

S20230010225_LAB8

DBMS LAB 8 screenshots and code

Table creation for exercise

```
57 (1056,7000),
58 (1076,8000);
59 DROP TABLE IF EXISTS SalaryBudgets;
60 CREATE TABLE SalaryBudgets(
61     total DECIMAL(15,2) NOT NULL
62 );
63 INSERT INTO SalaryBudgets(total)
```

Result Grid

total
20000.00

SalaryBudgets 3 x

Output

#	Time	Action	Message	Duration / Fetch
✓ 15	15:27:49	INSERT INTO Salaries(employeeNumber,salary) VALUES (1002,5000), (1056,7000), (10...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.016 sec
⚠ 16	15:27:49	DROP TABLE IF EXISTS SalaryBudgets	0 row(s) affected, 1 warning(s): 1051 Unknown table 's20230010225_lab8.salarybudgets'	0.000 sec
✓ 17	15:27:49	CREATE TABLE SalaryBudgets(total DECIMAL(15,2) NOT NULL)	0 row(s) affected	0.031 sec
✓ 18	15:27:49	INSERT INTO SalaryBudgets(total) SELECT SUM(salary) FROM Salaries	1 row(s) affected Records: 1 Duplicates: 0 Warnings: 0	0.016 sec
✓ 19	15:27:49	SELECT * FROM SalaryBudgets LIMIT 0, 10000	1 row(s) returned	0.000 sec / 0.000 sec

Q1

```
68 delimiter //
69
70 create trigger before_insert_update
71 before insert on WorkCenters
72 for each row
73 begin
74     update WorkCenterStats
75     set totalCapacity = totalCapacity + new.capacity;
76 end //
77 delimiter ;
78
79
```

Output

Action Output

#	Time	Action	Message
✓ 1	15:33:40	create trigger before_insert_update before insert on WorkCenters for each row begin upd...	0 row(s) affected

Q2

```

82 • create trigger insert_reminder
83 after insert on members
84 for each row
85 begin
86     if new.birthDate is null then
87         insert into reminders (memberId, message)
88         values (new.id, 'Update birthday info');
89     END IF;
90 END //
91 DELIMITER ;
92
93

```

Output

Action Output

#	Time	Action	Message
✓ 1	15:33:40	create trigger before_insert_update before insert on WorkCenters for each row begin upd...	0 row(s) affected
✓ 2	15:35:17	create trigger insert_reminder after insert on members for each row begin if new.birthDate ...	0 row(s) affected

Q3

```

93 delimiter //
94 • create trigger insert_into_salarchive
95 before delete on Salaries
96 for each row
97 begin
98     insert into SalaryArchives (employeeNumber, validFrom, amount, deletedAt)
99     values (old.employeeNumber, old.employeeNumber());
100 end //
101 delimiter ;
102
103

```

Output

Action Output

#	Time	Action	Message
1	15:47:06	create trigger insert_into_salarchive before delete on Salaries for each row begin insert i...	0 row(s) affected

Q4

```
105 • create trigger update_salbudget
106   after delete on Salaries
107   for each row
108   begin
109       update SalaryBudgets
110       set total = total - old.salary;
111   end //
112
113   delimiter ;
114
115
116
117
```

Output				
Action Output				
#	Time	Action	Message	
2	15:35:17	create trigger insert_reminder after insert on members for each row begin if new.birthDat...	0 row(s) affected	
3	15:37:43	create trigger insert_into_salary_archives_before_delete before delete on Salaries for eac...	Error Code: 1054. Unknown column 'validFrom' in 'OLD'	
4	15:38:48	create trigger insert_into_salary_archives_before_delete before delete on Salaries for eac...	Error Code: 1054. Unknown column 'validFrom' in 'OLD'	
5	15:42:11	create trigger insert_into_salary_archives_before_delete before delete on Salaries for eac...	0 row(s) affected	
6	15:45:06	create trigger update_salbudget after delete on Salaries for each row begin update Sal...	0 row(s) affected	

```
Code: -- CREATE TABLE WorkCenters (
-- id INT AUTO_INCREMENT PRIMARY KEY,
-- name VARCHAR(100) NOT NULL,
-- capacity INT NOT NULL
-- );
-- DROP TABLE IF EXISTS WorkCenterStats;
-- CREATE TABLE WorkCenterStats(
-- totalCapacity INT NOT NULL
-- );
-- DROP TABLE IF EXISTS members;
-- CREATE TABLE members (
-- id INT AUTO_INCREMENT,
-- name VARCHAR(100) NOT NULL,
-- email VARCHAR(255),
```

```

-- birthDate DATE,
-- PRIMARY KEY (id)
-- );

-- DROP TABLE IF EXISTS reminders;

-- CREATE TABLE reminders (
-- id INT AUTO_INCREMENT,

-- memberId INT,
-- message VARCHAR(255) NOT NULL,
-- PRIMARY KEY (id , memberId)
-- );

-- DROP TABLE IF EXISTS Salaries;

-- CREATE TABLE Salaries (
-- employeeNumber INT PRIMARY KEY,
-- validFrom DATE NOT NULL,
-- amount DEC(12 , 2 ) NOT NULL DEFAULT 0
-- );

-- INSERT INTO
-- salaries(employeeNumber,validFrom,amount) VALUES
-- (1002,'2000-01-01',50000),
-- (1056,'2000-01-01',60000),
-- (1076,'2000-01-01',70000);

-- DROP TABLE IF EXISTS SalaryArchives;

-- CREATE TABLE SalaryArchives (
-- id INT AUTO_INCREMENT,
-- employeeNumber INT,
-- validFrom DATE NOT NULL,

```

```
-- amount DEC(12 , 2 ) NOT NULL DEFAULT 0,  
-- deletedAt TIMESTAMP DEFAULT NOW(),  
-- PRIMARY KEY (id, employeeNumber)  
-- );
```

```
-- DROP TABLE IF EXISTS Salaries;  
-- CREATE TABLE Salaries (  
-- employeeNumber INT PRIMARY KEY,  
-- salary DECIMAL(10,2) NOT NULL DEFAULT 0  
-- );
```

```
-- INSERT INTO  
-- Salaries(employeeNumber,salary) VALUES  
-- (1002,5000),  
-- (1056,7000),  
-- (1076,8000);
```

```
-- DROP TABLE IF EXISTS SalaryBudgets;  
-- CREATE TABLE SalaryBudgets(  
-- total DECIMAL(15,2) NOT NULL  
-- );
```

```
-- INSERT INTO SalaryBudgets(total)  
-- SELECT SUM(salary)  
-- FROM Salaries;  
-- SELECT * FROM SalaryBudgets;
```

```
-- delimiter //
```

```
-- create trigger before_insert_update
```

```

-- before insert on WorkCenters

-- for each row

-- begin

--   update WorkCenterStats

--   set totalCapacity = totalCapacity + new.capacity;

-- end //

-- delimiter ;


-- DELIMITER //


-- create trigger insert_reminder

-- after insert on members

-- for each row

-- begin

--   if new.birthDate is null then

--     insert into reminders (memberId, message)

--     values (new.id, 'Update birthday info');

--   END IF;

-- END //

-- DELIMITER ;


-- delimiter //

-- create trigger insert_into_salarchieive

-- before delete on Salaries

-- for each row

-- begin

--   insert into SalaryArchives (employeeNumber, validFrom, amount, deletedAt)

```

```
-- values (old.employeeNumber, old.employeeNumber());  
-- end //  
-- delimiter ;
```

```
-- DELIMITER //
```

```
-- create trigger update_salbudget  
-- after delete on Salaries  
-- for each row  
-- begin  
--   update SalaryBudgets  
--   set total = total - old.salary;  
-- end //  
  
-- delimiter ;
```