**CHAPTER 3**

**SYSTEM DESIGN**

**3.2E-R Diagram**

Manages

1 1

MANAGER

BBANK

1

Stores

N

1

Orders

Manages

1 N

BLOOD

1

Placed By

M N

ORDERS

HOSPITAL

RECEPTIONIST

**3.2 The entities**

1. Donor
2. Blood
3. Receptionist
4. Blood Bank
5. Blood Bank Manager
6. Hospital

**3.3 The relationships**.

1. Blood bank stores different types of blood. So cardinality is 1:N.
2. Blood Bank is managed by an blood bank -manager. So cardinality is 1:1.
3. A receptionist works under a Manager. So cardinality is 1:1.
4. Orders are ordered for different blood types.
5. Hospitals may order blood from different Blood Banks. So cardinality is N:M.

**3.4 The key attributes**.

1. Donor – donor id (DID).
2. Blood – code (code).
3. Receptionist – employee id (RID).
4. Blood Bank–Blood Bank number (BID).
5. Blood Bank Manager – employee id (MID).
6. Hospital – Hospital ID(HID).

**3.5 Other relevant attributes**

1. Donor – name, age, sex, address, phone number (phno).
2. Blood – blood type, cost.
3. Receptionist – name, address, phone number (phno).
4. Blood Bank– issues, orders, blood type.
5. Blood Bank Manager – name, email \_id, phone number (phno).
6. Hospital-name,address,Phone no.