Question –

DDBMS (Distribution Database Management System)

Create a schema for banking System for Vertical Fragmentation

Vertical Fragmentation

- Vertical fragmentation is typically used to improve performance for queries that only access a subset of the columns in a table
- Divides table by Columns

Table: Account Information

Customer ID	Name	Address	Phone	Email
101	Aryan Sharma	Thane	9960765259	aryansharma@gmail.com
102	Raja Pandey	Mumbai	9384759283	raja.p21@gmail.com
103	Ranjeev Singh	Delhi	9837382947	ranjeev@gmail.com

Account ID	Account Type	Balance	Open Date
201	Savings	5000	2023-01-15
202	current	2500	2023-02-20
203	Savings	10000	2023-03-10

Transaction ID	Transaction Date	Amount	Description
301	2023-09-01	+ 100	Deposit
302	2023-09-02	- 500	ATM Withdrawal
303	2023-09-03	+ 200	Monthly Interest

{Fragmented based on Account information such as (Transaction, Account Detail, etc)}

Fragmentation Criteria:

Fragment 1: Customer Info

Fragment 2: Contact Info

Fragment 3: Account Info

Fragment 4: Transaction Info

Fragment 1: Customer Info

Customer ID	Name
101	Aryan Sharma
102	Raja Pandey
103	Ranjeev Singh

Fragment 2: Contact Info

Customer ID	Address	Phone	Email
101	Thane	9960765259	aryansharma@gmail.com
102	Mumbai	9384759283	raja.p21@gmail.com
103	Delhi	9837382947	ranjeev@gmail.com

Fragment 3: Account Info

Customer ID	Account ID	Account Type	Open Date
101	201	Savings Acc.	2023-01-15
102	202	Current Acc.	2023-02-20
103	203	Savings Acc.	2023-03-10

Fragment 4: Transaction Info

AccountID	Transaction ID	Transaction Date	Amount	Description
201	301	2023-09-01	+ 100	Deposit
202	302	2023-09-02	- 500	ATM Withdrawal
203	303	2023-09-03	+ 200	Monthly Interest