1)

```
mysql> SHOW TRIGGERS IN company
    -> \G
*************************** 1. row ***************************
             Trigger: capitalize_names_before_insert
               Event: INSERT
               Table: EMPLOYEE
           Statement: -- Left(NEW.fname, 1) get the first character of the fname
-- Ucase(Left(NEW.fname, 1)) convert the first character to upper case
-- Substring(NEW.fname, 2) get the rest of the fname
-- Concat(Ucase(Left(NEW.fname, 1)), Substring(NEW.fname, 2)) concat the two strings
BEGIN
    SET NEW.fname = CONCAT(UCASE(LEFT(NEW.fname, 1)), SUBSTRING(NEW.fname, 2)),
        NEW.lname = CONCAT(UCASE(LEFT(NEW.lname, 1)), SUBSTRING(NEW.lname, 2));
END
              Timing: BEFORE
             Created: 2025-04-10 00:31:00.86
            sql_mode: IGNORE_SPACE,ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION
             Definer: root@localhost
character_set_client: utf8mb4
collation_connection: utf8mb4_unicode_ci
  Database Collation: utf8mb4_0900_ai_ci
1 row in set (0.00 sec)

mysql>
```

```
INSERT INTO EMPLOYEE(fname, minit, lname, ssn, bdate, address, sex, salary, super_ssn, dno)↵VALUES ('bronny', NULL, 'james', '987876765', '1980-10-15', NULL, 'M', 45000, '333445555', 5)

AffectedRows : 1
```

	>	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000	888665555	4
	>	Bronny	(NULL)	James	987876765	1980-10-15	(NULL)	M	45000	333445555	5
	>	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000	987654321	4

2)

```
CREATE TRIGGER bdate_before_current_update↵BEFORE UPDATE ON DEPENDENT↵FOR EACH ROW↵BEGIN↵  IF NEW.bdate > CURDATE() THEN↵      SIGNAL SQLSTATE '50002'↵      SET MESSAGE_TEXT = 'Dependent bdate must be earlier than today';↵   END IF;↵END;↵

AffectedRows : 0
```

Dependent bdate must be earlier than today 👁

```
UPDATE DEPENDENT
SET bdate = '4031-01-01'
WHERE essn = '333445555' AND
dependent_name = 'Alice'
```

3) before

Total 9

		fname varchar(2(	minit varchar('	lname varchar(25	ssn varchar(9	bdate date	address varchar(50)	sex varchar('	salary int	super_ss varchar(9)	dno int
	>	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000	333445555	5
	>	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	80000	888665555	5
	>	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555	5
	>	Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000	333445555	5
	>	James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000	(NULL)	1
	>	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000	888665555	4
	>	Bronny	(NULL)	James	987876765	1980-10-15	(NULL)	M	45000	333445555	5
	>	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000	987654321	4
	>	Alicia	J	Zelaya	999887777	1968-01-19	3321 Castle, Spring, TX	F	25000	987654321	4

		* essn varchar(9)	* pno int	phours float(5,1)
	>	123456789	1	32.5
	>	123456789	2	7.5
	>	333445555	2	10.0
	>	333445555	3	10.0
	>	333445555	10	10.0
	>	333445555	20	10.0
	>	453453453	1	20.0
	>	453453453	2	20.0
	>	666884444	3	40.0
	>	888665555	20	(NULL)
	>	987654321	20	15.0
	>	987654321	30	20.0
	>	987987987	10	35.0
	>	987987987	30	5.0
	>	999887777	10	10.0
	>	999887777	30	30.0

after

		• fname varchar(20)	minit varchar(1)	• lname varchar(25)	• ssn varchar(9)	bdate date	address varchar(50)	sex varchar(1)	• salary int	super_ss varchar(9)	dno int
	>	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000	333445555	5
	>	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	80000	888665555	5
	>	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555	5
	>	Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000	333445555	5
	>	James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000	(NULL)	1
	>	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000	888665555	4
	>	Bronny	(NULL)	James	987876765	1980-10-15	(NULL)	M	45000	333445555	5
	>	Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000	987654321	4
	>	Alicia	J	Zelaya	999887777	1968-01-19	3321 Castle, Spring, TX	F	25000	987654321	4

4) before

	essn varchar(9)	pno int	phours float(5,1)
>	123456789	1	32.5
>	123456789	2	7.5
>	333445555	2	10.0
>	333445555	3	10.0
>	333445555	10	10.0
>	333445555	20	10.0
>	453453453	1	20.0
>	453453453	2	20.0
>	666884444	3	40.0
>	888665555	20	(NULL)
>	987654321	20	15.0
>	987654321	30	20.0
>	987987987	10	35.0
>	987987987	30	5.0
>	999887777	10	10.0
>	999887777	30	30.0

fname varchar(2C)	minit varchar(`)	lname varchar(25	ssn varchar(9	bdate date	address varchar(50)	sex varchar(`	salary int	super_ss varchar(9)	dno int
John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000	333445555	5
Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	80000	888665555	5
Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555	5
Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000	333445555	5
James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000	(NULL)	1
Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000	888665555	4
Bronny	(NULL)	James	987876765	1980-10-15	(NULL)	M	45000	333445555	5
Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000	987654321	4
Alicia	J	Zelaya	999887777	1968-01-19	3321 Castle, Spring, TX	F	25000	987654321	4

after

	essn varchar(9)	pno int	phours float(5,1)
>	123456789	1	32.5
>	123456789	2	7.5
>	333445555	2	10.0
>	333445555	3	10.0
>	333445555	10	10.0
>	333445555	20	10.0
>	453453453	1	20.0
>	453453453	2	20.0
>	666884444	3	40.0
>	888665555	20	(NULL)
>	987654321	20	15.0
>	987654321	30	20.0
>	987987987	10	35.0
>	987987987	30	5.0
>	999887777	10	10.0
>	999887777	30	30.0

fname varchar(20)	minit varchar(1)	lname varchar(25)	ssn varchar(9)	bdate date	address varchar(50)	sex varchar(1)	salary int	super_ss varchar(9)	dno int
John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000	333445555	5
Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	80000	888665555	5
Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555	5
Ramesh	K	Narayan	666884444	1962-09-15	975 Fire Oak, Humble, TX	M	38000	333445555	5
James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	55000	(NULL)	1
Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Bellaire, TX	F	43000	888665555	4
Bronny	(NULL)	James	987876765	1980-10-15	(NULL)	M	45000	333445555	5
Ahmad	V	Jabbar	987987987	1969-03-29	980 Dallas, Houston, TX	M	25000	987654321	4
Alicia	J	Zelaya	999887777	1968-01-19	3321 Castle, Spring, TX	F	25000	987654321	4