

**GROUP B**  
**ASSIGNMENT 5**

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**CLASS**– TE-IT  
**BATCH**– T2  
**ROLL NO**– 7048

**PROBLEM STATEMENT**

Write and execute suitable database triggers. Consider row level and statement level triggers

Consider Account table containing information of Acc\_no, Name, balance of minimum 10 customers. Write a Trigger that maintains a log of a Account (acc\_no, name, balance) table.

Whenever there is any update on account balance, LogTable maintains AccountNo, Name, amount (that is deposited or withdrawn), Type of transaction(if deposit then 'D' – if withdraw then 'W'), and Timestamp which includes Date and Time.

```
mysql> create database Bank;  
Query OK, 1 row affected (0.00 sec)
```

```
mysql> use Bank;  
Database changed
```

```
mysql> create table Account(Acc_no int, Name varchar(25), Balance  
real(10,2));  
Query OK, 0 rows affected (0.40 sec)
```

```
mysql> create table AccountLOG(Acc_no int, Name  
varchar(25), TransAmount real(10,2), TransType ENUM('W', 'D'),  
TransDateTime timestamp);  
Query OK, 0 rows affected (0.40 sec)
```

```
mysql> insert into Account values(1234, 'Shivani', 1400.25);  
Query OK, 1 row affected (0.05 sec)
```

```
mysql> insert into Account values(2353, 'Sakshi', 2300.45);  
Query OK, 1 row affected (0.08 sec)
```

```
mysql> insert into Account values(3244, 'Reyansh', 4556.80);  
Query OK, 1 row affected (0.04 sec)
```

```
mysql> insert into Account values(9981, 'Arnav', 6000);  
Query OK, 1 row affected (0.05 sec)
```

```
mysql> insert into Account values(8721, 'Sita', 9000);  
Query OK, 1 row affected (0.05 sec)
```

```
mysql> insert into Account values(8347,'Lokesh',10000000.25);
Query OK, 1 row affected (0.06 sec)
```

```
mysql> insert into Account values(2314,'Ankit',5898.33);
Query OK, 1 row affected (0.06 sec)
```

```
mysql> insert into Account values(3421,'Rohan',9938.21);
Query OK, 1 row affected (0.06 sec)
```

```
mysql> insert into Account values(8942,'Priyanka',19894.67);
Query OK, 1 row affected (0.05 sec)
```

```
mysql> insert into Account values(5575,'Minakshi',8556.78);
Query OK, 1 row affected (0.05 sec)
```

```
mysql> select * from Account;
```

Acc_no	Name	Balance
1234	Shivani	1400.25
2353	Sakshi	2300.45
3244	Reyansh	4556.80
9981	Arnav	6000.00
8721	Sita	9000.00
8347	Lokesh	10000000.25
2314	Ankit	5898.33
3421	Rohan	9938.21
8942	Priyanka	19894.67
5575	Minakshi	8556.78

```
10 rows in set (0.00 sec)
```

```
mysql> delimiter //
```

```
mysql> CREATE TRIGGER MaintainLOG
```

```
-> AFTER UPDATE
```

```
-> ON Account
```

```
-> FOR EACH ROW
```

```
-> BEGIN
```

```
-> Declare transAmt real(10,2);
```

```
-> Declare transType varchar(1);
```

```
-> if old.Balance > new.Balance then SET transType='W';
```

```
-> else SET transType='D';
```

```
-> end if;
```

```
-> if old.Balance > new.Balance then SET transAmt =
```

```
old.Balance-new.Balance;
```

```
-> else SET transAmt=new.Balance-old.Balance;
```

```
-> end if;
```

```
-> insert into AccountLOG
```

```
values(old.Acc_no, old.Name, transAmt, transType, now());
```

```
-> END
```

```
-> //
```

Query OK, 0 rows affected (0.09 sec)

mysql> select \* from Account;

Acc_no	Name	Balance
1234	Shivani	1400.25
2353	Sakshi	2300.45
3244	Reyansh	4556.80
9981	Arnav	6000.00
8721	Sita	9000.00
8347	Lokesh	10000000.25
2314	Ankit	5898.33
3421	Rohan	9938.21
8942	Priyanka	19894.67
5575	Minakshi	8556.78

10 rows in set (0.00 sec)

mysql> update Account set Balance=1500.56 where Acc\_no=1234;

Query OK, 1 row affected (0.10 sec) Rows matched: 1 Changed: 1  
Warnings: 0

mysql> select \* from Account;

Acc_no	Name	Balance
1234	Shivani	1500.56
2353	Sakshi	2300.45
3244	Reyansh	4556.80
9981	Arnav	6000.00
8721	Sita	9000.00
8347	Lokesh	10000000.25
2314	Anjal	5898.33
3421	Rohan	9938.21
8942	Priyanka	19894.67
5575	Minakshi	8556.78

10 rows in set (0.00 sec)

mysql> select \* from AccountLOG;

Acc_no	Name	TransAmount	TransType	TransDateTime
1234	Shivani	100.31	D	2017-10-02 21:58:13

1 row in set (0.00 sec)

```
mysql> update Account set Balance=2000.56 where Acc_no=2353;
Query OK, 1 row affected (0.05 sec) Rows matched: 1  Changed: 1
Warnings: 0
```

```
mysql> select * from Account;
```

Acc_no	Name	Balance
1234	Shivani	1500.56
2353	Sakshi	2000.56
3244	Reyansh	4556.80
9981	Arnav	6000.00
8721	Sita	9000.00
8347	Lokesh	10000000.25
2314	Ankit	5898.33
3421	Rohan	9938.21
8942	Priyanka	19894.67
5575	Minakshi	8556.78

10 rows in set (0.00 sec)

```
mysql> select * from AccountLOG;
```

Acc_no	Name	TransAmount	TransType	TransDateTime
1234	Shivani	100.31	D	2017-10-02 21:58:13
2353	Sakshi	299.89	W	2017-10-02 21:58:59

2 rows in set (0.00 sec)

```
mysql> update Account set Balance=5000.78 where Acc_no=3421;
Query OK, 1 row affected (0.04 sec) Rows matched: 1  Changed: 1
Warnings: 0
```

```
mysql> select * from Account;
```

Acc_no	Name	Balance
1234	Shivani	1500.56
2353	Sakshi	2000.56
3244	Reyansh	4556.80
9981	Arnav	6000.00
8721	Sita	9000.00

	8347		Lokesh		10000000.25	
	2314		Ankit		5898.33	
	3421		Rohan		5000.78	
	8942		Priyanka		19894.67	
	5575		Minakshi		8556.78	

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10 rows in set (0.00 sec)

mysql> select \* from AccountLOG;

+-----+-----+-----+-----+-----+

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	Acc_no		Name		TransAmount		TransType		TransDateTime
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	1234		Shivani		100.31		D		2017-10-02 21:58:13
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|

	2353		Sakshi		299.89		W		2017-10-02 21:58:59
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|

	3421		Rohan		4937.43		W		2017-10-02 21:59:33
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+ 3 rows in set (0.01 sec)