  | staff\_id | simple |
|  | staff\_department | simple |
|  | staff\_subject | composite |
|  | student\_section | simple |
|  | year | simple |

| **ENTITY** | **ATTRIBUTES** | **TYPE** |
| --- | --- | --- |
| Class | Student\_name | COMPOSITE |
|  | Student\_id | simple |
|  | Student class | simple |
|  | Student class | composite |
|  | student\_section | simple |
|  | year | simple |



**Normalizing staff\_table**

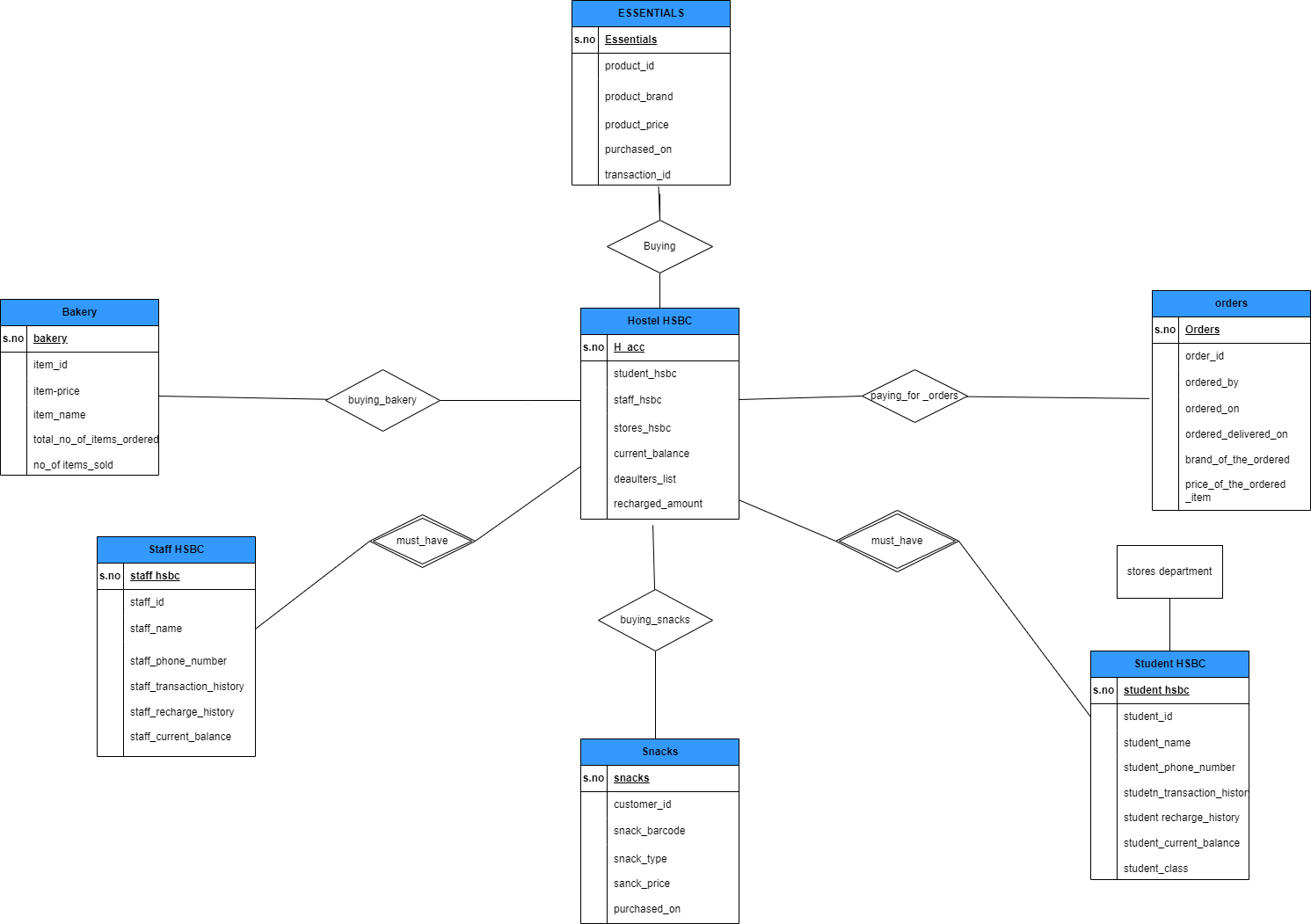
*By default my table is in 1NF because each record is unique & also each cell contains a single value.*

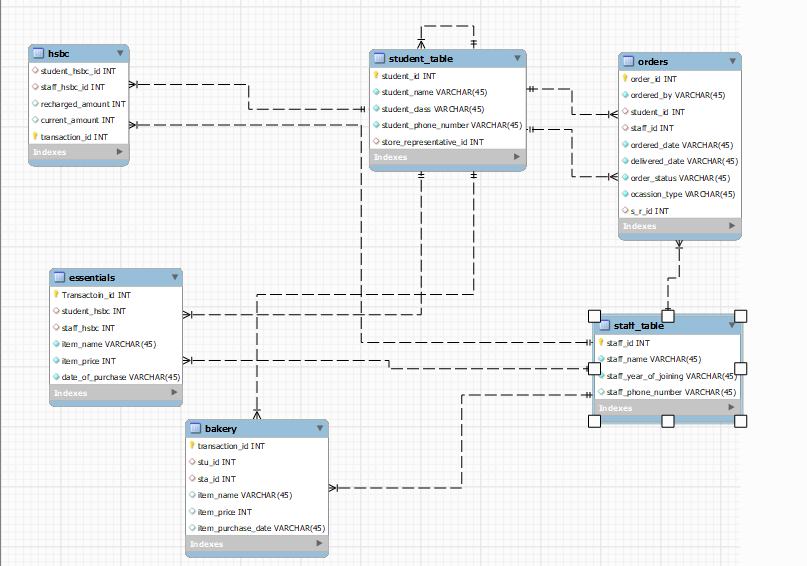
*Now checking whether my table is in 2 NF or not.*

1. *It is 1 NF form.*
2. *There is a* **Primary Key** *that does not functionally dependant on any subset of candidate key relation.*
3. *In my table staff\_id is the* **PRIMARY KEY.**
4. *The Functional Dependencies in my table are FD={staff\_id → staff\_name, staff\_id → staff\_year\_of\_joining, staff\_id →staff\_phone\_number}.*
5. *The prime attribute is staff\_id.*
6. *The non-prime attributes are staff\_name,staff\_year\_of\_joining,staff\_phone\_number.*
7. *FD={staff\_id → staff\_name, staff\_id → staff\_year\_of\_joining, staff\_id →staff\_phone\_number}.*
8. *The non-prime attributes are partially dependent on the primary key.*

*Checking Whether staff\_id table is in 3 NF or not:*

*As there are no transitive functional dependencies, and hence our table is in 3 NF.*

**

**