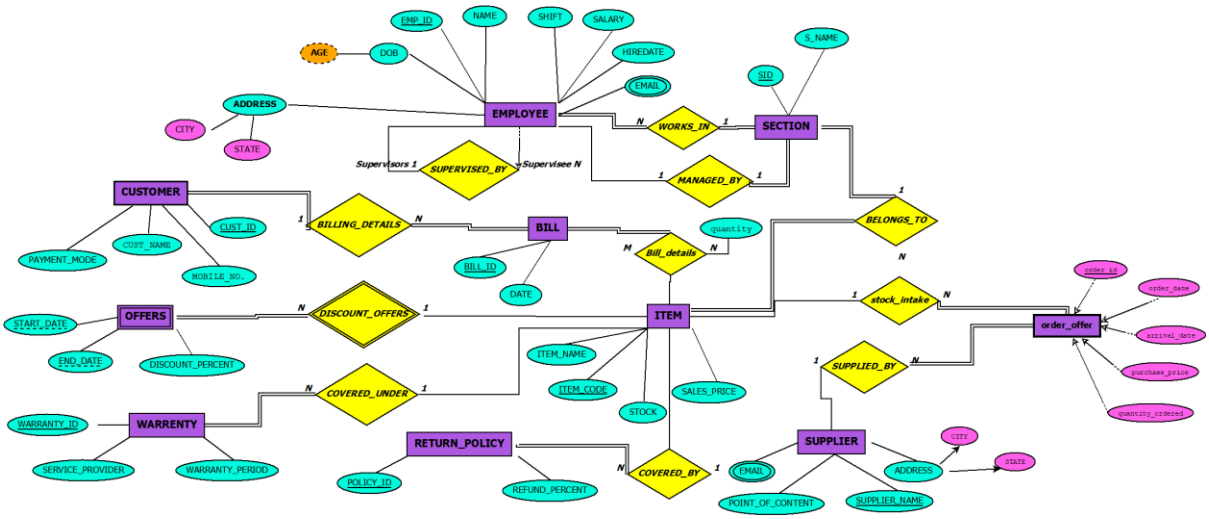
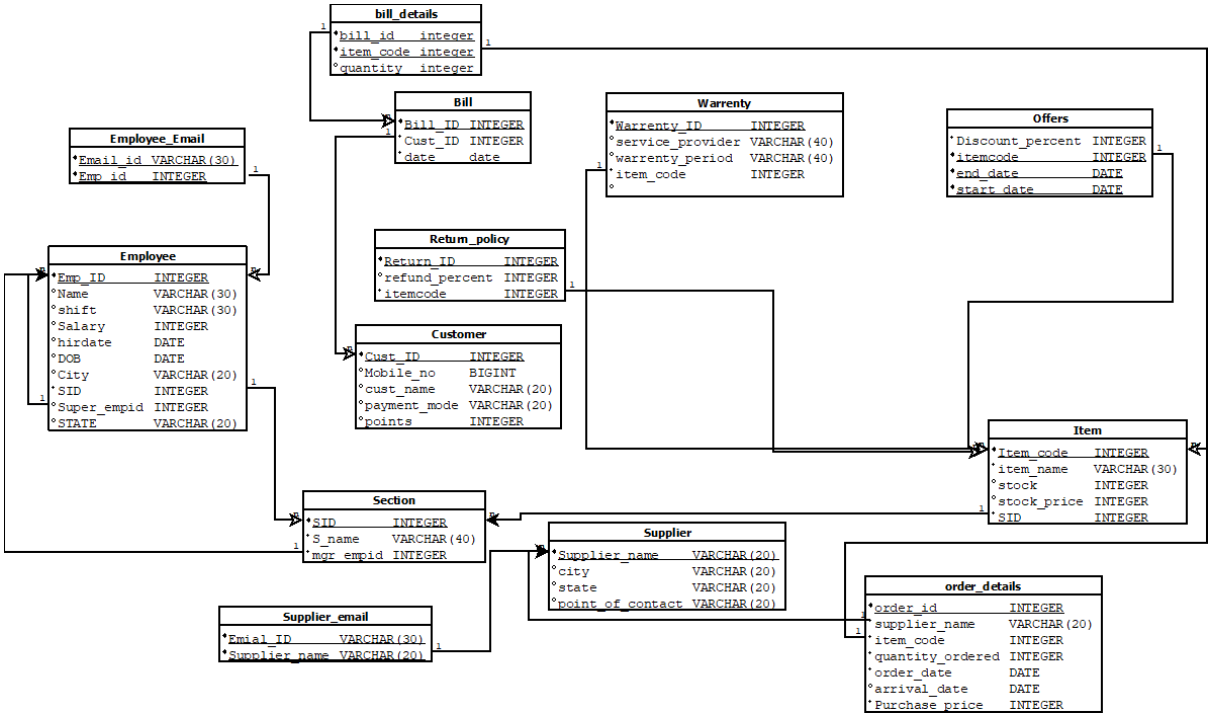
SHOPPING MANIA DATABASE

ER-DIAGRAM



RELATION-SCHEMA



NORMALIZATION PROOF

RELATION:- EMPLOYEE

KEY: Emp_id
Minimal FD set:
Emp_ID → name
Emp_ID →shift
Emp_ID → salary
Emp_ID → hir_date
Emp_ID → DOB
Emp_ID → City
Emp_ID → State
Emp_ID → SID
Emp_ID → super_empid

→In every FD set of the relation, {Emp_ID} is a super key. Therefore, the EMPLOYEE Relation is in BCNF.

RELATION:- EMP_EMAIL

KEY:{Email_id,Emp_id}

→There is a no FDs. {Emp_ID,Email_id} is a key. Therefore, the EMP_Email Relation is in BCNF.

RELATION:- SECTION

KEY:{SID}
Minimal FD set:
SID →sname
SID → mgr_empid

→In every FD set of the relation, {SID} is a super key. Therefore, the SECTION Relation is in BCNF.

RELATION:- BILL

KEY: Bill_id
Minimal FD set:
Bill_ID→Date
Bill_ID→ Cust_ID

→In every FD set of the relation, {Bill_ID} is a super key. Therefore, the BILL relation is in BCNF.

RELATION:- CUSTOMER

KEY: Cust_ID
Minimal FD set:
Cust_ID → mobile_no
Cust_ID → Cust_name
Cust_ID → payment_mode

→In every FD set of the relation, {Cust_ID} is a super key. Therefore, the CUSTOMER Relation is in BCNF.

RELATION:- WARRANTY

KEY: warranty_ID
Minimal FD set:
warranty_ID → service_provider
warranty_ID → warrenty_period
warranty_ID → item_code

→In every FD set of the relation, {Warranty_ID} is a super key. Therefore, the WARRANTY relation is in BCNF.

RELATION:- RETURN_POLICY

KEY: Return_id
Minimal FD set:
Return_ID → refund_percent
Return_ID → item_code

→In every FD set of the relation, {Return_ID} is a super key. Therefore, the Return_policy relation is in BCNF.

RELATION:- OFFERS

KEY: {start_date,end_date,Item_code}
Minimal FD set:
{start_date,end_date,Item_code} → Discount_percent

→In every FD set of the relation, {start_date,end_date,Item_code} is a super key. Therefore, the OFFERS relation is in BCNF.

RELATION:- ITEM

KEY: Item_id
Minimal FD set:
Item_code → item_name
Item_code → stock
Item_code → selling_price
Item_code →purchase_price
Item_code → SID

→In every FD set of the relation, {Item_code} is a super key. Therefore, the ITEM relation is in BCNF.

RELATION:- SUPPLIER

KEY: supplier_name
Minimal FD set:
supplier_name → city
supplier_name → state
supplier_name → point_of_contact

→In every FD set of the relation, {Supplier_Name} is a super key. Therefore, the Supplier relation is in BCNF.

RELATION:- ORDER_DETAILS

KEY: order_id
Minimal FD set:
Order_id → supplier_name
Order_id → item_code
Order_id → quantity_ordered
Order_id → order_date
Order_id → arrival_date
Order_id → purchase_price

→In every FD set of the relation, {Order_id} is a super key. Therefore, the ORDRE_DETAILS relation is in BCNF.

RELATION:- Bill_details

KEY: {Bill_id,Item_code}
Minimal FD set:
{Bill_id,Item_code} → quantity

→In every FD set of the relation,{Bill_id,Item_code} is a super key. Therefore, the Bill_details is in BCNF.

RELATION:- SUPPLIER_EMAIL

KEY:{Email_id,Supplier_name}

→There is a no FDs. {Supplier_name,Email_id} is a key. Therefore, the SUPPLIER_EMAIL Relation is in BCNF.