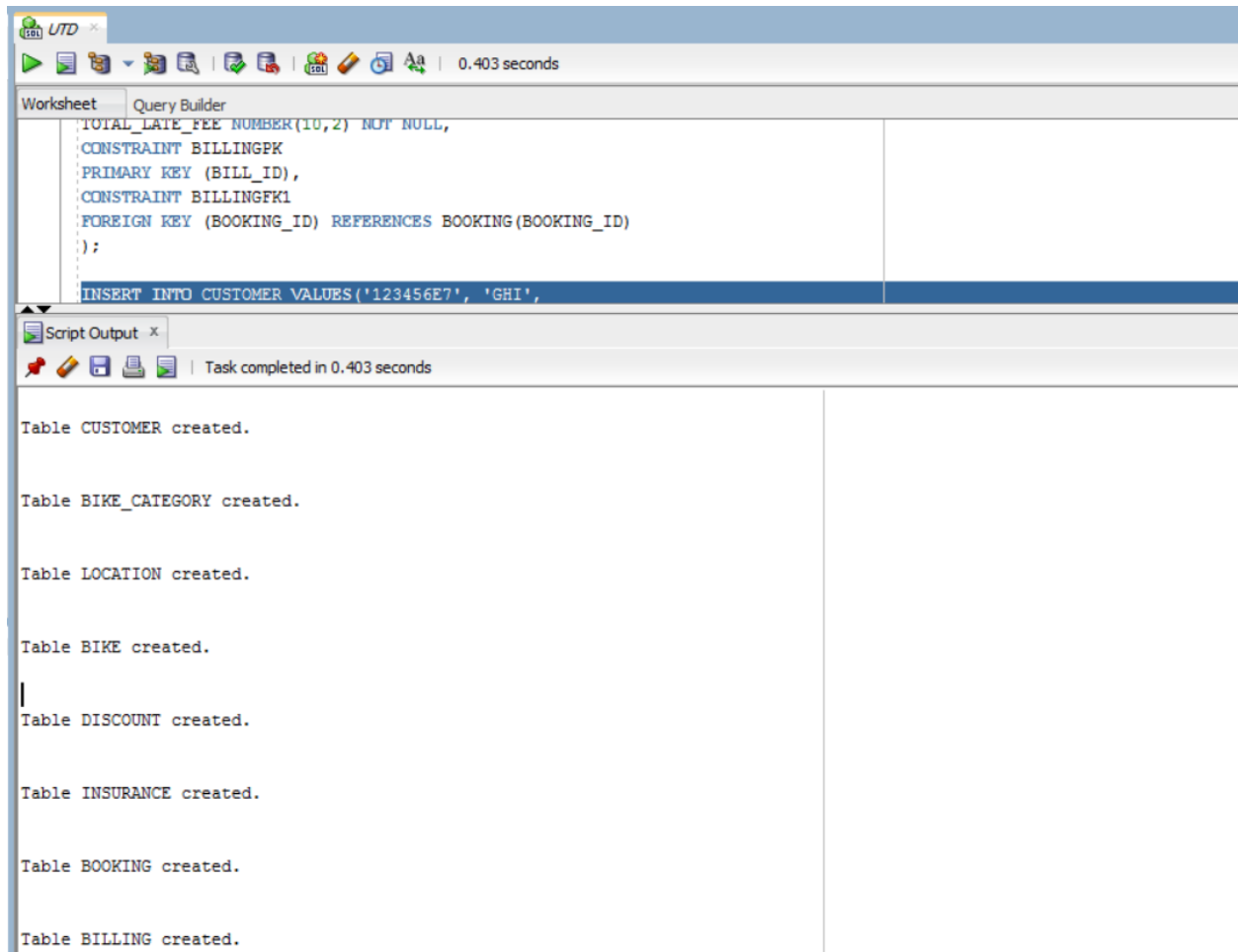


SCREENSHOTS

CREATE

Creating all the tables.



INSERT

Inserting rows into CUSTOMER Table

```
INSERT INTO CUSTOMER VALUES('123446E7', 'GHI',
'GHI','GHI','9098123429', 'ghighi@gmail.com','122 DALLAS DOWNTOWN',
'DALLAS','TEXAS',50932,'N',NULL);
INSERT INTO CUSTOMER VALUES('I0971237', 'DEF',
'DEF','DEF','4245985740', 'defdef@gmail.com','212 MIDWAY STREET',
'RALEIGH','NORTH CAROLINA',42571,'M','M1004');
INSERT INTO CUSTOMER VALUES('F0011266', 'ABC',
'ABC','ABC','7892340918', 'abcabc@gmail.com','300 COLLEGE STATION',
'COLLEGE STATION','TEXAS',56784,'N',NULL);
```

Script Output x Query Result x
Task completed in 0.221 seconds

1 row inserted.
1 row inserted.
1 row inserted.

Inserting rows into BIKE table

```
INSERT INTO BIKE VALUES('KRX1234', 'ROADRUNNER', 'KAWASAKI',
2014,100,'RACING','L101','A');
INSERT INTO BIKE VALUES('HCD4567', 'CRUISER', 'HONDA',
2015,150,'NORMAL','L102','N');
INSERT INTO BIKE VALUES('HHD3245', 'HYBRID', 'HONDA',
2014,123,'HYBRID','L103','A');
INSERT INTO BIKE VALUES('HLD3231', 'LANDCRUISER', 'HONDA',
2016,130,'OFFROADING', 'L102', 'A');
INSERT INTO BIKE VALUES('YTD2451', 'EXTRAVAGANZA', 'YAMAHA',
2015,70,'EXTREME','L103','A');
INSERT INTO BIKE VALUES('HRD3135', 'RACER', 'HERO',
2016,110,'RACING', 'L102', 'A');
INSERT INTO BIKE VALUES('HTC1355', 'THUNDERCAT', 'HARLEY-DAVIDSON',
2016,114,'HYBRID', 'L101', 'A');
INSERT INTO BIKE VALUES('HLO2143', 'LIBERIO', 'HERO',
2015,123,'NORMAL', 'L104', 'A');
```

Script Output x Query Result x
Task completed in 0.156 seconds

1 row inserted.
1 row inserted.

QUERYING

Querying the BIKE table to view its contents

The screenshot shows a database query tool interface. The top section is a 'Query Builder' window with a text area containing several SQL insert statements. The statements are as follows:

```
INSERT INTO DISCOUNT VALUES ('C111', 'WEEKENDER SPECIAL',  
to_date('2017-10-14', 'YYYY-MM-DD'), 10);  
  
INSERT INTO INSURANCE VALUES ('I111', 'COLLISION/ MINOR ACCIDENT WAIVER', 'Covers theft and damage to the rental bike', 15);  
INSERT INTO INSURANCE VALUES ('I112', 'SUPPLEMENTAL LIABILITY PROTECTION', 'Covers damage to others', 12);  
  
INSERT INTO BOOKING VALUES ('B1113', TO_TIMESTAMP('2017-04-10 13:00:00',  
'YYYY-MM-DD HH24:MI:SS'), TO_TIMESTAMP('2017-04-15 13:00:00', 'YYYY-MM-DD HH24:MI:SS'),  
450, 'R', 'L101', 'L101', 'KRX1234', '123456E7', 'I111',  
TO_TIMESTAMP('2017-04-16 13:00:00', 'YYYY-MM-DD HH24:MI:SS'), 'A111');  
  
INSERT INTO BOOKING VALUES ('B1114', TO_TIMESTAMP('2017-04-23 13:00:00',  
'YYYY-MM-DD HH24:MI:SS'), TO_TIMESTAMP('2017-04-25 20:30:00', 'YYYY-MM-DD HH24:MI:SS'),  
48, 'R', 'L102', 'L102', 'HCD4567', 'T0981237', 'I112',  
TO_TIMESTAMP('2017-04-25 20:30:00', 'YYYY-MM-DD HH24:MI:SS'), 'B111');
```

Below the query builder is a 'Script Output' tab, which is currently displaying the 'Query Result'. The result is a table with 8 columns: REGISTRATION_NUMBER, MODEL_NAME, MAKE, MODEL_YEAR, MILEAGE, BIKE_CATEGORY_NAME, LOC_ID, and AVAILABILITY_FLAG. The table contains 3 rows of data:

REGISTRATION_NUMBER	MODEL_NAME	MAKE	MODEL_YEAR	MILEAGE	BIKE_CATEGORY_NAME	LOC_ID	AVAILABILITY_FLAG
1 KRX1234	ROADRUNNER	KAWASAKI	2014	10000	RACING	L101	A
2 HCD4567	CRUISER	HONDA	2015	15000	NORMAL	L102	N
3 HHD3245	HYBRID	HONDA	2014	12356	HYBRID	L103	A

CRUD operations using MAMP

CREATE

Creating tables on the MAMP server using SQL option:

The screenshot shows the phpMyAdmin interface with the SQL tab selected. The database is 'Bike_rental'. The SQL query entered is:

```
1 CREATE TABLE CUSTOMER
2 (DL NUMBER CHAR(8) NOT NULL,
3 FNAME VARCHAR(25) NOT NULL,
4 MNAME VARCHAR(15),
5 LNAME VARCHAR(25) NOT NULL,
6 PHONE NUMBER(10) NOT NULL,
7 EMAIL_ID VARCHAR(30) NOT NULL,
8 STREET VARCHAR(30) NOT NULL,
9 CITY VARCHAR(30) NOT NULL,
10 STATE_NAME VARCHAR(20) NOT NULL,
11 ZIPCODE NUMBER(5) NOT NULL,
12 MEMBERSHIP_TYPE CHAR(1) DEFAULT 'N' NOT NULL,
13 MEMBERSHIP_ID CHAR(5),
14 CONSTRAINT CUSTOMERPK
15 PRIMARY KEY(DL NUMBER));
```

Buttons for 'Clear', 'Format', and 'Get auto-saved query' are visible. Below the query box, there are checkboxes for 'Show this query here again', 'Retain query box', and 'Rollback when finished'.

All tables have been created on the server as can be seen below.

The screenshot shows the phpMyAdmin Structure tab for the 'bike_rental' database. It lists 8 tables with their respective actions and specifications.

Table	Action	Rows	Type	Collation	Size	Overhead
bike	✱ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	48 K1B	-
bike_category	✱ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 K1B	-
billing	✱ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	32 K1B	-
booking	✱ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	112 K1B	-
customer	✱ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 K1B	-
discount	✱ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	32 K1B	-
insurance	✱ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	32 K1B	-
location	✱ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 K1B	-
8 tables	Sum	0	InnoDB	latin1_swedish_ci	304 K1B	0 B

At the bottom, there are checkboxes for 'Check All' and a 'With selected:' dropdown menu.

INSERT

Inserting one row into the BIKE_CATEGORY table

The screenshot shows the phpMyAdmin interface with the 'bike_rental' database selected. The 'SQL' tab is active, and a query is entered in the text area: `INSERT INTO BIKE_CATEGORY VALUES ('OFFROADING', 55, 30);`. The interface includes a sidebar with a tree view of the database structure, a top navigation bar with tabs like 'Browse', 'Structure', 'SQL', 'Search', 'Insert', 'Export', 'Import', 'Privileges', 'Operations', and 'Triggers', and a bottom section with buttons for 'SELECT', 'INSERT', 'UPDATE', 'DELETE', 'Clear', 'Format', and 'Get auto-saved query'.

QUERYING

Querying the BIKE_CATEGORY table

The screenshot shows the phpMyAdmin interface with the 'bike_rental' database selected. The 'SQL' tab is active, and a query is entered in the text area: `select * from bike_category`. The results are displayed in a table with the following columns: CATEGORY_NAME, COST_PER_DAY, and LATE_FEE_PER_HOUR. The table contains one row with the value 'OFFROADING' in the CATEGORY_NAME column, 55.00 in the COST_PER_DAY column, and 30.00 in the LATE_FEE_PER_HOUR column. The interface includes a sidebar with a tree view of the database structure, a top navigation bar with tabs like 'Browse', 'Structure', 'SQL', 'Search', 'Insert', 'Export', 'Import', 'Privileges', 'Operations', and 'Triggers', and a bottom section with buttons for 'Print view', 'Print view (with full texts)', 'Export', 'Display chart', and 'Create view'.

CATEGORY_NAME	COST_PER_DAY	LATE_FEE_PER_HOUR
OFFROADING	55.00	30.00

PHP INSERT

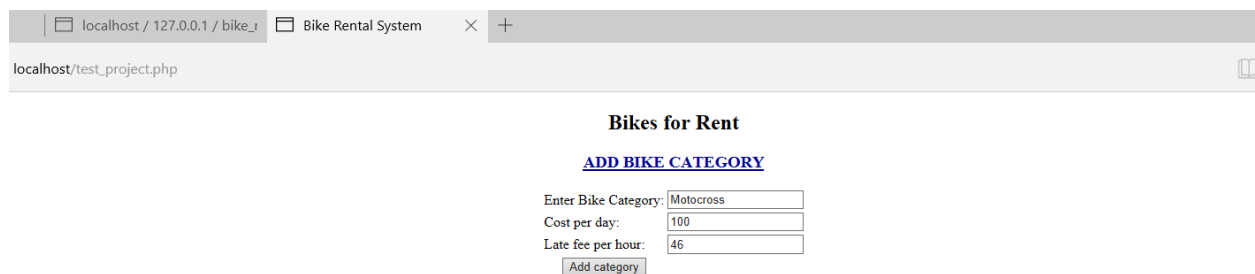
Using PHP to connect to BIKE_RENTAL database on localhost; the following **Insert** was done.

Bike_category: Motocross

Cost_per_day: 100

Late_fee_per_hour: 46

When we click on Add category, the above category with the corresponding values will be added to the BIKE_CATEGORY table on BIKE_RENTAL database.



The screenshot shows a web browser window with the address bar displaying 'localhost / 127.0.0.1 / bike_r'. The page title is 'Bike Rental System'. The URL bar shows 'localhost/test_project.php'. The main content area has the heading 'Bikes for Rent' and a link 'ADD BIKE CATEGORY'. Below the link is a form with three input fields: 'Enter Bike Category:' with the value 'Motocross', 'Cost per day:' with the value '100', and 'Late fee per hour:' with the value '46'. There is an 'Add category' button at the bottom of the form.

Bikes for Rent	
ADD BIKE CATEGORY	
Enter Bike Category:	<input type="text" value="Motocross"/>
Cost per day:	<input type="text" value="100"/>
Late fee per hour:	<input type="text" value="46"/>
<input type="button" value="Add category"/>	

Snapshot of the BIKE_CATEGORY table **before** the above INSERT was done

The screenshot shows the phpMyAdmin interface for the 'bike_rental' database. The 'Table: bike_category' is selected. The query box shows 'SELECT * FROM `bike_category`'. The results show 2 rows: 'EXTREME' with 'COST_PER_DAY' 70.00 and 'LATE_FEE_PER_HOUR' 40.00, and 'Thrill' with 'COST_PER_DAY' 70.00 and 'LATE_FEE_PER_HOUR' 30.00.

	CATEGORY_NAME	COST_PER_DAY	LATE_FEE_PER_HOUR
<input type="checkbox"/>	EXTREME	70.00	40.00
<input type="checkbox"/>	Thrill	70.00	30.00

Two entries exist in the table – Extreme and Thrill.

Snapshot of the BIKE_CATEGORY table **after** the above INSERT was done

The screenshot shows the phpMyAdmin interface for the 'bike_rental' database. The 'Table: bike_category' is selected. The query box shows 'SELECT * FROM `bike_category`'. The results show 3 rows: 'EXTREME' with 'COST_PER_DAY' 70.00 and 'LATE_FEE_PER_HOUR' 40.00, 'Motocross' with 'COST_PER_DAY' 100.00 and 'LATE_FEE_PER_HOUR' 46.00, and 'Thrill' with 'COST_PER_DAY' 70.00 and 'LATE_FEE_PER_HOUR' 30.00.

	CATEGORY_NAME	COST_PER_DAY	LATE_FEE_PER_HOUR
<input type="checkbox"/>	EXTREME	70.00	40.00
<input type="checkbox"/>	Motocross	100.00	46.00
<input type="checkbox"/>	Thrill	70.00	30.00

Three entries now exist in the table – Extreme, Thrill and Motocross.

PHP DELETE

Using PHP to connect to BIKE_RENTAL database on localhost; the following **Delete** was done.

Category that we wish to delete: Thrill

When we click on Delete category, the above category will be deleted from the database.

localhost / 127.0.0.1 / bike_r Bike Rental System

localhost/test_project.php

Bikes for Rent

[ADD BIKE CATEGORY](#)

Enter Bike Category:

Cost per day:

Late fee per hour:

[DELETE BIKE CATEGORY](#)

Enter Bike Category:

Snapshot of the BIKE_CATEGORY table **before** the above DELETE was done

The screenshot shows the phpMyAdmin interface for the 'bike_rental' database, specifically the 'bike_category' table. The status bar at the top indicates 'Showing rows 0 - 2 (3 total, Query took 0.0002 seconds.)'. The SQL query box contains 'SELECT * FROM `bike_category`'. Below the query box, there are controls for 'Show all', 'Number of rows: 25', and a 'Filter rows' search box. The 'Sort by key' dropdown is set to 'None'. The table data is displayed with columns: CATEGORY_NAME, COST_PER_DAY, and LATE_FEE_PER_HOUR. The rows are: EXTREME (70.00, 40.00), Motocross (100.00, 46.00), and Thrill (70.00, 30.00). Each row has checkboxes for selection and icons for Edit, Copy, and Delete. At the bottom, there are 'Query results operations' including Print view, Print view (with full texts), Export, Display chart, and Create view.

CATEGORY_NAME	COST_PER_DAY	LATE_FEE_PER_HOUR
EXTREME	70.00	40.00
Motocross	100.00	46.00
Thrill	70.00	30.00

Three categories exist in the database – Extreme, Thrill and Motocross.

Snapshot of the BIKE_CATEGORY table **after** the above DELETE was done

The screenshot shows the phpMyAdmin interface for the 'bike_rental' database, specifically the 'bike_category' table. The status bar at the top indicates 'Showing rows 0 - 1 (2 total, Query took 0.0003 seconds.)'. The SQL query box contains 'SELECT * FROM `bike_category`'. Below the query box, there are controls for 'Show all', 'Number of rows: 25', and a 'Filter rows' search box. The 'Sort by key' dropdown is set to 'None'. The table data is displayed with columns: CATEGORY_NAME, COST_PER_DAY, and LATE_FEE_PER_HOUR. The rows are: EXTREME (70.00, 40.00) and Motocross (100.00, 46.00). The 'Thrill' category has been removed. Each row has checkboxes for selection and icons for Edit, Copy, and Delete. At the bottom, there are 'Query results operations' including Print view, Print view (with full texts), Export, Display chart, and Create view.

CATEGORY_NAME	COST_PER_DAY	LATE_FEE_PER_HOUR
EXTREME	70.00	40.00
Motocross	100.00	46.00

Only two entries Extreme and Motocross exist now. Thrill has been deleted.

PHP UPDATE

We are renaming an existing bike category.

Old Bike category: Extreme

New Bike category: Super extreme

Bikes for Rent

[ADD BIKE CATEGORY](#)

Bike Category:

Cost per day:

Late fee per hour:

[DELETE BIKE CATEGORY](#)

Bike Category:

[RENAME BIKE CATEGORY](#)

Old Bike Category:

New Bike Category:

Snapshot of the BIKE_CATEGORY table **before** the above UPDATE was done

The screenshot shows the phpMyAdmin interface for the 'bike_rental' database. The 'bike_category' table is selected, and a query is executed: `SELECT * FROM 'bike_category' WHERE 1`. The results show two rows:

CATEGORY_NAME	COST_PER_DAY	LATE_FEE_PER_HOUR
Extreme	70.00	40.00
Motocross	100.00	46.00

Two entries exist – Extreme and Motocross.

Snapshot of the BIKE_CATEGORY table **after** the above UPDATE was done

The screenshot shows the phpMyAdmin interface for the 'bike_rental' database. The 'bike_category' table is selected, and a query is executed: `SELECT * FROM 'bike_category' WHERE 1`. The results show two rows:

CATEGORY_NAME	COST_PER_DAY	LATE_FEE_PER_HOUR
Motocross	100.00	46.00
Super extreme	70.00	40.00

Entry Extreme has been renamed to Super extreme.

PHP READ

We are trying to obtain the cost per day and the late fee per hour of the Motocross category.

Bikes for Rent

[ADD BIKE CATEGORY](#)

Bike Category:
Cost per day:
Late fee per hour:

[DELETE BIKE CATEGORY](#)

Bike Category:

[RENAME BIKE CATEGORY](#)

Old Bike Category:
New Bike Category:

[QUERY BIKE CATEGORY](#)

Bike Category:

When we click query category, the pop up that follows tells us the cost per day and the late fee per hour in dollars for the chosen category.

Bikes for Rent

[ADD BIKE CATEGORY](#)

Bike Category:
Cost per day:
Late fee per hour:

[DELETE BIKE CATEGORY](#)

Bike Category:

[RENAME BIKE CATEGORY](#)

Old Bike Category:
New Bike Category:

[QUERY BIKE CATEGORY](#)

Bike Category:

This site says...

For category Motocross, the cost per day is 100.00 dollars and the late fee per hour is 46.00 dollars.

OK

FINAL SCREENSHOT AFTER MODIFYING STYLE AND ADDING COLOUR

localhost / 127.0.0.1 / bike_r Bike Rental System × +

localhost/test_project.php

BIKES FOR RENT

ADD BIKE CATEGORY

Bike Category:

Cost per day:

Late fee per hour:

DELETE BIKE CATEGORY

Bike Category:

RENAME BIKE CATEGORY

Old Bike Category:

New Bike Category:

QUERY BIKE CATEGORY

Bike Category: