

## **ASSIGNMENT 1**

### **-- Creating Database 'SchoolDB'**

```
CREATE DATABASE IF NOT EXISTS SchoolDB;
```

### **-- Using Database 'SchoolDB'**

```
USE SchoolDB;
```

### **-- Creating Table 'Student'**

```
CREATE TABLE Student (  
    Roll_no INT AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(255) NOT NULL,  
    phone BIGINT(10) NOT NULL,  
    marks INT NOT NULL CHECK (marks BETWEEN 0 AND 100),  
    favourite_subjects VARCHAR(255)  
);
```

### **-- Populating the table with random data**

```
INSERT INTO Student (name, phone, marks, favourite_subjects)  
VALUES  
    ('Rohan Verma', '8764568324', 98, 'Maths'),  
    ('Aarav Kapoor', '9875389045', 85, 'Science'),  
    ('Ananya Sharma', '9876543222', 92, 'English'),  
    ('Ishita Verma', '9876543210', 72, 'Hindi'),  
    ('Rajat Singhania', '8765432109', 39, 'History'),  
    ('Nisha Khanna', '7654321098', 56, 'English'),  
    ('Siddharth Reddy', '6543210987', 85, 'Maths'),  
    ('Priya Desai', '5432109876', 96, 'Physical Education'),  
    ('Vikram Yadav', '4321098765', 62, 'Geography'),  
    ('Meera Joshi', '3210987654', 59, 'Biology'),  
    ('Rohan Malhotra', '2109876543', 74, 'English'),  
    ('Preeti Chatterjee', '1098765432', 89, 'Geography'),  
    ('Aditya Rajput', '9870123456', 44, 'Hindi'),  
    ('Kavya Kapoor', '8901234567', 52, 'Physical Education'),  
    ('Varun Mehra', '7890123456', 49, 'History'),  
    ('Jaya Nair', '6789012345', 60, 'Biology'),  
    ('Dev Khurana', '5678901234', 81, 'Hindi'),  
    ('Shruti Sharma', '4567890123', 53, 'Physical Education'),  
    ('Aniket Kapoor', '3456789012', 63, 'Science'),  
    ('Swara Banerjee', '2345678901', 58, 'Geography'),
```

```
('Arnav Singh', '1234567890', 93, 'Maths'),  
('Riya Bhatia', '8765432101', 83, 'Maths'),  
('Pranav Deshmukh', '7654321090', 99, 'Science'),  
('Aisha Kumar', '6543210980', 59, 'Science'),  
('Karthik Rana', '5432109870', 69, 'Hindi')  
;
```

**-- Triggers to restrict user from deleting the Student table**

```
DELIMITER //  
CREATE TRIGGER prevent_drop_Student  
BEFORE DELETE  
ON Student  
FOR EACH ROW  
BEGIN  
    SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Cannot Drop Student Table';  
END//  
DELIMITER ;
```

**-- Query to calculate the average marks of students**

```
SELECT AVG(marks) AS average_marks FROM Student;
```

**-- Query to calculate the unique number of subjects**

```
SELECT COUNT(DISTINCT favourite_subjects) AS unique_subjects FROM Student;
```

**Output of Below Mentioned Queries On Next Page :-**

**1. SHOW COLUMNS FROM Student;**

**2. SELECT \* FROM Student;**


**3. SHOW triggers;**



**4. Average marks of students.**

**5. Unique number of subjects.**

70 • SHOW COLUMNS FROM Student;

71

100%  1:71

Result Grid  Filter Rows:  Export: 

	Field	Type	Null	Key	Default	Extra
▶	Roll_no	int	NO	PRI	NULL	auto_increment
▢	name	varchar(255)	NO		NULL	
▢	phone	bigint	NO		NULL	
▢	marks	int	NO		NULL	
▢	favourite_subjects	varchar(255)	YES		NULL	

Local instance 3306

Administration Schemas assignment1\*

SCHEMAS

Filter objects

SchoolDB

Tables

Student

Columns

Roll\_no

name

phone

marks

favourite\_s...

Indexes

Foreign Keys

Triggers

Object Info Session

No object selected

66 -- Query to calculate the unique number of subjects

67

68 • SELECT COUNT(DISTINCT favourite\_subjects) AS unique\_subjects FROM Student;

69

70 • SELECT \* FROM Student;

71

100% 1:71

Result Grid

Filter Rows: Search

Edit:

Export/Import:

Roll_no	name	phone	marks	favourite_subjects
1	Rohan Verma	8764568324	98	Maths
2	Aarav Kapoor	9875389045	85	Science
3	Ananya Sharma	9876543222	92	English
4	Ishita Verma	9876543210	72	Hindi
5	Rajat Singhania	8765432109	39	History
6	Nisha Khanna	7654321098	56	English
7	Siddharth Reddy	6543210987	85	Maths
8	Priya Desai	5432109876	96	Physical Education
9	Vikram Yadav	4321098765	62	Geography
10	Meera Joshi	3210987654	59	Biology
11	Rohan Malhotra	2109876543	74	English
12	Preeti Chatterjee	1098765432	89	Geography
13	Aditya Rajput	9870123456	44	Hindi
14	Kanya Kapoor	8801234567	52	Physical Education
15	Varun Mehra	7890123456	49	History
16	Jaya Nair	6789012345	60	Biology
17	Dev Khurana	5678901234	81	Hindi
18	Shruti Sharma	4567890123	53	Physical Education
19	Aniket Kapoor	3456789012	63	Science
20	Swara Banerjee	2345678901	58	Geography
21	Aman Singh	1234567890	93	Maths
22	Riya Bhatia	8765432101	63	Maths
23	Pranav Deshm...	7654321090	99	Science
24	Aisha Kumar	6543210980	59	Science
25	Karthik Rana	5432109870	69	Hindi

Student 5 Apply

70 • SHOW triggers;

71

100%1:71

Result Grid

Filter Rows: Search

Export:

Trigger	Event	Table	Statement	Timing	Created	sql_mode	Definer	Character Set
▶ prevent_drop_Student	DELETE	Student	BEGIN SIGNAL SQLSTATE '45000' SET ME...	BEFORE	2024-02-01 19:27:36.70	ONLY_FULL_GROUP_BY,STRICT_TRANS_TA...	root@localhost	utf8

62 • -- Query to calculate the average marks of students

63

64 **SELECT** **AVG**(marks) **AS** average\_marks **FROM** Student;

65

66

100% 1:65

Result Grid



Filter Rows:



Search

Export:



average_marks
---------------

▶ 70.8000
-----------

66 -- Query to calculate the unique number of subjects

67

68 • **SELECT** **COUNT**(**DISTINCT** favourite\_subjects) **AS** unique\_subjects **FROM** Student;

69

100% 1:69

Result Grid



Filter Rows:



Search

Export:



unique_subjects
-----------------

▶ 8
-----