



## ***EDGE BU CSE Digital Skills Training***

***Project Report on***  
***Blood Bank Management System***  
***Course Name: Database***  
***Batch No.-01***

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# 1. Designing (Entity Relationship) ER Diagram

## Steps of Drawing ERD

1. Identify the Entities Required
2. Identify the Attributes and Primary key for each Entity
3. Identify the Relationship needed
4. Identify the Cardinality Ratio and Participation
5. Draw the Diagram

### Step-1: Identify the Entities Required

- Donors
- Blood\_Bank\_Units
- Blood\_Tests
- Blood\_Requests
- Blood\_Transfusions
- Staffs
- Pathologist
- Instruments

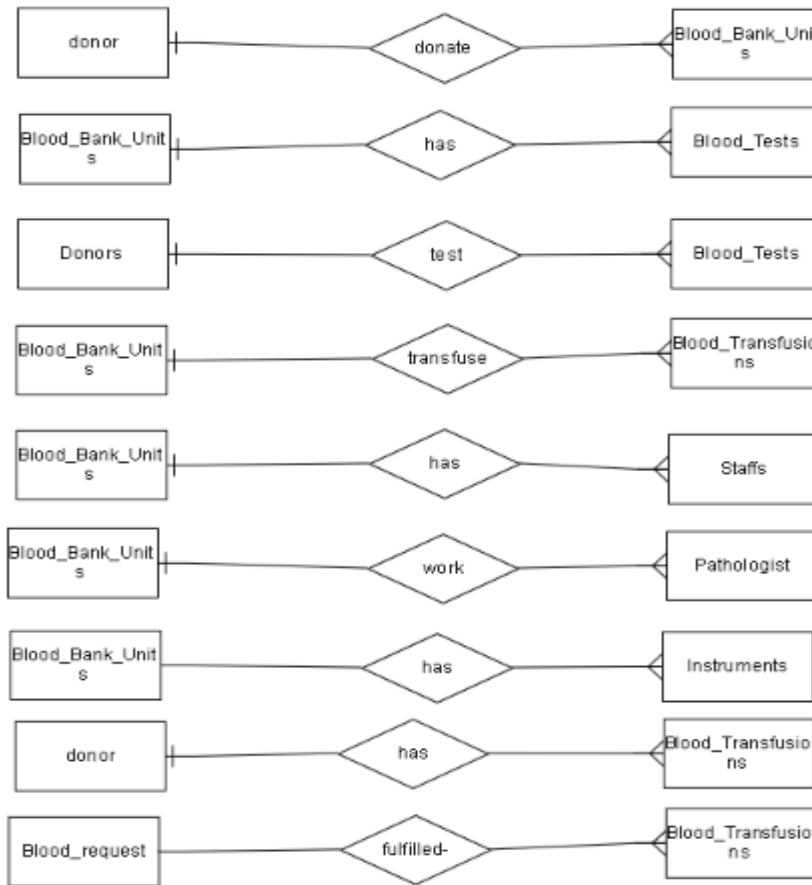
### Step-2: Identify the Attributes and Primary key for each Entity

- Donors(Donor\_ID, Name, Blood\_Type, Age, Gender, Blood\_Pressure, Weight, Hemoglobin, Phone, Email, Last\_Donation\_Date, Medical\_History)
- Blood\_Bank\_Units(Unit\_ID, Name, Blood\_Type, Status, Donation\_Date, Expiry\_Date, Volume, Location)
- Blood\_Tests(Test\_ID, Blood\_Type, Test\_Date)
- Blood\_Requests(Request\_ID, Requester\_Name, Phone, Blood\_Type, Request\_Date, Quantity, Status, Fulfillment\_Date)
- Blood\_Transfusions(Transfusion\_ID, Blood\_Type, Quantity, Causes, Transfusion\_Date)
- Staffs(StaffID, Name, Role, ContactNumber, Email, UnitID),
- Pathologist (ID, Name, Phone)
- Instruments(ID, Name, Quantity, PurchaseDate)

### Step-3: Identify the Relationship needed

1. **Donors** --- donate --- **Blood\_Bank\_Units**
2. **Blood\_Bank\_Units** ---has--- **Blood\_Tests**
3. **Donors** --- test --- **Blood\_Tests**
4. **Blood\_Requests** --- fulfilled --- **Blood\_Transfusions**
5. **Donors** --- have --- **Blood\_Transfusions**
6. **Blood\_Bank\_Units** ---Transfuse--- **Blood\_Transfusions**
7. **Blood\_Bank\_Units** --- has --- **Staffs**
8. **Blood\_Bank\_Units** ---work--- **Pathologist**.
9. **Blood\_Bank\_Units** ---has--- **Instruments**

#### Step-4: Identify the Cardinality Ratio and Participation



#### Step-5: Draw the Diagram

