

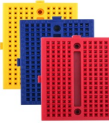
Send & Read Data within MySQL & Node-RED



XAMPP

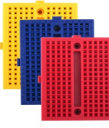
Safyzan Salim

Sept2023



Task:

- ✓ To send slider's value, Node-RED's system time and random value into MySQL.
- ✓ To read slider's value & random value from MySQL & display at Node-RED.



A. MySQL:

✓ Database Name: **2023_nodered_mysqli_1**

✓ Table Name: **example1**

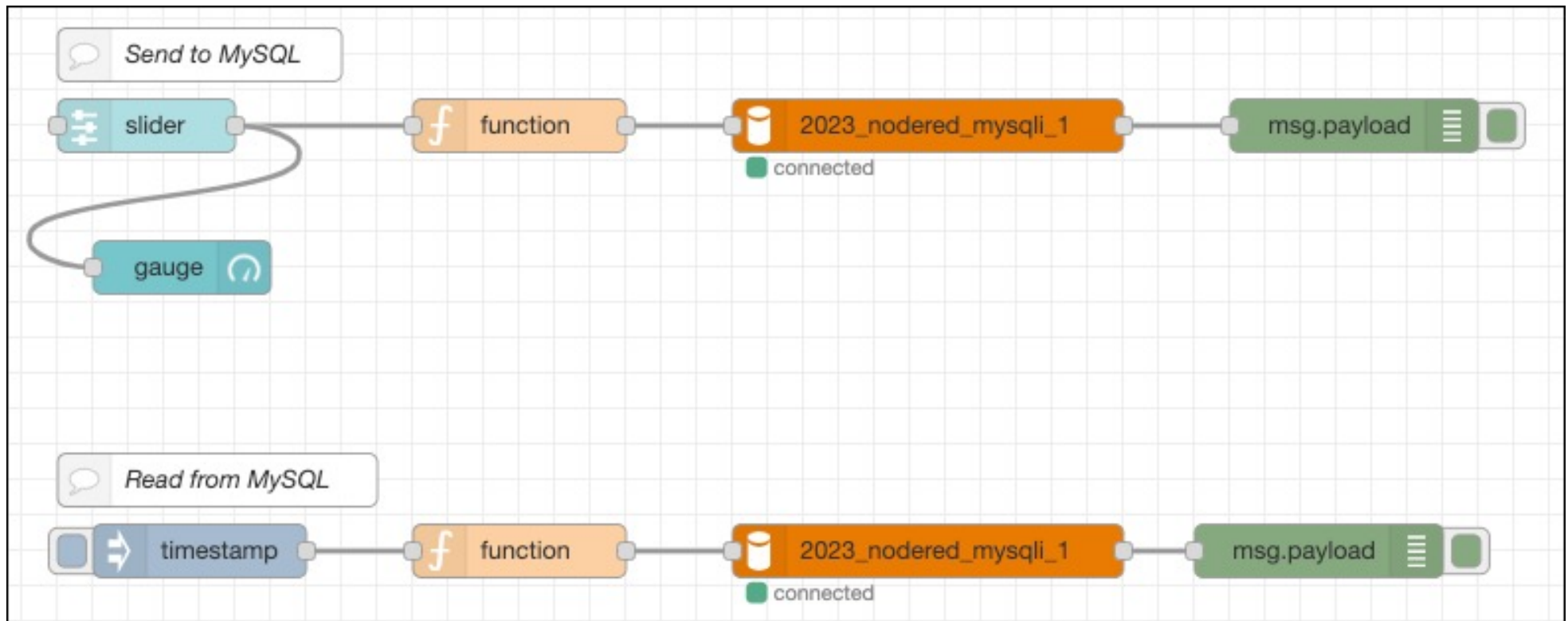
Database name Table name

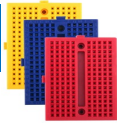
Server: localhost » Database: 2023_nodered_mysqli_1 » Table: example1										
<div> <div>Browse</div> <div>Structure</div> <div>SQL</div> <div>Search</div> <div>Insert</div> <div>Export</div> <div>Import</div> <div>Privileges</div> <div>Operations</div> <div>Tracking</div> <div>Triggers</div> </div>										
<div> <div>Table structure</div> <div>Relation view</div> </div>										
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action	
<input type="checkbox"/> 1	id	int(11)			No	None		AUTO_INCREMENT	Change	Drop More
<input type="checkbox"/> 2	log_in	timestamp			Yes	CURRENT_TIMESTAMP			Change	Drop More
<input type="checkbox"/> 3	log_from_nodered	varchar(100)	latin1_swedish_ci		No	None			Change	Drop More
<input type="checkbox"/> 4	data1	varchar(255)	latin1_swedish_ci		No	None			Change	Drop More
<input type="checkbox"/> 5	data2	varchar(144)	latin1_swedish_ci		No	None			Change	Drop More



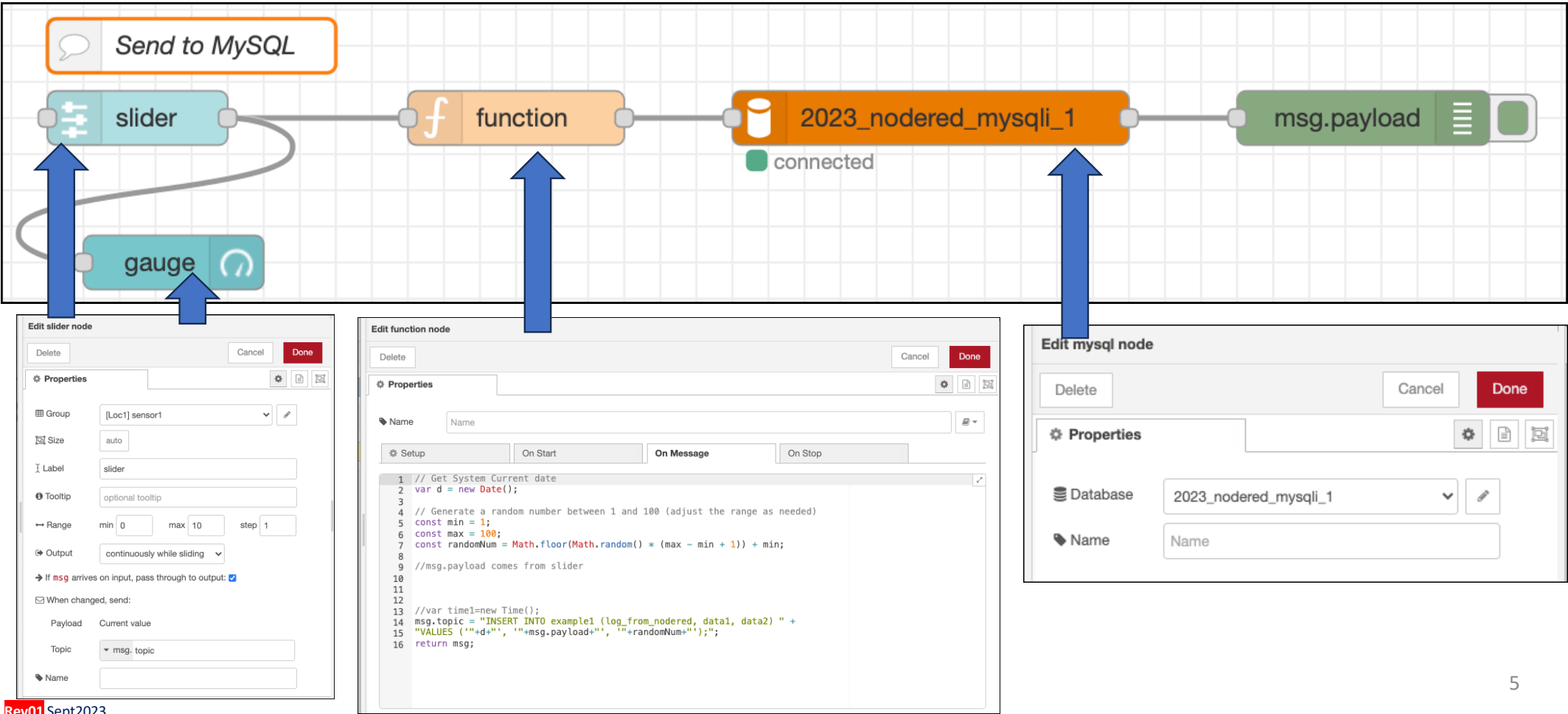
B. Node-RED:

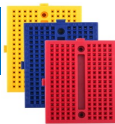
✓ Project Setup



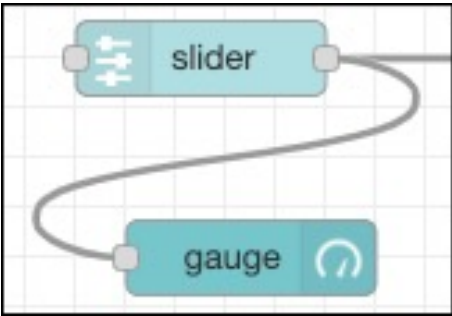


C. Node-RED to MySQL: ✓ Project Description





C. Node-RED to MySQL: ✓ Project Properties



Edit slider node

Delete

Cancel

Done

Properties

Group

[Loc1] sensor1

Size

auto

Label

slider

Tooltip

optional tooltip

Range

min

0

max

10

step

1

Output

continuously while sliding

If msg arrives on input, pass through to output:

☒

When changed, send:

Payload

Current value

Topic

msg. topic

Name

Edit gauge node

Delete

Cancel

Done

Properties

Group

[Loc1] sensor1

Size

auto

Type

Gauge

Label

gauge

Value format

{{value}}

Units

units

Range

min

0

max

10

Colour gradient

Sectors

0

...

optional

...

optional

...

10

Name

dashboard

i

Layout

Site

Theme

Tabs & Links

+ tab

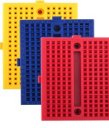
+ link

Loc1

sensor1

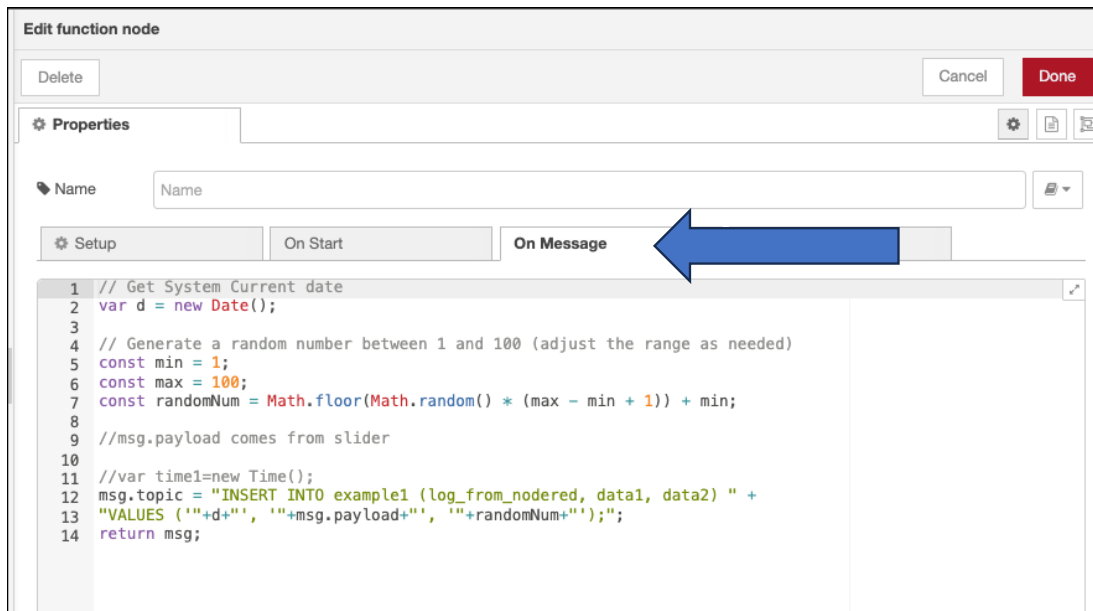
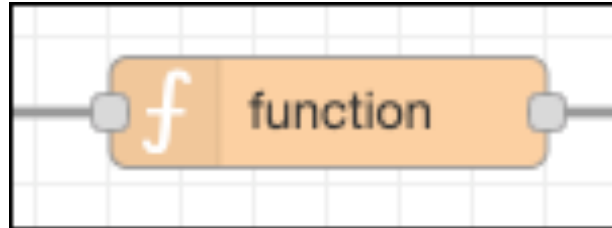
gauge

slider



C. Node-RED to MySQL:

✓ Project Properties

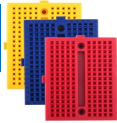


```
// Get System Current date
var d = new Date();
```

```
// Generate a random number between 1 and 100 (adjust the range as needed)
const min = 1;
const max = 100;
const randomNum = Math.floor(Math.random() * (max - min + 1)) + min;
```

```
//msg.payload comes from slider
```

```
//var time1=new Time();
msg.topic = "INSERT INTO example1 (log_from_nodered, data1, data2) " +
"VALUES ('"+d+"', '"+msg.payload+"', '"+randomNum+"')";
return msg;
```



C. Node-RED to MySQL: ✓ The Results

Flow 3

Send to MySQL

slider

gauge

function

2023_nodered_mysql_1

msg.payload

Loc1

sensor1

gauge

slider

debug

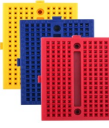
all nodes

12/09/2023, 19:58:40 node: 993b18533a132491

INSERT INTO example1 (log_from_nodered, data1, data2) VALUES ('Tue Sep 12 2023 19:58:40 GMT+0800 (Malaysia Time)', '2', '97');; msg.payload : OkPacket

"[object Object]"

	id	log_in	log_from_nodered	data1	data2
	17	2023-09-12 19:11:45	Tue Sep 12 2023 19:11:45 GMT+0800 (Malaysia Time)	2	43



D. MySQL to Node-RED:

✓ Project Description

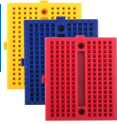
The screenshot displays the Node-RED web interface. At the top, a flow titled 'Flow 3' is visible. It consists of a 'Read from MySQL' node, followed by a 'timestamp' node, a 'function' node, a '2023_nodered_mysql_1' node, and a 'msg.payload' node. The 'function' node is selected, and its properties are shown in the left sidebar. The 'Properties' section includes a 'Name' field and a 'Setup' tab. The 'On Message' tab is active, showing the following JavaScript code:

```
1 // Select ALL from example1 Descending id
2 msg.topic = "SELECT * FROM example1 order by id desc";
3 return msg;
```

The 'debug' console on the right shows the output of the flow, displaying two objects with the following structure:

```
12/09/2023, 20:07:49 node: a3ae21d0732bb364
SELECT * FROM example1 order by id desc : msg.payload : array[2]
▼ array[2]
▼ 0: object
  id: 18
  log_in: "2023-09-12T11:58:40.000Z"
  log_from_nodered: "Tue Sep 12 2023 19:58:40 GMT+0800 (Malaysia Time)"
  data1: "2"
  data2: "97"
▼ 1: object
  id: 17
  log_in: "2023-09-12T11:11:45.000Z"
  log_from_nodered: "Tue Sep 12 2023 19:11:45 GMT+0800 (Malaysia Time)"
  data1: "2"
  data2: "43"
```

```
// Select ALL from example1 Descending id
msg.topic = "SELECT * FROM example1 order by id desc";
return msg;
```



E. MySQL to Node-RED:

✓ The Results

Flow 3

Read from MySQL

timestamp

function

2023_nodered_mysql_1

msg.payload

Loc1

sensor1

gauge

2

0 10 units

slider

debug

12/09/2023, 20:07:49 node: a3ae21d0732bb364

SELECT * FROM example1 order by id desc : msg.payload : array[2]

array[2]

0: object

id: 18

log_in: "2023-09-12T11:58:40.000Z"

log_from_nodered: "Tue Sep 12 2023 19:58:40 GMT+0800 (Malaysia Time)"

data1: "2"

data2: "97"

1: object

id: 17

log_in: "2023-09-12T11:11:45.000Z"

log_from_nodered: "Tue Sep 12 2023 19:11:45 GMT+0800 (Malaysia Time)"

data1: "2"

data2: "43"

+ Options

			id	log_in	log_from_nodered	data1	data2
<input type="checkbox"/>			17	2023-09-12 19:11:45	Tue Sep 12 2023 19:11:45 GMT+0800 (Malaysia Time)	2	43
<input type="checkbox"/>			18	2023-09-12 19:58:40	Tue Sep 12 2023 19:58:40 GMT+0800 (Malaysia Time)	2	97



END