CREATE TABLE system\_logs (

-> id INT AUTO\_INCREMENT PRIMARY KEY,

-> user\_id INT NOT NULL,

-> Name VARCHAR(255) NOT NULL,

-> changedate DATETIME DEFAULT NULL,

-> action VARCHAR(50) DEFAULT NULL

-> );

CREATE TRIGGER before\_user\_update

-> BEFORE UPDATE ON user

-> FOR EACH ROW

-> INSERT INTO system\_logs

-> SET action = 'update',

-> user\_id = OLD.user\_id,

-> Name = OLD.Name,

-> changedate = NOW()

-> ;

UPDATE user

-> SET Name = 'APWB Dumbledore'

-> WHERE

-> user\_id = 5

-> ;

select \* from system\_logs;

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

| id | user\_id | Name | changedate | action |

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

| 1 | 5 | Albus Dumbledore | 2020-11-03 13:29:49 | update |

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

1 row in set (0.00 sec)

2.

ALTER TABLE system\_logs

-> ADD Message VARCHAR(255) DEFAULT NULL

-> ;

create trigger before\_add\_update

-> before update on user

-> for each row

-> begin

-> if new.Address=old.Address then

-> insert into system\_logs

-> set action='update', user\_id=old.user\_id, Name=old.Name, Message='Same Address';

-> end if;

-> end$$

UPDATE user

-> SET Address = 'Hogwards'

-> WHERE

-> user\_id = 5

-> $$

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

| id | user\_id | Name | changedate | action | Message |

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

| 1 | 5 | Albus Dumbledore | 2020-11-03 13:29:49 | update | NULL |

| 2 | 5 | APWB Dumbledore | 2020-11-03 14:04:44 | update | NULL |

| 3 | 5 | APWB Dumbledore | NULL | update | Same Address |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |

3.

CREATE TRIGGER remove\_null\_message

-> AFTER UPDATE ON user

-> FOR EACH ROW

-> BEGIN

-> if Message=NULL THEN

-> INSERT INTO system\_logs

-> SET action='update',

-> user\_id = OLD.user\_id,

-> Name = OLD.Name,

-> Message = 'Default null Message';

-> end if;

-> end$$

create trigger avoid\_null\_message

-> before insert on user

-> for each row

-> begin

-> IF Address = NULL then

-> INSERT INTO system\_logs

-> set action='insert', user\_id=OLD.user\_id, Name=OLD.Name, Message='Default NULL';

-> UPDATE user

ALTER TABLE system\_logs

-> DROP COLUMN Message$$