

# ① Mapping of strong entity types

## Donor

<u>D_id</u>	Dname	Dphone
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PK: D\_id

## Patient

<u>pid</u>	pname	Age	DOB
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PK: Pid

## Blood

<u>Code</u>	Cost	Type
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PK: Code

## Blood Bank

<u>Bno</u>	Street	City	Zip
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PK: Bno

# ② Mapping of weak entity

## Blood Bank Manager

<u>Bno</u>	<u>Mid</u>	Mphone	Mname
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Primary key Bno + Mid  
Foreign key: Bno

# ③ Mapping of binary 1:1 relationship types: Done for weak entity,

# ④ Mapping of binary 1:N relationship types:

## Blood:

<u>Code</u>	Cost	Type	Bno	Date
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PK: Code  
FK: Bno

## Patient:

<u>Pid</u>	Fid	Pname	Age	DOB
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PK: Pid  
FK: Fid

# ⑤ Mapping of binary M:N relationship types: No M:N relation in ER diagram



## ⑥ Mapping of multivalued attribute:

multiphone

<u>Pmobile</u>	<u>Pid</u>
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Pk: Pmobile + Pid  
Fk: Pid

## ⑦ Mapping of N-ary Relationship type.

Here relationship between Patient, Blood and donor is ternary.

tern-combine

<u>Pid</u>	<u>D-id</u>	<u>Code</u>
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Pk: Pid + D-id + Code  
Fk: Pid, D-id, Code

Final relational model:

Donor

<u>D-id</u>	Dname	Dphone
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Patient

Fid	<u>Pid</u>	Pname	Age	DoB
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Blood

<u>Code</u>	Cost	Type	Bno	Date
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Blood Bank

<u>Bno</u>	Street	City	Zip
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Blood Bank Manager

<u>Bno</u>	<u>Mid</u>	Mphone	Mname
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Multiphone

<u>Pmobile</u>	<u>Pid</u>
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tern-combine

<u>PCode</u>	<u>Pid</u>	<u>Did</u>
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