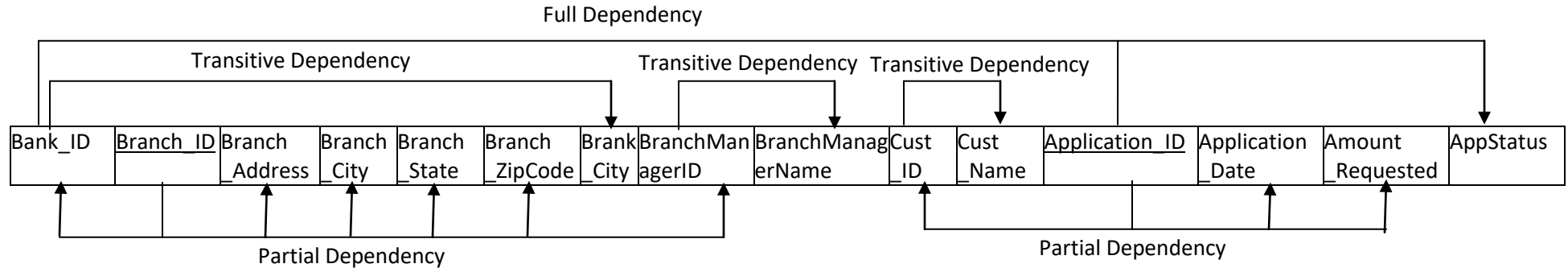


Problem 2



Ans:

1) the primary keys are Branch_ID and Application_ID, the other candidate keys are Cust_ID, Bank_ID

2) as described in the arrows in the table above

partial dependencies include:

- A. Branch_ID -> Branch_Address, Branch_City, Branch_State, Branch_Zipcode, Bank_ID, BranchManagerID
- B. Application_ID -> Cust_ID, Application_Date, Amount_Requested

Transitive dependencies include:

- A. Bank_ID -> Brank_City
- B. Cust_ID -> Cust_Name
- C. BranchManagerID -> BranchManagerName

3) Third normal relations

| | | |
|----------------|-----------|-----------|
| Application_ID | Branch_ID | AppStatus |
|----------------|-----------|-----------|

APPLICATION ACCESSMENT

| | | | | | | |
|-----------|----------------|-------------|--------------|----------------|----------|-----------------|
| Branch_ID | Branch_Address | Branch_City | Branch_State | Branch_Zipcode | Brank_ID | BranchManagerID |
|-----------|----------------|-------------|--------------|----------------|----------|-----------------|

BANK BRANCH

| | |
|---------|-----------|
| Bank_ID | Bank_City |
|---------|-----------|

BANK

| | |
|-----------------|-------------------|
| BranchManagerID | BranchManagerName |
|-----------------|-------------------|

BRANCH MANAGER

| | | | |
|----------------|---------|------------------|------------------|
| Application_ID | Cust_ID | Application_Date | Amount_Requested |
|----------------|---------|------------------|------------------|

LOAN APPLICATION

| | |
|---------|-----------|
| Cust_ID | Cust_Name |
|---------|-----------|

CUSTOMER

- 4) The ERD of the relationship
As shared in lucichart