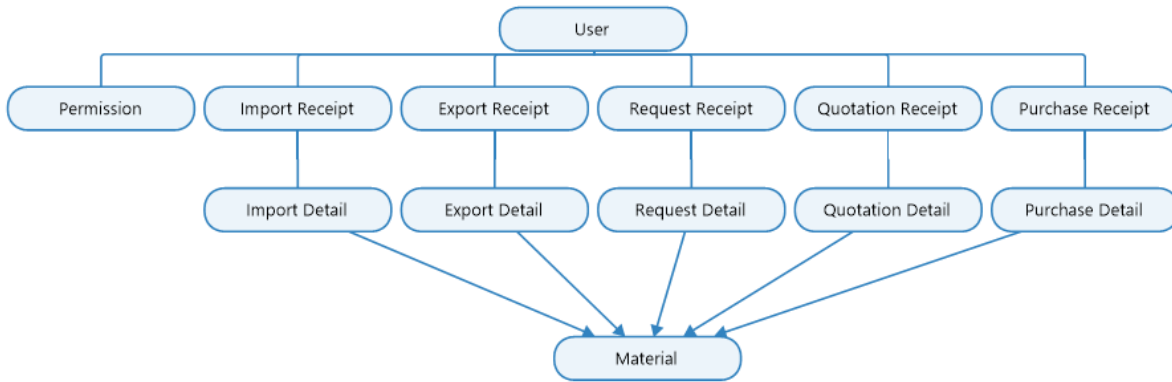


CHAPTER 4: DATABASE DESIGN

4.1. ENTITY RELATIONSHIP



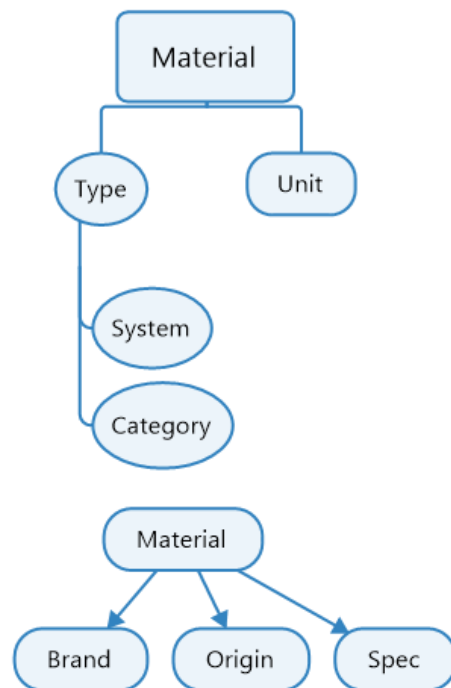
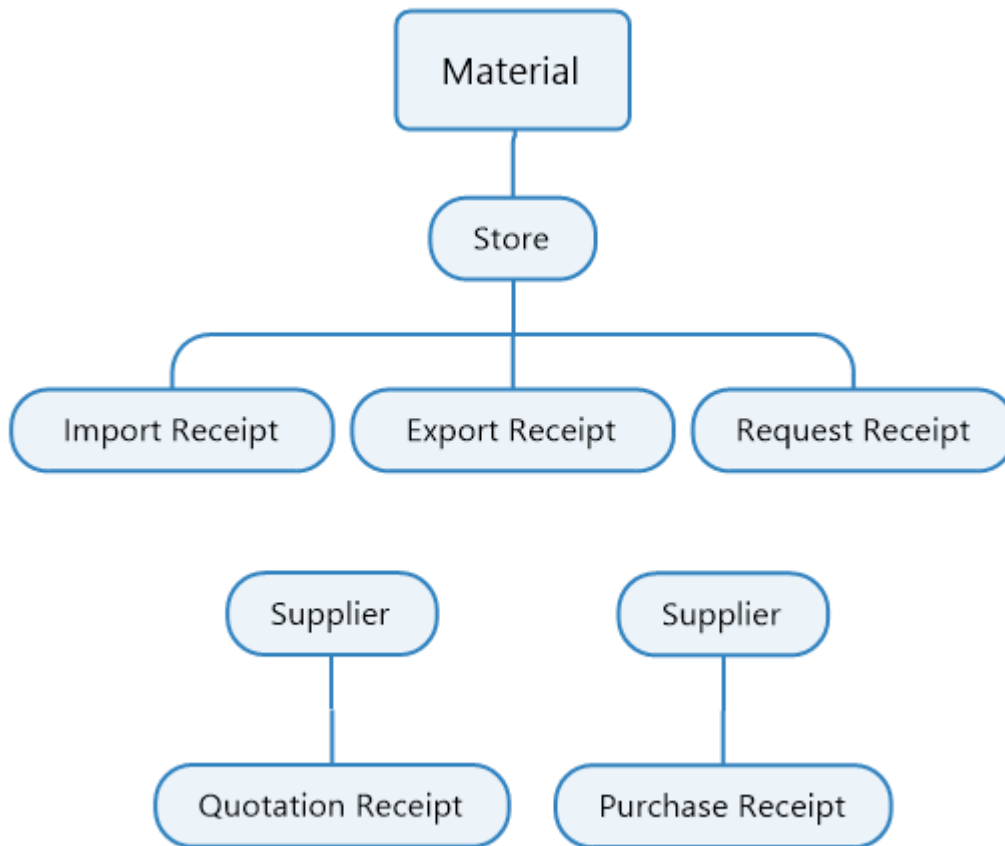


Figure 4.23 Entity Relationship**4.2. DATABASE SCHEMA****4.2.1. User: Manage user**

id SERIAL PRIMARY KEY,
username varchar (100) DEFAULT NULL,
password varchar (300) DEFAULT NULL,
displayname varchar (200) DEFAULT NULL,
email varchar (200) DEFAULT NULL,
thumbnail text DEFAULT NULL,
enabled boolean DEFAULT TRUE,
firstname varchar (100) DEFAULT NULL,
lastname varchar (100) DEFAULT NULL,
address varchar (500) DEFAULT NULL,
mobile varchar (50) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.2. Permission: Manage permission

id SERIAL PRIMARY KEY,
target varchar (100) DEFAULT NULL,
rules text DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.3. Store: Manage store

id SERIAL PRIMARY KEY,
idparent integer DEFAULT NULL,
code varchar (50) DEFAULT NULL,
name varchar (300) DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,

idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.4. Supplier: Manage supplier

id SERIAL PRIMARY KEY,
code varchar (50) DEFAULT NULL,
name varchar (300) DEFAULT NULL,
email varchar (200) DEFAULT NULL,
address varchar (500) DEFAULT NULL,
mobile varchar (50) DEFAULT NULL,
telephone varchar (50) DEFAULT NULL,
fax varchar (50) DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,

updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.5. Catalog: Manage category, system, type, spec, brand, unit, origin

id SERIAL PRIMARY KEY,
idparent integer DEFAULT NULL,
code varchar (50) DEFAULT NULL,
name varchar (300) DEFAULT NULL,
scope varchar (100) DEFAULT NULL,
scopeparent varchar (100) DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.6. Material: Manage material

id SERIAL PRIMARY KEY,
idcategory integer DEFAULT NULL,
idsystem integer DEFAULT NULL,
idtype integer DEFAULT NULL,
idbrand integer DEFAULT NULL,
idspec integer DEFAULT NULL,
idorigin integer DEFAULT NULL,
idunit integer DEFAULT NULL,
idref integer DEFAULT NULL,
reftype varchar (50) DEFAULT NULL,
code varchar (50) DEFAULT NULL,
name varchar (300) DEFAULT NULL,
materialcode varchar (50) DEFAULT NULL,
description varchar (5000) DEFAULT NULL,
quantity integer DEFAULT NULL,
thumbnail text DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,

deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.7. Materialstore: Show material quantity in store

id SERIAL PRIMARY KEY,
idstore integer DEFAULT NULL,
idmaterial integer DEFAULT NULL,
quantity integer DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.8. Quotation: Manage quotation

id SERIAL PRIMARY KEY,
idsupplier integer DEFAULT NULL,
idref integer DEFAULT NULL,

reftype varchar (50) DEFAULT NULL,
code varchar (50) DEFAULT NULL,
name varchar (300) DEFAULT NULL,
startdate date DEFAULT NULL,
enddate date DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.9. Quotationdetail: Detail list of Quotation

id SERIAL PRIMARY KEY,
idquotation integer DEFAULT NULL,
idmaterial integer DEFAULT NULL,
idunit integer DEFAULT NULL,
materialcode varchar (50) DEFAULT NULL,
price numeric DEFAULT NULL,
note varchar (1000) DEFAULT NULL,

status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.10. Materialbaseline: Baseline material

id SERIAL PRIMARY KEY,
idref integer DEFAULT NULL,
reftype varchar (50) DEFAULT NULL,
code varchar (50) DEFAULT NULL,
name varchar (300) DEFAULT NULL,
scope varchar (100) DEFAULT NULL,
totalamount numeric DEFAULT NULL,
baselinedate date DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,

iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.11. Materialbaselinedetail: Detail list of Materialbaseline

id SERIAL PRIMARY KEY,
idmaterialbaseline integer DEFAULT NULL,
idsupplier integer DEFAULT NULL,
idmaterial integer DEFAULT NULL,
idunit integer DEFAULT NULL,
price numeric DEFAULT NULL,
quantity integer DEFAULT NULL,
amount numeric DEFAULT NULL,
startdate date DEFAULT NULL,
enddate date DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,

createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.12.Purchase: Manage purchase receipt

id SERIAL PRIMARY KEY,
idreceiver integer DEFAULT NULL,
idcontact integer DEFAULT NULL,
idsupplier integer DEFAULT NULL,
idref integer DEFAULT NULL,
reftype varchar (50) DEFAULT NULL,
code varchar (50) DEFAULT NULL,
name varchar (300) DEFAULT NULL,
idstore integer DEFAULT NULL,
contactphonenumber varchar (50) DEFAULT NULL,
contactfaxnumber varchar (50) DEFAULT NULL,
deliveryaddress varchar (500) DEFAULT NULL,
deliverydate date DEFAULT NULL,
vat integer DEFAULT NULL,
totalamount numeric DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,

idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.13.Purchasedetail: Detail list of Purchasedetail

id SERIAL PRIMARY KEY,
idpurchase integer DEFAULT NULL,
idmaterial integer DEFAULT NULL,
idunit integer DEFAULT NULL,
materialcode varchar (50) DEFAULT NULL,
price numeric DEFAULT NULL,
quantity integer DEFAULT NULL,
amount numeric DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,

updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.14.Request: Manage request receipt

id SERIAL PRIMARY KEY,
idstore integer DEFAULT NULL,
idwriter integer DEFAULT NULL,
idreceiver integer DEFAULT NULL,
idresponsible integer DEFAULT NULL,
idref integer DEFAULT NULL,
reftype varchar (50) DEFAULT NULL,
code varchar (50) DEFAULT NULL,
name varchar (300) DEFAULT NULL,
receiverphonenumber varchar (50) DEFAULT NULL,
writerphonenumber varchar (50) DEFAULT NULL,
address varchar (500) DEFAULT NULL,
times integer DEFAULT NULL,
requestdate date DEFAULT NULL,
receivedate date DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,

iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.15.Requestdetail: Detail list of Requestdetail

id SERIAL PRIMARY KEY,
idrequest integer DEFAULT NULL,
idmaterial integer DEFAULT NULL,
softquantity integer DEFAULT NULL,
quantity integer DEFAULT NULL,
workitem varchar (300) DEFAULT NULL,
deliverydate date DEFAULT NULL,
drawingname varchar (300) DEFAULT NULL,
teamname varchar (300) DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,

updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.16. Materialimport: Manage import receipt

id SERIAL PRIMARY KEY,
idstore integer DEFAULT NULL,
idimporter integer DEFAULT NULL,
idref integer DEFAULT NULL,
reftype varchar (50) DEFAULT NULL,
code varchar (50) DEFAULT NULL,
name varchar (300) DEFAULT NULL,
importdate date DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.17. Materialimportdetail: Detail list of Materialimportdetail

id SERIAL PRIMARY KEY,
idmaterialimport integer DEFAULT NULL,
idmaterial integer DEFAULT NULL,
idunit integer DEFAULT NULL,
price numeric DEFAULT NULL,
quantity integer DEFAULT NULL,
amount numeric DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.18. Materialexport: Manage export receipt

id SERIAL PRIMARY KEY,
idstore integer DEFAULT NULL,
idexporter integer DEFAULT NULL,

idref integer DEFAULT NULL,
reftype varchar (50) DEFAULT NULL,
code varchar (50) DEFAULT NULL,
name varchar (300) DEFAULT NULL,
exportdate date DEFAULT NULL,
note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.19. Materialexportdetail: Detail list of Materialexportdetail

id SERIAL PRIMARY KEY,
idmaterialexport integer DEFAULT NULL,
idmaterial integer DEFAULT NULL,
idunit integer DEFAULT NULL,
price numeric DEFAULT NULL,
quantity integer DEFAULT NULL,
amount numeric DEFAULT NULL,

note varchar (1000) DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,
updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL

4.2.20.Comment

id SERIAL PRIMARY KEY,
idwriter integer DEFAULT NULL,
idref integer DEFAULT NULL,
reftype varchar (50) DEFAULT NULL,
content text DEFAULT NULL,
status integer DEFAULT NULL,
idowner integer DEFAULT NULL,
idcreate integer DEFAULT NULL,
idupdate integer DEFAULT NULL,
iddelete integer DEFAULT NULL,
idlock integer DEFAULT NULL,
createdate timestamp with time zone DEFAULT NULL,

updatedate timestamp with time zone DEFAULT NULL,
deletedate timestamp with time zone DEFAULT NULL,
lockdate timestamp with time zone DEFAULT NULL,
version integer DEFAULT NULL