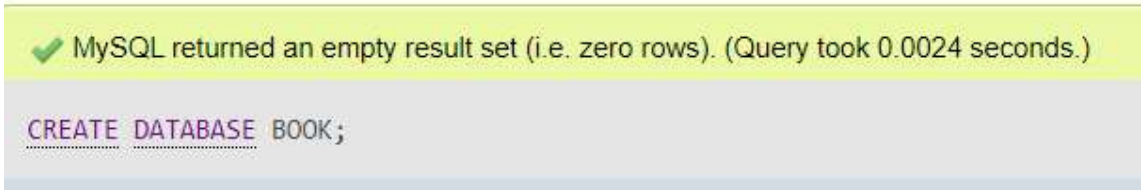
BDTM: Big Data Tools for Managers

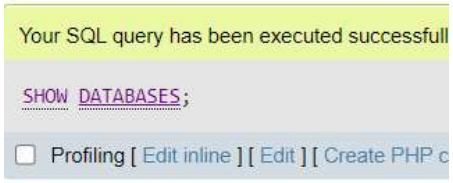
1st Internal Answer Sheet [Set-B]

Q1. Demonstrate Basic database operation with MySQL [10]

A. Create a database BOOK in MySQL



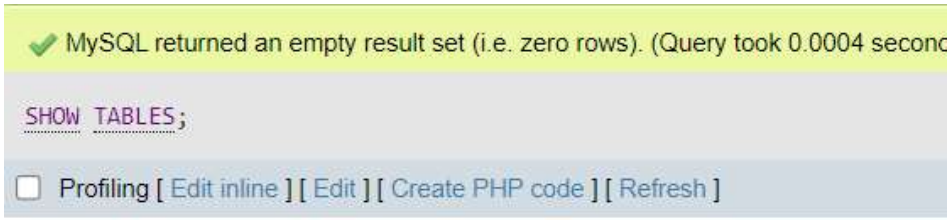
B. List all the databases available in MySQL



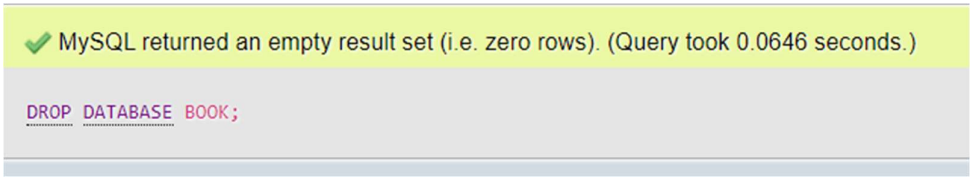
+ Options

Database
bdtm_exam
book
information_schema
mobile
mysql
performance_schema

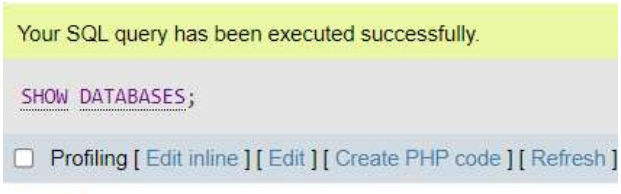
C. Select the BOOK database, and list all the tables available in BOOK database



D. Remove BOOK database from MySQL



E. List all the databases available in MySQL



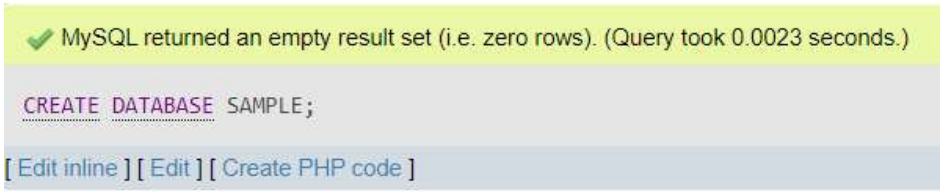
+ Options

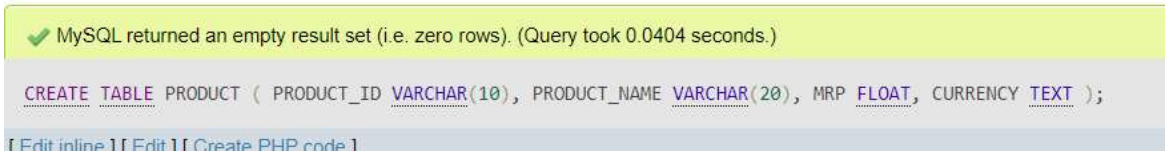
Database
information_schema
mysql
performance_schema
phpmyadmin
test

Q2. Demonstrate Basic RDBMS table operations with MySQL [10]

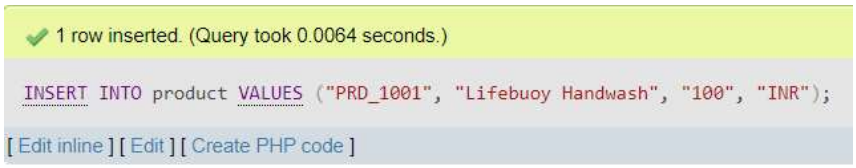
PRODUCT_ID	PRODUCT_NAME	MRP	CURRENCY
PRD_1001	Lifebuoy Handwash	100	INR
PRD_1002	Per Cara Pro Shampoo	1.5	USD
PRD_1003	Mamaearth Hair Oil	250	INR
PRD_1004	Liquid Handwash	185	INR
PRD_1005	Mamaearth Shampoo	300	INR

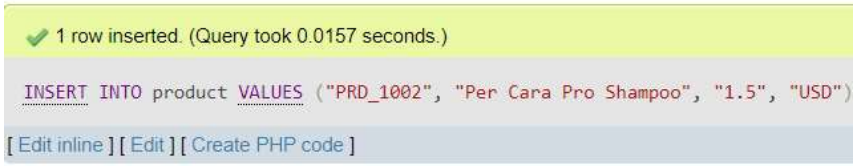
A. Create database SAMPLE, and create above given PRODUCT table in SAMPLE database

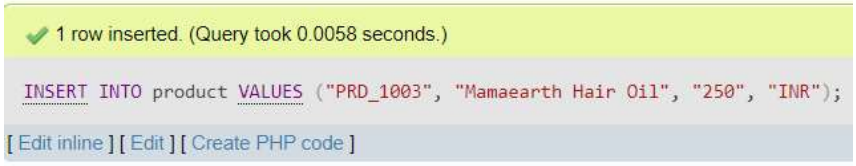


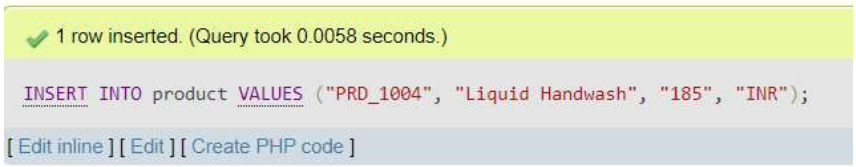


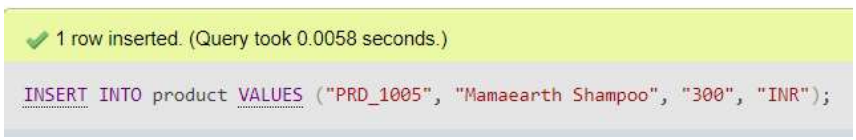
B. Insert above given sample records in PRODUCT table











C. Display PRODUCT table structure

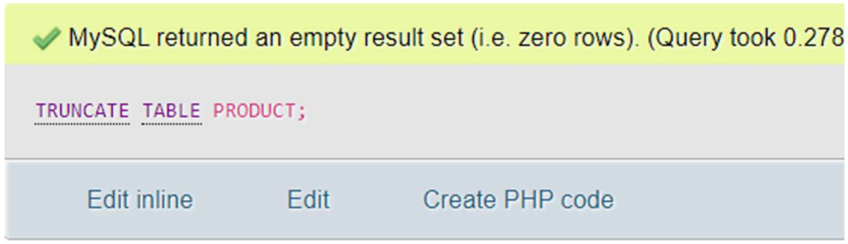
```
DESC PRODUCT;
```

[Edit inline] [Edit] [Create PHP code]

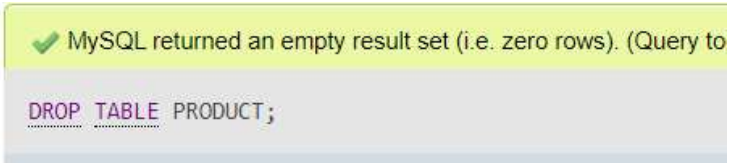
+ Options

Field	Type	Null	Key	Default	Extra
PRODUCT_ID	varchar(10)	YES		*NULL*	
PRODUCT_NAME	varchar(20)	YES		*NULL*	
MRP	float	YES		*NULL*	
CURRENCY	text	YES		*NULL*	

D. Truncate PRODUCT table



E. Delete PRODUCT table from SAMPLE database



Q3. Demonstrate NOT NULL, UNIQUE and DEFAULT Constraint in MySQL Table [10]

USN	NAME	DOB	ADDRESS	CITY	STATE	PINCODE	CGPA
1SI23MBA01	AAA	1995-01-01	B H ROAD	TUMKUR	KARNATAKA	572103	8.5
1SI23MBA02	BBB	1996-01-01	BANGALORE	BANGALORE	KARNATAKA	560001	9.5
1SI23MBA02	BBB	1996-01-01	BANGALORE	BANGALORE	KARNATAKA	572103	9.5
1SI23MBA04		1999-01-01	B H ROAD	TUMKUR	KARNATAKA	572103	8.5
1SI23MBA05	FFF	1999-01-01	B H ROAD				

A. Create above table “students_exam“ with following constraint

- USN with UNIQUE constraint
- NAME with NOT NULL constraint
- CITY, STATE, PINCODE and CGPA having DEFAULT value TUMKUR, KARNATAKA, 572103 and 0

B. Insert above records into the students_exam table
(Note : The error message is expected while inserting records into the table and place same error message as part of answers for 3rd, 4th & 5th records)

```
1 INSERT INTO students_exam VALUES ('1SI23MBA04', NULL, '1999-01-01', 'B H ROAD', 'TUMKUR', 'KARNATAKA', '560001', 9.5);
2
```

Clear | Format | Get auto-saved query

Bind parameters

Bookmark this SQL query:

Delimiter ; | Show this query here again | Retain query box | Rollback when finished | Enable foreign key checks

Error

SQL query: Copy

```
INSERT INTO students_exam VALUES ('1SI23MBA04', NULL, '1999-01-01', 'B H ROAD', 'TUMKUR', 'KARNATAKA', '560001', 9.5);
```

MySQL said:

```
#1048 - Column 'NAME' cannot be null
```

1 row inserted. (Query took 0.0139 seconds.)

```
INSERT INTO students_exam VALUES ('1SI23MBA05', 'FFF', '1999-01-01', 'B H ROAD', NULL, NULL, NULL, NULL);
```

[Edit inline] [Edit] [Create PHP code]

OR

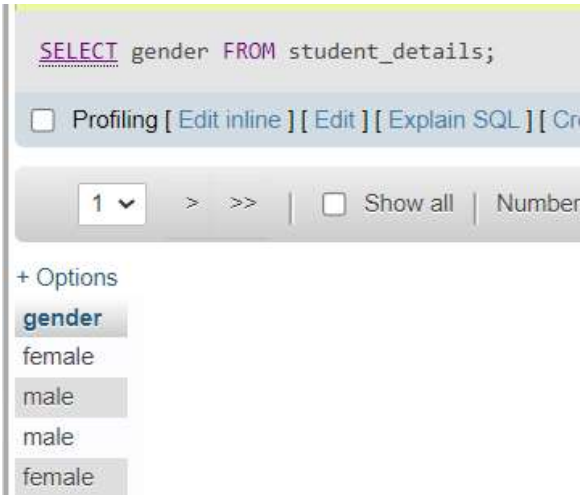
1 row inserted. (Query took 0.0174 seconds.)

```
INSERT INTO students_exam (USN, NAME, DOB, ADDRESS) VALUES ('1SI23MBA05', 'FFF', '1999-01-01', 'B H ROAD');
```

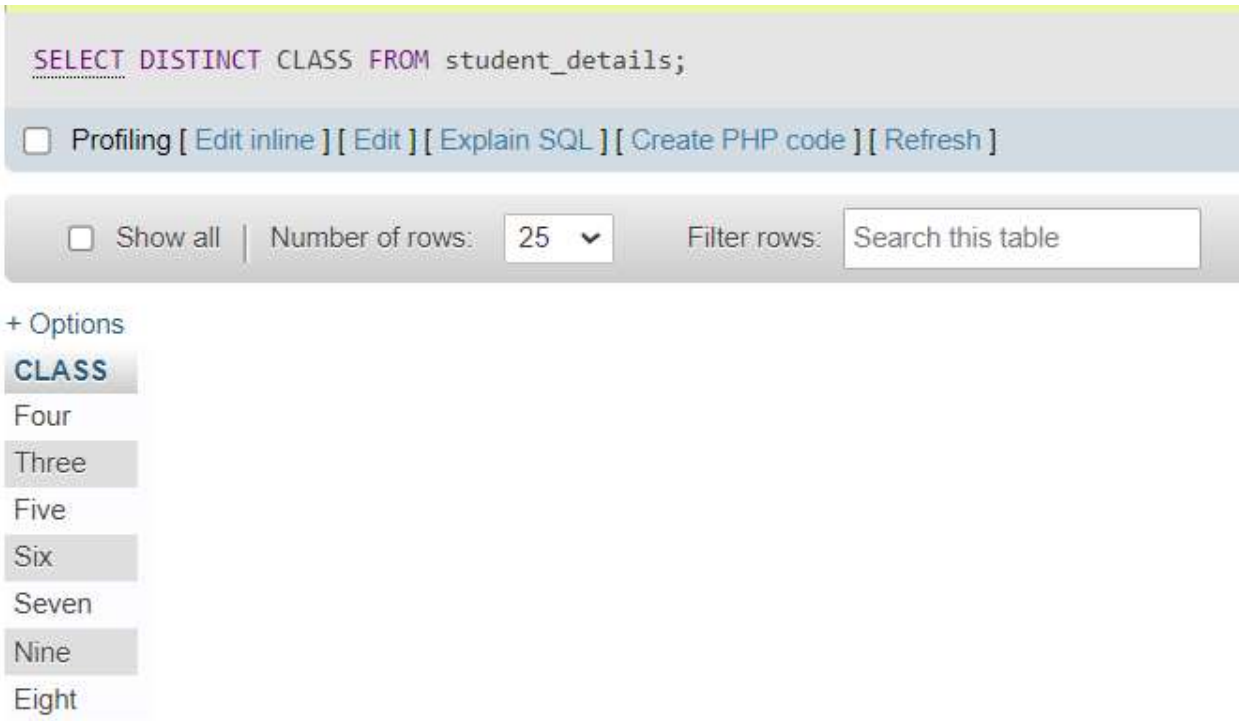
Q4. Working with SELECT clause in MySQL Table [10]

Copy mysql code from below link and paste into the SQL window to create and insert sample records. After executing given code in selected database new table will be created name “student_details”
https://raw.githubusercontent.com/sitmbadept/sitmbadept.github.io/main/BDTM/SQL/student_details.sql

A. Display single column gender from student_details table



B. Display unique values for class name from student_details



C. Display unique values name, gender details from student_details table

```
SELECT DISTINCT name, gender FROM `student_details`;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

1 > >> | Show all | Number of rows: 25 Filter

+ Options

name	gender
John Deo	female
Max Ruin	male
Arnold	male
Krish Star	female
John Mike	female
Alex John	male
My John Rob	male
Asruid	male
Tes Qry	male
Big John	female

D. Display distinct records from student_details

```
SELECT DISTINCT * FROM student_details;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refr

1 > >> | Show all | Number of rows: 25

+ Options

id	name	class	mark	gender
1	John Deo	Four	75	female
2	Max Ruin	Three	85	male
3	Arnold	Three	55	male
4	Krish Star	Four	60	female
5	John Mike	Four	60	female
6	Alex John	Four	55	male
7	My John Rob	Five	78	male
8	Asruid	Five	85	male
9	Tes Qry	Six	78	male
10	Big John	Four	55	female

E. Display all the records from student_details, also sort data in ascending order by name and descending order by gender (everything in one query)

```
SELECT * FROM student_details ORDER by name asc, gender desc;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

1 > >> | Show all | Number of rows: 25 Filter

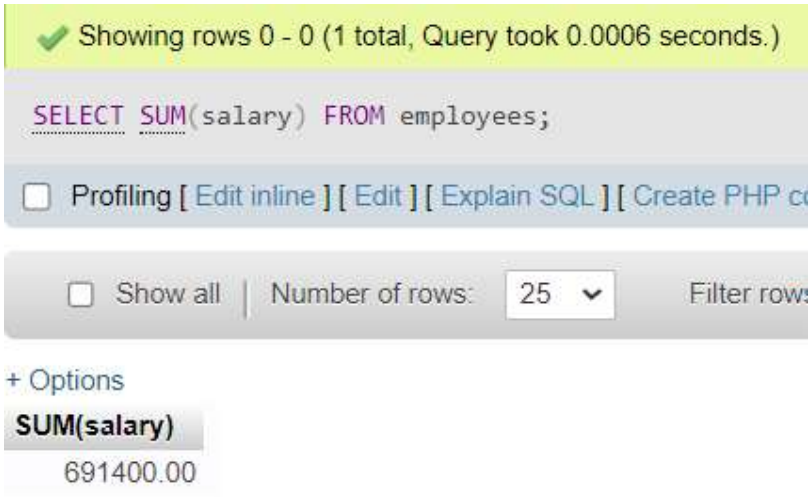
+ Options

id	name ▲ 1	class	mark	gender ▼ 2
6	Alex John	Four	55	male
3	Arnold	Three	55	male
8	Asruid	Five	85	male
21	Babby John	Four	69	female
10	Big John	Four	55	female

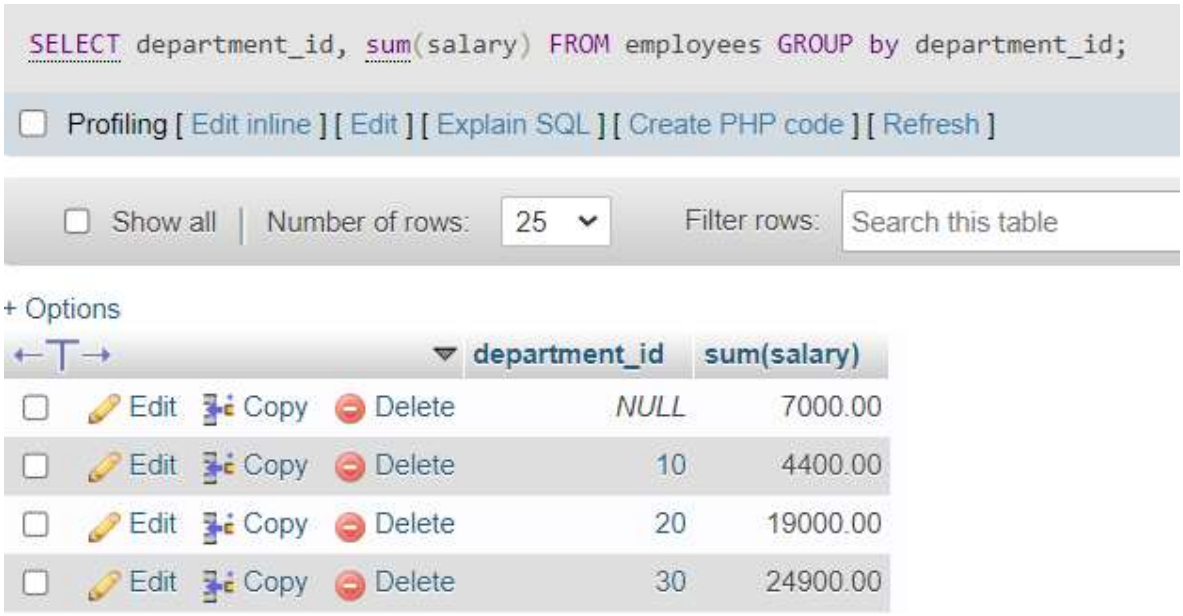
Q5. Demonstrate advance SELECT clause in MySQL [10]

Copy mysql code from given link and paste into the SQL windows to create and insert sample database & tables in MySQL. After executing given code, new database will be created name “bdtm_exam” in MySQL.
https://raw.githubusercontent.com/sitmbadept/sitmbadept.github.io/main/BDTM/SQL/bdtm-exam.sql

A. Write a query to get the total salaries payable to employees



B. Write a query to get the total salaries payable to employees by their department_id



C. Write a query to get the highest, lowest, sum, and average salary of all employees.

D. Write a query to get the department_id and total salary of the employees where total salary is greater than or equal to 5000.

```
SELECT department_id, sum(salary) FROM employees GROUP BY department_id HAVING sum(salary) >= 5000;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

	department_id	sum(salary)
Edit Copy Delete	NULL	7000.00
Edit Copy Delete	20	19000.00
Edit Copy Delete	30	24900.00
Edit Copy Delete	40	6500.00
Edit Copy Delete	50	156400.00
Edit Copy Delete	60	28800.00
Edit Copy Delete	70	10000.00
Edit Copy Delete	80	304500.00
Edit Copy Delete	90	58000.00
Edit Copy Delete	100	51600.00
Edit Copy Delete	110	20300.00

E. Write a query to get the total salary, maximum, minimum, average salary of employees (job ID wise), for department ID 50 only.

Showing rows 0 - 2 (3 total, Query took 0.0013 seconds.)

```
SELECT job_id, sum(salary), MAX(salary), MIN(salary), AVG(salary) FROM employees WHERE department_id =50 GROUP BY job_id;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table

+ Options

	job_id	sum(salary)	MAX(salary)	MIN(salary)	AVG(salary)
Edit Copy Delete	SH_CLERK	64300.00	4200.00	2500.00	3215.000000
Edit Copy Delete	ST_CLERK	55700.00	3600.00	2100.00	2785.000000
Edit Copy Delete	ST_MAN	36400.00	8200.00	5800.00	7280.000000