1.Add primary key constraint to customer\_id in customer table.
alter table customer modify CUSTOMER\_ID int;

alter table customer add constraint primary key (CUSTOMER\_ID);

	Field	Туре	Null	Key	Default
•	CUSTOMER_ID	int	NO	PRI	NULL
	FIRSTNAME	varchar(30)	YES		NULL
	CUSTOMER_CITY	varchar(15)	YES		NULL
	CUSTOMER_CONTACT_NO	varchar(10)	YES		NULL
	OCCUPATION	varchar(10)	YES		NULL
	CUSTOMER_DATE_OF_BIRTH	date	YES		NULL
	LASTNAME	varchar(20)	YES		NULL

2.Add primary key constraint to account\_number in account table.

alter table account modify ACCOUNT\_NUMBER int;

alter table account add constraint primary key (account\_number);

	Field	Туре	Null	Key	Default
•	ACCOUNT_NUMBER	int	NO	PRI	NULL
	CUSTOMER_NUMBER	varchar(20)	YES		NULL
	BRANCH_ID	varchar(10)	YES		NULL
	OPENING_BALANCE	double	YES		NULL
	ACCOUNT_OPENING_DATE	date	YES		NULL
	ACCOUNT_TYPE	varchar(10)	YES		NULL
	ACCOUNT_STATUS	varchar(10)	YES		NULL

3.Add foreign key constraint to customer\_number in account table which refers customer\_id of customer table.

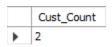
alter table account modify CUSTOMER NUMBER int;

alter table account add constraint foreign key (customer\_number) references customer (Customer\_id);

	Field	Туре	Null	Key	Default
•	ACCOUNT_NUMBER	int	NO	PRI	NULL
	CUSTOMER_NUMBER	int	YES	MUL	NULL
	BRANCH_ID	varchar(10)	YES		NULL
	OPENING_BALANCE	double	YES		NULL
	ACCOUNT_OPENING_DATE	date	YES		NULL
	ACCOUNT_TYPE	varchar(10)	YES		NULL
	ACCOUNT_STATUS	varchar(10)	YES		NULL

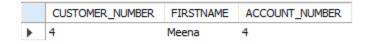
4. Write a query to display the number of customer's from Chennai. Give the count an alias name of Cust\_Count.

select count(customer\_id) 'Cust\_Count' from customer where CUSTOMER\_CITY='Chennai';



5. Write a query to display the customer number, customer firstname, account number for the customer's whose accounts were created after 15th of any month.

SELECT A.CUSTOMER\_NUMBER, C.FIRSTNAME, A.ACCOUNT\_NUMBER FROM Account A JOIN Customer C ON A.CUSTOMER\_NUMBER = C.CUSTOMER\_ID WHERE DAY(ACCOUNT\_OPENING\_DATE) > 15;



6. Write a query to display the number of customers who have registration but no account in the bank.

Give the alias name as Count\_Customer for number of customers.

```
SELECT COUNT(*) AS Count_Customer
FROM Customer C
WHERE NOT EXISTS (
SELECT 1 FROM Account A
WHERE A.CUSTOMER_NUMBER = C.CUSTOMER_ID
);

Count_Customer
```

7.Create table transaction\_details with columns

```
transaction_number VARCHAR(6),
account_number VARCHAR(6),
date_of_transaction DATE,
medium_of_transaction VARCHAR(20),
transaction_type VARCHAR(20),
transaction_amount double
)
```

	Field	Туре	Null	Key	Default
•	transaction_number	varchar(6)	YES		NULL
	account_number	varchar(6)	YES		NULL
	date_of_transaction	date	YES		NULL
	medium_of_transaction	varchar(20)	YES		NULL
	transaction_type	varchar(20)	YES		NULL
	transaction_amount	double	YES		NULL

8. Add foreign key constraint to account\_number in transaction table which refers account\_number of account table.

## ALTER TABLE Transaction\_Details ADD CONSTRAINT FK\_Transaction\_Account FOREIGN KEY (ACCOUNT\_NUMBER) REFERENCES Account(ACCOUNT\_NUMBER);

	Field	Туре	Null	Key	Default
•	transaction_number	varchar(6)	YES		NULL
	account_number	int	YES	MUL	NULL
	date_of_transaction	date	YES		NULL
	medium_of_transaction	varchar(20)	YES		NULL
	transaction_type	varchar(20)	YES		NULL
	transaction_amount	double	YES		NULL

## 9.Insert rows in transaction table

INSERT INTO Transaction\_Details (TRANSACTION\_NUMBER, ACCOUNT\_NUMBER, DATE\_OF\_TRANSACTION, MEDIUM\_OF\_TRANSACTION, TRANSACTION\_TYPE, TRANSACTION\_AMOUNT)

## **VALUES**

('T00001', '1', '2024-01-18', 'Online', 'Deposit', 5000),

('T00002', '1', '2024-01-25', 'ATM', 'Withdrawal', 2000),

('T00003', '3', '2024-02-10', 'Branch', 'Deposit', 3000),

('T00004', '1', '2024-03-20', 'Online', 'Withdrawal', 1500),

('T00005', '2', '2024-03-05', 'ATM', 'Deposit', 7000);

	transaction_number	account_number	date_of_transaction	medium_of_transaction	transaction_type	transaction_amount
•	T00001	1	2024-01-18	Online	Deposit	5000
	T00002	1	2024-01-25	ATM	Withdrawal	2000
	T00003	3	2024-02-10	Branch	Deposit	3000
	T00004	1	2024-03-20	Online	Withdrawal	1500
	T00005	2	2024-03-05	ATM	Deposit	7000

10. Write a query to display the total number of withdrawals and total number of deposits being done by customer whose customer number ends with 001. The query should display transaction type and the number of transactions. Give an alias name as Trans\_Count for number of transactions.

Display the records sorted in ascending order based on transaction type.

SELECT TD.TRANSACTION\_TYPE, COUNT(\*) AS Trans\_Count FROM Transaction\_Details TD

JOIN Account A ON TD.ACCOUNT\_NUMBER = A.ACCOUNT\_NUMBER WHERE A.CUSTOMER\_NUMBER LIKE '%1'

GROUP BY TD.TRANSACTION\_TYPE

ORDER BY TD.TRANSACTION\_TYPE ASC;

	TRANSACTION_TYPE	Trans_Count
•	Deposit	1
	Withdrawal	2