1. Given Student Database, in which student marks assessment is recorded. In such schema, create a trigger so that the total and average of specified marks is automatically inserted whenever a record is insert.

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

| Field | Type | Null | Key | Default | Extra |

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

| tid | int(4) | NO | PRI | NULL | auto\_increment |

| name | varchar(30) | YES | | NULL | |

| subj1 | int(2) | YES | | NULL | |

| subj2 | int(2) | YES | | NULL | |

| subj3 | int(2) | YES | | NULL | |

| total | int(3) | YES | | NULL | |

| per | int(3) | YES | | NULL | |

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

1. **Given Library Book Management database schema with Student database schema. In these database, create a trigger so that if any student borrows a book from library then the count of that specified book should be decremented.**

**+-----+-------------+--------+**

**| bid | btitle | copies |**

**+-----+-------------+--------+**

**| 1 | Java | 10 |**

**| 2 | C++ | 5 |**

**| 3 | MySql | 10 |**

**| 4 | Oracle DBMS | 5 |**

**+-----+-------------+--------+**

**Answer:**

mysql> USE libraryBookManagement;

Reading table information for completion of table and column names

You can turn off this feature to get a quicker startup with -A

Database changed

mysql> SELECT\* FROM Books;

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

| bid | sid | copies |

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

| 1 | Java | 10 |

| 2 | C++ | 5 |

| 3 | Mysql | 10 |

| 4 | Oracle DBMS | 5 |

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

4 rows in set (0.00 sec)

mysql> USE libraryBookManagement;

Reading table information for completion of table and column names

You can turn off this feature to get a quicker startup with -A

Database changed

mysql> SELECT\* FROM Books;

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

| bid | sid | copies |

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

| 1 | Java | 10 |

| 2 | C++ | 5 |

| 3 | Mysql | 10 |

| 4 | Oracle DBMS | 5 |

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

4 rows in set (0.00 sec)

1. **Create a trigger which stop insertion of any employee into the Employee table, where the age group is less then 18.**

mysql> create table employee

-> (id int(2) not null auto\_increment,

-> name varchar(20),

-> age int(2),

-> primary key(id));

Query OK, 0 rows affected, 2 warnings (0.05 sec)

mysql> desc employee;

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

| Field | Type | Null | Key | Default | Extra |

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

| id | int | NO | PRI | NULL | auto\_increment |

| name | varchar(20) | YES | | NULL | |

| age | int | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> create trigger lessAge

-> before insert on

-> employee

-> for each row

-> begin

-> if(new.age<18) then

-> SIGNAL SQLSTATE '45000'

-> SET MESSAGE\_TEXT='age less than 18 not allowed';

-> END IF;

-> END //

Query OK, 0 rows affected (0.02 sec)

mysql> INSERT INTO employee values (1,'Neerav',15);

-> end if //

ERROR 1644 (45000): age less than 18 not allowed

mysql> INSERT INTO employee values (1,'Neerav',18); end if//

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO employee values (2,'Neerav',18);

-> end if //

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO employee values (8,'Nierav',19);

-> end if //

Query OK, 1 row affected (0.00 sec)

mysql> SELECT\* FROM employee;

-> end if //

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

| id | name | age |

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

| 1 | Neerav | 18 |

| 2 | Neerav | 18 |

| 8 | Nierav | 19 |

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

3 rows in set (0.00 sec)