

# Entity Relationship Diagram to Relational Schema Mapping

## 1. Entity Mapping

- a. USER[PhoneNum, AcctBal, Fname, Lname, Gender, DoB]
- b. ICP[ABN, Name, Domain, AcctBal]
- c. CREATOR[ABN, Name, OfferDesc, AcctBal]

## 2. Weak Entity Mapping

- a. REQUEST[DateTime, User, Approval, Price]
  - i. User is a FK and partial key
- b. SERVICE[Name, ICP, Desc]
  - i. ICP is a FK
- c. PACKAGE[ICP, Name, Desc]
  - i. ICP is a FK and partial key
- d. CONTRACT[ICP, Cnum, Rank, Effective, CreationDate, EffectiveDate, TerminationDate]
  - i. ICP is a FK and partial key
- e. CATEGORY[ICP, Name, Desc]
  - i. ICP is a FK and partial key
- f. MATERIAL[Cname, Name, Desc, Type, Expiry, CreationDate]
  - i. Cname is a FK and partial key

## 3. Binary 1:1 Relationship Mapping

- a. There are no Binary 1:1 relationships in my ER diagram

## 4. Binary 1:N Relationship Mapping

- a. REQUEST[DateTime, User, Approval, Price, ICP, Mname, Mcreator]
  - i. ICP, Mname, Mcreator are FKs
- b. CONTRACT[ICP, Cnum, Rank, Creator, Effective, CreationDate, EffectiveDate, TerminationDate]
  - i. Creator is a FK
- c. CATEGORY[ICP, Name, ParentICP, ParentName, Desc]
  - i. ParentICP, ParentName are FKs

## 5. Binary M:N Relationship mapping

- a. PSUBSCRIPTION[User, PackageICP, PackageN]
  - i. User, PackageICP, PackageN are FKs and form the primary key
- b. SSUBSCRIPTION[User, ServiceN, ServiceICP]
  - i. User, ServiceN, ServiceICP are FKs and form the primary key
- c. SERV\_PACK[Sname, ICP, Pname]
  - i. Sname, ICP, Pname are FKs and form the primary key
- d. SERV\_MAT[Sname, SICP, Mcreator, Mname]
  - i. Sname, SICP, Mcreator, Mname are FKs and form the primary key
- e. WHOLESALE[Mcreator, Mname, CICP, Cnum, Price]
  - i. Mcreator, Mname, CICP, Cnum are FKs and form the primary key
  - ii. Price is an attribute of the relation
- f. CATEGORIZATION[CICP, Cname, Mname, Mcreator]
  - i. CICP, Cname, Mname, Mcreator are FKs and form the primary key

## 6. Multi-valued Attribute Mapping

- a. USER\_ADDRESSES[User, Atype, Address]
  - i. User is a FK and partial key
  - ii. Atype is a partial key
  - iii. Address is the non-key attribute
- b. USER\_EMAILS[User, Etype, Email]
  - i. User is a FK and partial key
  - ii. Etype is a partial key
  - iii. Email is the non-key attribute
- c. USER\_PHONES[User, Ptype, PhoneNum]
  - i. User is a FK and partial key
  - ii. Ptype is a partial key
  - iii. PhoneNum is the non-key attribute
- d. ICP\_ADDRESSES[ICP, Atype, Address]
  - i. ICP is a FK and partial key
  - ii. Atype is a partial key
  - iii. Address is the non-key attribute
- e. ICP\_EMAILS[ICP, Etype, Email]
  - i. ICP is a FK and partial key
  - ii. Etype is a partial key
  - iii. Email is the non-key attribute
- f. ICP\_PHONES[ICP, Ptype, PhoneNum]
  - i. ICP is a FK and partial key
  - ii. Ptype is a partial key
  - iii. PhoneNum is the non-key attribute
- g. CC\_ADDRESSES[Creator, Atype, Address]
  - i. Creator is a FK and partial key
  - ii. Atype is a partial key
  - iii. Address is the non-key attribute
- h. CC\_EMAILS[Creator, Etype, Email]
  - i. Creator is a FK and partial key
  - ii. Etype is a partial key
  - iii. Email is the non-key attribute
- i. CC\_PHONES[Creator, Ptype, PhoneNum]
  - i. Creator is a FK and partial key
  - ii. Ptype is a partial key
  - iii. PhoneNum is the non-key attribute

My entity relationship diagram does not have any N-ary relationships nor super and sub-classes. I can stop after 6 steps.