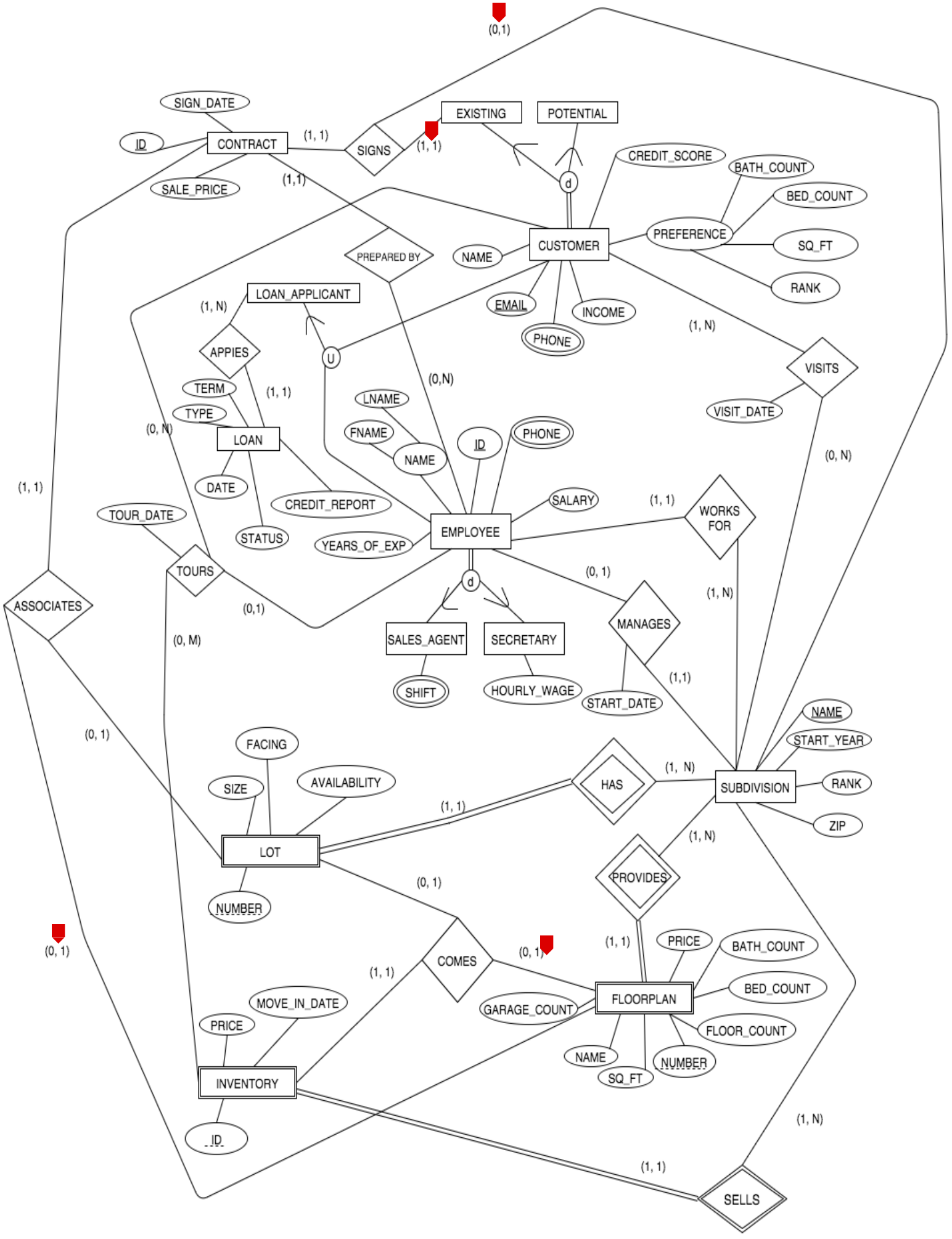
DATABASE DESIGN PROJECT

PHASE 1

TEAM MEMBERS:
Suneesha Kudipudi
Indhumadhi Suryanarayanan
Sindhujaa Ranganathan Chandra Babu

Guidance:
Dr. Weili Wu & T.A. Jing Yuan


(0,1)
SIGN_DATE
ID
CONTRACT
(1, 1)
SIGNS
(1, 1)
EXISTING
POTENTIAL
SALE_PRICE
(1,1)
d
CREDIT_SCORE
BATH_COUNT
BED_COUNT
PREFERENCE
SQ_FT
RANK
PREPARED BY
NAME
CUSTOMER
EMAIL
INCOME
PHONE
(1, N)
LOAN_APPLICANT
(1, N)
APPIES
U
(1, N)
VISITS
VISIT_DATE
(0,N)
TERM
(1, 1)
LNAME
TYPE
(0, N)
LOAN
FNAME
NAME
ID
PHONE
(0, N)
(1, 1)
DATE
CREDIT_REPORT
SALARY
(1, 1)
WORKS FOR
TOUR_DATE
STATUS
YEARS_OF_EXP
EMPLOYEE
TOURS
(0, 1)
ASSOCIATES
(0,1)
d
(1, N)
(0, M)
SALES_AGENT
SECRETARY
MANAGES
SHIFT
HOURLY_WAGE
START_DATE
(1,1)
NAME
START_YEAR
(0, 1)
FACING
(1, N)
HAS
SUBDIVISION
RANK
SIZE
AVAILABILITY
(1, 1)
ZIP
LOT
(1, N)
PROVIDES
(0, 1)
NUMBER
(0, 1)
(1, 1)
PRICE
BATH_COUNT
COMES
(0, 1)
(1, 1)
BED_COUNT
GARAGE_COUNT
FLOORPLAN
MOVE_IN_DATE
FLOOR_COUNT
PRICE
NAME
NUMBER
INVENTORY
SQ_FT
ID
(1, N)
(1, 1)
SELLS

ASSUMPTIONS

- Each EMPLOYEE should either be a SALES AGENT or a SECRETARY(disjoint)
- Every EMPLOYEE should work a SUBDIVISION and all SUBDIVISIONs should have atleast one EMPLOYEE.
- Not all EMPLOYEEs are involved in managing a SUBDIVSION
- Each SUBDIVISION should have a FLOORPLAN and all FLOORPLANs must belong to a SUBDIVISION.
- A FLOORPLAN can be provided by only one SUBDIVISION.
- Each SUBDIVISION should have a LOT and all LOTs must belong to a SUBDIVISION.
- A LOT can be provided by only one SUBDIVISION.
- A INVENTORY can be provided by only one SUBDIVISION.
- Each SUBDIVISION should have a INVENTORY and all INVENTORY s must belong to a SUBDIVISION.
- INVENTORY, FLOORPLAN and LOT form a ternary relationship.
- Not all LOTS and FLOORPLANS have an INVENTORY but all INVENTORYs have a LOT and FLOORPLAN.
- Only one INVENTORY can be made on one LOTS and one FLOORPLANS.
- Many CUSTOMERS visit any number of SUBDIVISIONs but not all SUBDIVISIONS be visited by the CUSTOMER.
- Since EMPLOYEE is part of a SUBDIVISION, the SUBDIVISION visited by the customer gets recorded through the EMPLOYEE.
- The 'status' of the LOAN entity takes either 'approval' or 'disapproval' as its value.
- 'Availability' of LOT entity takes either 'y' for yes or 'n' for no depending on the availability of the lot.

PROJECT QUESTIONS

a) Can you think 2 more rules (other than the one explicitly described above) that are likely to be used in the system?
   - Semantic use of NULL values. NULL values in the database will be treated as values, which will play a role in deciding KEYS.
   - We can also add integrity constraints like semantic constraint for many attributes like bedrooms and baths as mentioned in the question.

b) Is the ability to model super-class/subclass relationships likely to be important in such environment? Why or why not?
   Yes, the ability to model super-class/subclass relationships likely to be important in such environment because this way we can reduce any redundancy that happens through many relationships between the same Entities. In generalization, specialization and inheritance, the common attributes and relationships between two or more entities need not be explicitly mentioned.