

# Application Software Development Lab (ASDL)

Github : [ceccs18c59/cs331:Application Software Development Lab \(github.com\)](https://github.com/ceccs18c59/cs331:Application%20Software%20Development%20Lab)

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## Experiment 11

SQL TRIGGERS.

### SQL Query

```
USE cs333;
CREATE TABLE EMPLOYEE (
    CODE VARCHAR(10),
    NAME CHAR(50),
    DOB DATE NOT NULL,
    DESIGNATION CHAR(50),
    SALARY INT
);

INSERT INTO EMPLOYEE VALUES ('E01', 'Peter', '1985-09-26', 'CEO', '150000');
INSERT INTO EMPLOYEE VALUES ('E02', 'Andrew', '1986-11-10', 'CTO', '100000');
INSERT INTO EMPLOYEE VALUES ('E03', 'Chris', '1992-02-16', 'Sales Manager',
'80000');
INSERT INTO EMPLOYEE VALUES ('E04', 'Daniel', '1987-04-21', 'Clerk', '40000');
INSERT INTO EMPLOYEE VALUES ('E05', 'Ethan', '1991-07-10', 'Clerk', '40000');

DELIMITER $$
CREATE TRIGGER INSERT_PREVENT
BEFORE INSERT
ON EMPLOYEE FOR EACH ROW
BEGIN
IF (CURRENT_TIME() BETWEEN '17:00' AND '00:00' ) THEN
SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'NO CHANGES TO EMPLOYEE TABLE';
END IF;
END $$
DELIMITER ;

DELIMITER $$
CREATE TRIGGER UPDATE_PREVENT
BEFORE UPDATE
ON EMPLOYEE FOR EACH ROW
BEGIN
IF (CURRENT_TIME() BETWEEN '17:00' AND '00:00' ) THEN
```

```

SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'NO CHANGES TO EMPLOYEE TABLE';
END IF;
END $$
DELIMITER ;

DELIMITER $$
CREATE TRIGGER DELETE_PREVENT
BEFORE DELETE
ON EMPLOYEE FOR EACH ROW
BEGIN
IF (CURRENT_TIME() BETWEEN '17:00' AND '00:00' ) THEN
SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'NO CHANGES TO EMPLOYEE TABLE';
END IF;
END $$
DELIMITER ;

```

## Result

The screenshot shows the MySQL Workbench interface. The central pane displays the SQL script being executed, which includes creating a table, inserting data, and creating three triggers. The right pane shows a message about disabled automatic context help. The bottom pane shows the 'Action Output' table with the following data:

#	Time	Action	Message	Duration / Fetch
26	17:30:51	CREATE TABLE EMPLOYEE ( CODE VARCHAR(10), N...	0 row(s) affected	0.047 sec
27	17:30:51	INSERT INTO EMPLOYEE VALUES (E01, 'Peter', '1985-09-2...	1 row(s) affected	0.016 sec
28	17:30:51	INSERT INTO EMPLOYEE VALUES (E02, 'Andrew', '1986-1...	1 row(s) affected	0.000 sec
29	17:30:51	INSERT INTO EMPLOYEE VALUES (E03, 'Chris', '1992-02-1...	1 row(s) affected	0.000 sec
30	17:30:51	INSERT INTO EMPLOYEE VALUES (E04, 'Daniel', '1987-04-...	1 row(s) affected	0.015 sec
31	17:30:51	INSERT INTO EMPLOYEE VALUES (E05, 'Ethan', '1991-07-...	1 row(s) affected	0.016 sec
32	17:30:51	CREATE TRIGGER INSERT_PREVENT BEFORE INSERT O...	0 row(s) affected	0.016 sec
33	17:30:51	CREATE TRIGGER UPDATE_PREVENT BEFORE UPDATE ...	0 row(s) affected	0.016 sec
34	17:30:51	CREATE TRIGGER DELETE_PREVENT BEFORE DELETE ...	0 row(s) affected	0.016 sec