

Data And Applications

Project Phase 2

Team No. - 57

ER DIAGRAM FOR OUR MINI – WORLD “BANKING SYSTEM”

In continuation of our work in phase 1 during which we had selected the “Banking System” as our topic for the project and worked out the data requirements for the database design and functional requirements for database operations, we have designed ER diagram for our mini world during the second phase of the project and drawn the same using draw.io. Assumptions made and the minor edits made while drawing ER diagram are mentioned below : --

1. Total participation has been displayed as a double line connecting the participating entity type to the relationship, whereas partial participation has been represented by a single line connecting the participating entity type to the relationship as per practice followed in the Text Book.

2. Under entity “LOAN” which is a superclass, an additional attribute ‘Loan Type’ has been added and the specialization is attribute (i.e ‘Loan Type’) defined. In the pdf document submitted earlier as a part of phase1 of the project, a typographical error occurred and the entity “LOAN” was mentioned as subclass in place of superclass and this typing mistake has been corrected at the time of drawing ER diagram. It is assumed that there are only three types of “Loan” viz. i) Education, ii) Home and iii) Other. Specialization has been considered as “Disjoint and Total”. The three subclasses and their own specific attributes are as under : -

SUBCLASS	OWN SPECIFIC ATTRIBUTE
EDUCATION LOAN	1. COURSE NAME (VARCHAR 60) 2. INSTITUTE NAME (VARCHAR 60)
HOME LOAN	1. PROPERTY DETAILS (VARCHAR 100)
OTHER LOAN	1. ITEM DETAILS (VARCHAR 100)

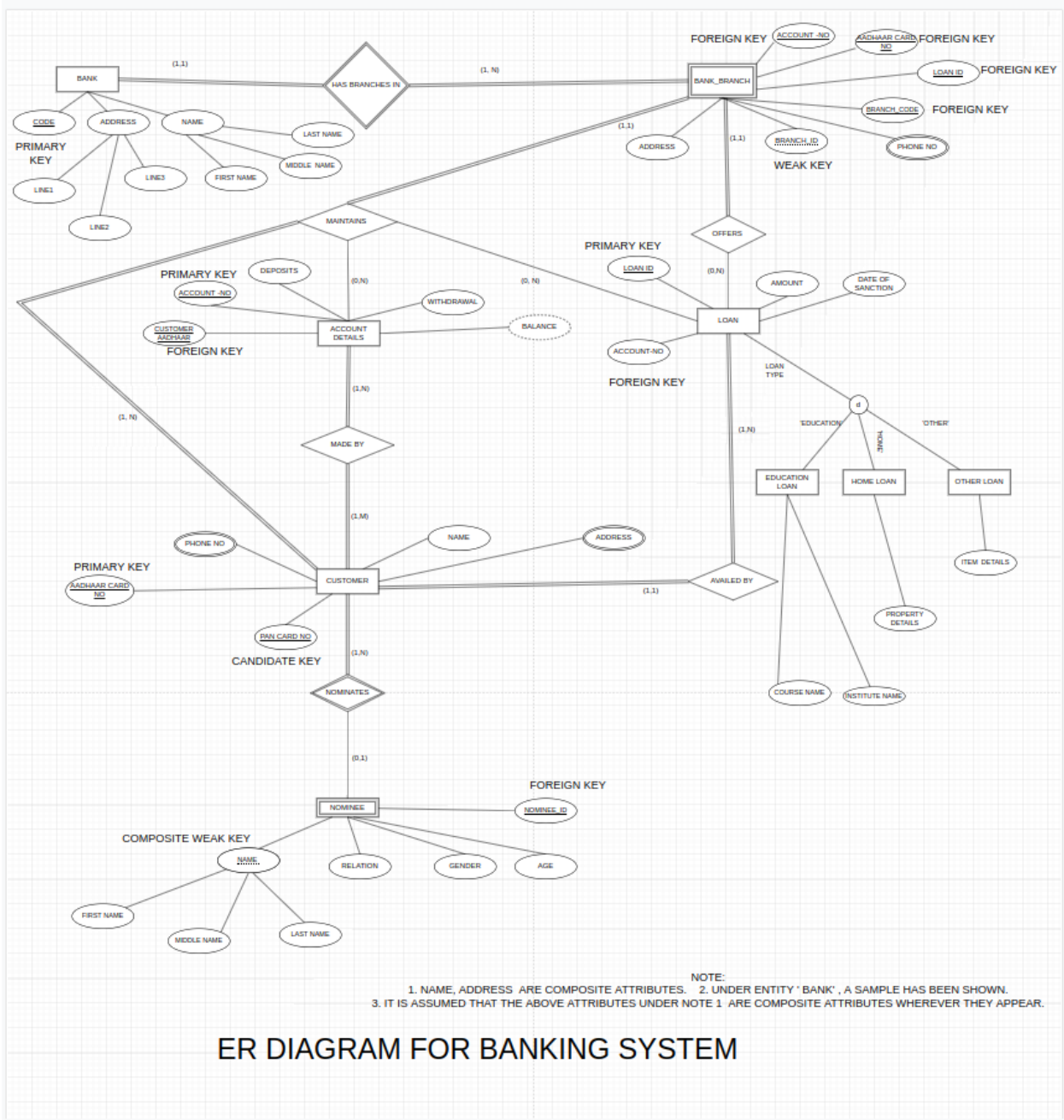
3. Under the entity "CUSTOMER", attribute "Nominee ID" has been dropped at the time of drawing ER diagram as the same was found to be infructuous.

4. As clearly depicted in the ER Diagram, Relationship of degree > 3 now is "Maintains" in place of "Made By" which was mentioned earlier in the pdf submitted as a part of phase 1 of the project. The relationship "Maintains" is between Bank Branch and Customer;

Bank Branch and Loan; Bank Branch and Account Details. At the time of drawing ER diagram, it was noticed that the relationship "Maintains" requires addition of few attributes (Foreign Keys) viz. 1) Account No. under entity Bank_Branch which takes reference from Account No. in Account Details Entity; 2) Aadhaar Card No. under entity Bank_Branch which takes reference from Aadhar Card No. in Customers Entity and 3) Loan ID under entity Bank_Branch which takes reference from Loan ID in Loan Entity.

5. Due to the limited number of shapes available for depicting attributes in draw.io, the shape which is used for Key attribute has also been used for depicting Foreign Key attribute. Key, Weak Key, Candidate Key and Foreign Key have been depicted in the diagram by including appropriate text in the diagram.

Keeping in view the above, ER diagram has been drawn using draw.io software and the same is attached.



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