Data tables used for Assignments:-

Employee and Transactions

Stucture of table:-

```
Database changed
mysql> desc employee;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| emp_id         | bigint(4)   | NO   | PRI | NULL    |       |
| emp_name       | varchar(10) | YES  |     | NULL    |       |
| emp_DOB        | date        | YES  |     | NULL    |       |
| emp_DOJ        | date        | YES  |     | NULL    |       |
| contact        | bigint(11)  | YES  |     | NULL    |       |
| address        | varchar(30) | YES  |     | NULL    |       |
| emp_department | varchar(11) | YES  |     | NULL    |       |
| emp_salary     | bigint(7)   | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)

mysql> desc transaction
    -> ;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| emp_id    | bigint(4)   | YES  | MUL | NULL    |       |
| emp_name  | varchar(10) | YES  |     | NULL    |       |
| emp_DOJ   | date        | YES  |     | NULL    |       |
| emp_salary| bigint(7)   | YES  |     | NULL    |       |
| emp_paid  | bigint(7)   | YES  |     | NULL    |       |
| emp_dop   | date        | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
6 rows in set (0.00 sec)
```

Records in tables are as Follow:-

```
+--------+----------+------------+------------+------------+-------------------+--------------+------------+
| emp_id | emp_name | emp_DOB    | emp_DOJ    | contact    | address           | emp_department | emp_salary |
+--------+----------+------------+------------+------------+-------------------+--------------+------------+
|      3 | Risabh   | 1996-05-09 | 2020-01-01 | 9310184828 | Agra              | Android      |      15000 |
|     10 | Karan    | 1997-08-01 | 2020-09-22 | 8744866528 | Ghaziabad         | Ios          |      26000 |
|     12 | Sashank  | 1997-02-24 | 2017-08-19 | 9953110039 | jhalandhar,punjab | Android      |      30000 |
|     19 | Tushar   | 1998-02-24 | 2020-01-03 | 9868786482 | Meerut up         | Managemment  |      15000 |
|     33 | Prashant | 1997-12-25 | 2010-01-01 | 9810184828 | Sonipat,Haryana   | PHP          |      12000 |
|     60 | mayank   | 1997-07-07 | 2020-02-03 | 9650704833 | Sahadara, Delhi   | Drupal       |      37500 |
|     87 | Shivank  | 1997-02-25 | 2020-01-07 | 1234567899 | Meerut            | IOS          |      13000 |
+--------+----------+------------+------------+------------+-------------------+--------------+------------+
7 rows in set (0.00 sec)

mysql> select * from transaction;
+--------+----------+------------+------------+----------+------------+
| emp_id | emp_name | emp_DOJ    | emp_salary | emp_paid | emp_dop    |
+--------+----------+------------+------------+----------+------------+
|      3 | Risabh   | 2020-01-01 |      15000 |     1450 | 2020-01-31 |
|     33 | Prashant | 2010-01-01 |      12000 |    11000 | 2020-01-31 |
|      3 | Risabh   | 2020-01-01 |      15000 |    15000 | 2020-02-28 |
|     33 | Prashant | 2010-01-01 |      12000 |    11500 | 2020-02-28 |
|     19 | Tushar   | 2020-01-03 |      15000 |    14500 | 2020-01-31 |
|     19 | Tushar   | 2020-01-03 |      15000 |    15000 | 2020-02-28 |
|     60 | mayank   | 2020-02-03 |      37500 |    36000 | 2020-02-28 |
+--------+----------+------------+------------+----------+------------+
7 rows in set (0.00 sec)

mysql>
```

Q1:- Fetch employee's Name, address, Phone, Dob, Department, salary whose salary is greater than the average salary.

Soln :-
query:- select emp_name , address, contact,emp_DOB,emp_department, emp_salary from employee where emp_salary>(select avg(emp_salary) from employee);

soln:-

```
7 rows in set (0.00 sec)

mysql>
mysql>  select emp_name , address, contact,emp_DOB,emp_department, emp_salary from employee where emp_salary>(select avg(emp_salary) from employee);
+----------+-------------------+------------+------------+--------------+------------+
| emp_name | address           | contact    | emp_DOB    | emp_department | emp_salary |
+----------+-------------------+------------+------------+--------------+------------+
| Karan    | Ghaziabad         | 8744866528 | 1997-08-01 | Ios          |      26000 |
| Sashank  | jhalandhar,punjab | 9953110039 | 1997-02-24 | Android      |      30000 |
| mayank   | Sahadara, Delhi   | 9650704833 | 1997-07-07 | Drupal       |      37500 |
+----------+-------------------+------------+------------+--------------+------------+
3 rows in set (0.00 sec)

mysql>
```

Q2:- Fetch Paid average salary for the current month.

Soln:-

Query:- select avg(emp_paid) as average_salary_piad from transaction where month(emp_dop)=month(current_date());

```
mysql> select avg(emp_paid) as average_salary_paid  from transaction where MONTH(emp_dop) = MONTH(CURRENT_DATE());
+---------------------+
| average_salary_paid |
+---------------------+
|          19375.0000 |
+---------------------+
1 row in set (0.00 sec)

mysql>
```

Q3:- Fetch the top 5 Employee's Name, Phone, Salary month, Paid salary for the current month

soln:-
select emp_name , contact , emp_salary ,emp_paid from employee join transaction on employee.emp_id =transaction.emp_id
where Month(emp_dop)=Month(current_date()) order by emp_paid desc limit 5;

Q4:- Fetch the employee's name, phone, dob, department name, salary who join last month.

Soln :-
Query select emp_name,contact,emp_DOB,emp_department,emp_salary from employee
    -> where month(emp_DOJ)=month(current_Date)-1;

```
mysql> select emp_name,contact,emp_DOB,emp_department,emp_salary from employee
    -> where month(emp_DOJ)=month(current_Date)-1;
+-----------+------------+------------+----------------+------------+
| emp_name  | contact    | emp_DOB    | emp_department | emp_salary |
+-----------+------------+------------+----------------+------------+
| Risabh    | 9310184828 | 1996-05-09 | Android        |      15000 |
| Tushar    | 9868786482 | 1998-02-24 | Management     |      15000 |
| Prashant  | 9810184828 | 1997-12-25 | PHP            |      12000 |
| Shivank   | 1234567899 | 1997-02-25 | IOS            |      13000 |
+-----------+------------+------------+----------------+------------+
4 rows in set (0.01 sec)
```


Q5:- Create a Program in PHP that will fetch and show employee details whose DOB is today?

Soln:-

```php
<?php

try
{
$conn =new PDO('mysql:host=127.0.0.1;dbname=Assignments','debian-sys-maint','0MONCnvln7dlERYI');
$conn->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);

$data1=$conn->query("select * from employee where month(emp_DOB)=month(current_Date()) and day(emp_DOB)=day(current_date())");
while( $row = $data1->fetch(PDO::FETCH_ASSOC) ) {
var_dump($row);
}
```
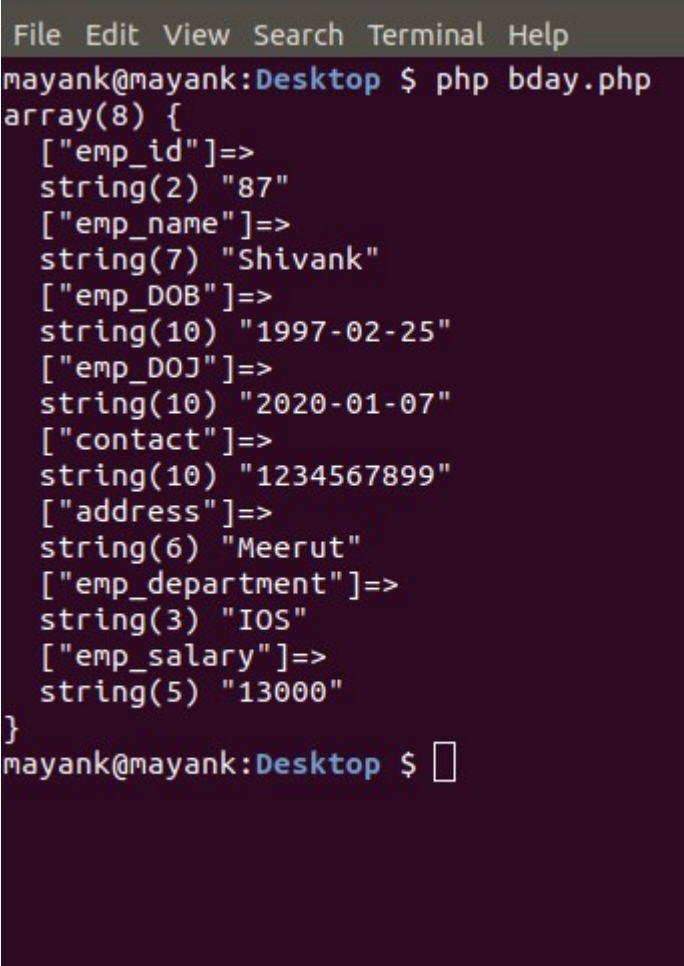
```
}
catch(PDOException $ex){
die('Error:'.$ex);
}

?>
```

```
File  Edit  View  Search  Terminal  Help
mayank@mayank:Desktop $ php bday.php
array(8) {
  ["emp_id"]=>
  string(2) "87"
  ["emp_name"]=>
  string(7) "Shivank"
  ["emp_DOB"]=>
  string(10) "1997-02-25"
  ["emp_DOJ"]=>
  string(10) "2020-01-07"
  ["contact"]=>
  string(10) "1234567899"
  ["address"]=>
  string(6) "Meerut"
  ["emp_department"]=>
  string(3) "IOS"
  ["emp_salary"]=>
  string(5) "13000"
}
mayank@mayank:Desktop $ ▯
```

Que 6:- What are the advantage & disadvantage of Index?

Soln:-

Advantages

- Speed up SELECT query
- Helps to make a row unique or without duplicates(primary,unique)
- If index is set to fill-text index, then we can search against large string values. for example to find a word from a sentence etc.

Disadvantages

- Indexes take additional disk space.

- indexes slow down INSERT,UPDATE and DELETE, but will speed up UPDATE if the WHERE condition has an indexed field. INSERT, UPDATE and DELETE becomes slower because on each operation the indexes must also be updated.

Ques7:- . Create two tables in MYSQL that shows working of INNER,LEFT, RIGHT.

Soln:-

1. Inner Join

select * from employee inner join transaction on emplyee.emp_id = transaction.emp_id

```
mysql> select * from employee inner join transaction where employee.emp_id=transaction.emp_id;
+--------+----------+------------+------------+------------+----------------+----------------+------------+--------+----------+------------+--------
---+----------+------------+
| emp_id | emp_name | emp_DOB    | emp_DOJ    | contact    | address        | emp_department | emp_salary | emp_id | emp_name | emp_DOJ    | emp_sala
ry | emp_paid | emp_dop    |
+--------+----------+------------+------------+------------+----------------+----------------+------------+--------+----------+------------+--------
---+----------+------------+
|      3 | Risabh   | 1996-05-09 | 2020-01-01 | 9310184828 | Agra           | Android        |      15000 |      3 | Risabh   | 2020-01-01 |      150
00 |     1450 | 2020-01-31 |
|     33 | Prashant | 1997-12-25 | 2010-01-01 | 9810184828 | Sonipat,Haryana | PHP           |      12000 |     33 | Prashant | 2010-01-01 |      120
00 |    11000 | 2020-01-31 |
|      3 | Risabh   | 1996-05-09 | 2020-01-01 | 9310184828 | Agra           | Android        |      15000 |      3 | Risabh   | 2020-01-01 |      150
00 |    15000 | 2020-02-28 |
|     33 | Prashant | 1997-12-25 | 2010-01-01 | 9810184828 | Sonipat,Haryana | PHP           |      12000 |     33 | Prashant | 2010-01-01 |      120
00 |    11500 | 2020-02-28 |
|     19 | Tushar   | 1998-02-24 | 2020-01-03 | 9868786482 | Meerut up      | Managemment    |      15000 |     19 | Tushar   | 2020-01-03 |      150
00 |    14500 | 2020-01-31 |
|     19 | Tushar   | 1998-02-24 | 2020-01-03 | 9868786482 | Meerut up      | Managemment    |      15000 |     19 | Tushar   | 2020-01-03 |      150
00 |    15000 | 2020-02-28 |
|     60 | mayank   | 1997-07-07 | 2020-02-03 | 9650704833 | Sahadara, Delhi | Drupal        |      37500 |     60 | mayank   | 2020-02-03 |      375
00 |    36000 | 2020-02-28 |
+--------+----------+------------+------------+------------+----------------+----------------+------------+--------+----------+------------+--------
---+----------+------------+
7 rows in set (0.00 sec)
```

2. Left Join

select employee.emp_name , emp_paid, emp_dop from employee left join transaction on employee.emp_id=transactio.emp_id

```
mysql> select emp_name , emp_paid,emp_dop from employee left join transaction on employee.emp_id=transaction.emp_id;
ERROR 1052 (23000): Column 'emp_name' in field list is ambiguous
mysql> select employee.emp_name , emp_paid,emp_dop from employee left join transaction on employee.emp_id=transaction.emp_id;
+----------+----------+------------+
| emp_name | emp_paid | emp_dop    |
+----------+----------+------------+
| Risabh   |     1450 | 2020-01-31 |
| Prashant |    11000 | 2020-01-31 |
| Risabh   |    15000 | 2020-02-28 |
| Prashant |    11500 | 2020-02-28 |
| Tushar   |    14500 | 2020-01-31 |
| Tushar   |    15000 | 2020-02-28 |
| mayank   |    36000 | 2020-02-28 |
| Karan    |     NULL | NULL       |
| Sashank  |     NULL | NULL       |
+----------+----------+------------+
9 rows in set (0.00 sec)
```

3. Right join

select employee.emp_name , emp_paid, emp_dop from employee right join transaction on employee.emp_id=transactio.emp_id

```
mysql> select employee.emp_name , emp_paid,emp_dop from employee Right join transaction on employee.emp_id=transaction.emp_id;
+-----------+----------+------------+
| emp_name  | emp_paid | emp_dop    |
+-----------+----------+------------+
| Risabh    |     1450 | 2020-01-31 |
| Prashant  |    11000 | 2020-01-31 |
| Risabh    |    15000 | 2020-02-28 |
| Prashant  |    11500 | 2020-02-28 |
| Tushar    |    14500 | 2020-01-31 |
| Tushar    |    15000 | 2020-02-28 |
| mayank    |    36000 | 2020-02-28 |
+-----------+----------+------------+
7 rows in set (0.00 sec)

mysql>
```

MONGO DB ASSIGNMENT

Q8 :- create a database "Bootcamp" with table "mongo".

Soln: -

create table name boot camp:-

use boot camp ;

```
File  Edit  View  Search  Terminal  Help
mayank@mayank:~$ mongo
MongoDB shell version v3.6.3
connecting to: mongodb://127.0.0.1:27017
MongoDB server version: 3.6.3
Server has startup warnings:
2020-02-27T09:27:41.157+0530 I STORAGE  [initand
2020-02-27T09:27:41.157+0530 I STORAGE  [initand
ge engine
2020-02-27T09:27:41.157+0530 I STORAGE  [initand
2020-02-27T09:27:41.884+0530 I CONTROL  [initand
2020-02-27T09:27:41.884+0530 I CONTROL  [initand
2020-02-27T09:27:41.884+0530 I CONTROL  [initand
2020-02-27T09:27:41.884+0530 I CONTROL  [initand
> use BOOTCAMP
switched to db BOOTCAMP
>
```

create table named mongo

db.mongo.insert({
... name:"mayank",

```
... age:22,
... competancy :"DRUPAL",
... POST : "TRAINEE"
... }
... )
WriteResult({ "nInserted" : 1 })
```

```
> db.mongo.insert({
... name:"mayank",
... age:22,
... competancy :"DRUPAL",
... POST : "TRAINEE"
... }
... )
WriteResult({ "nInserted" : 1 })
> show collections
mongo
> db.mongo.find({});
{ "_id" : ObjectId("5e574f2a6ba7936a38203df0"), "name" : "mayank", "age" : 22, "competancy" : "DRUPAL", "POST" : "TRAINEE" }
>
```

Ques 9 :- Write a PHP program to perform Create, Read, Update and Delete Operations.

Soln :-

Form.html

(A Form to take value from user)

code:-
```html
<!DOCTYPE html>
<html>
<head>
<title> Form </title>
</head>
<body>
<form name ="f1 ", action="operation.php" method="post">
<center>
<table>
<tr> <td> <h2> NAME </h2></td><td><input type="text" name="fn"
placeholder="first name "</td></tr>
<tr> <td> <h2> AGE </h2></td><td><input type="text" name="age"
placeholder="Age "</td></tr>
<tr> <td> <h2> Competancy </h2></td><td><input type="text" name="comp"
placeholder="completancy "</td></tr>
<tr> <td> <h2> Post </h2></td><td><input type="text" name="post"
placeholder="Post "</td></tr>
<tr>
<td><input type="submit" name=create value="create"</td>
<td><input type="submit" name="Read" value="Read"</td>
</tr>
<tr>
<td><input type="submit" name="UPD" value="update"</td>
<td><input type="submit" name="Delete" value="Delete"</td>
</tr>

</table>
```
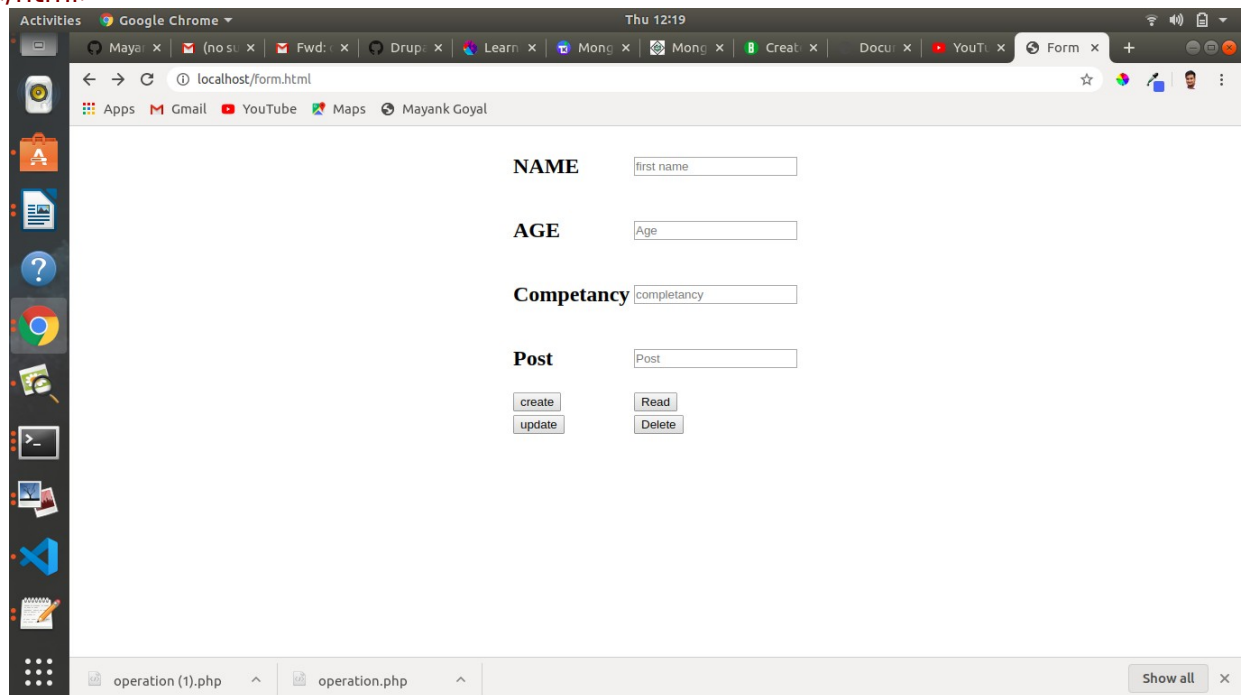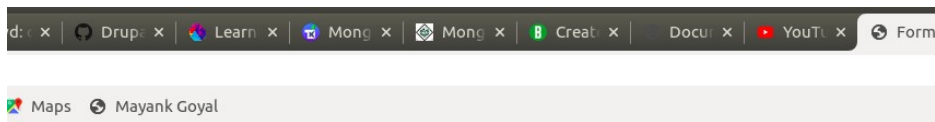
```html
</center>
</form>

</body>
</html>
```


PHP Code for Database connectivity :-

```php
<?php

 $manager = new MongoDB\Driver\Manager("mongodb://localhost:27017");
 $con = new MongoDB\Driver\Query([], []);
 $data = $manager->executeQuery('bootcamp.mongo', $con);
 $bulk =new MongoDB\Driver\BulkWrite;
 $doc=['id'=> new MongoDB\BSON\ObjectID , name =>
$_POST["fn"],age=>$_POST["age"],competancy=>$_POST["comp"],POST=>$_POST["post"]];
 if(isset($_POST['Read']))
 {


 if($data)
 {
?>
   <br><br>
   <table border="2">
       <tr>
          <th>Name</th>
          <th>Age</th>
          <th>Competancy</th>
          <th>Post</th>
       </tr>
<?php
   foreach($data as $value)
   {
?>
```

```php
        <tr>
        <td> <?php echo $value->name; ?> </td>
        <td> <?php echo $value->age; ?> </td>
        <td> <?php echo $value->competancy; ?> </td>
        <td> <?php echo $value->POST;?></td>
        </tr>
<?php
        }
?>
    </table>
<?php
}
else
echo "value not set";
}

 if(isset($_POST['create']))
 {
    $bulk->insert($doc);
        $manager->executeBulkWrite('bootcamp.mongo', $bulk);
        echo "<script>alert('Record Inserted
Successfully');window.location='form.html';</script>";
        }

if(isset($_POST["UPD"]))
        {
        $bulk->update(['name' => $_POST["fn"]], ['$set' =>
['age'=>$_POST["age"],'competancy'=>$_POST["comp"],'POST'=>$_POST["post"]]]);
        $manager->executeBulkWrite('bootcamp.mongo', $bulk);
        echo "<script>alert('Record Updated
Successfully');window.location='form.html';</script>";
        }
if(isset($_POST["Delete"]))
        {
        $bulk->delete(['name' =>
$_POST["fn"],'age'=>$_POST["age"],'competancy'=>$_POST["comp"],'POST'=>$_POST["p
ost"]]);
        $manager->executeBulkWrite('bootcamp.mongo', $bulk);
        echo "<script>alert('Record Deleted
Successfully');window.location='form.html';</script>";
        }
?>
```
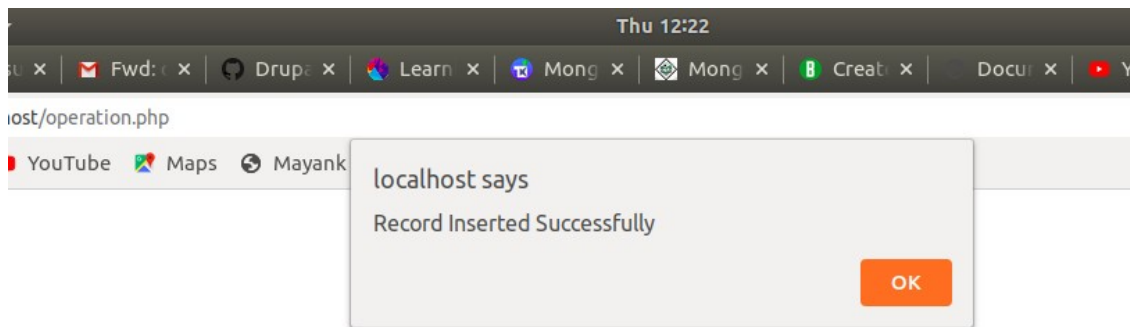
Case 1 :-
Create
Records :-

localhost says

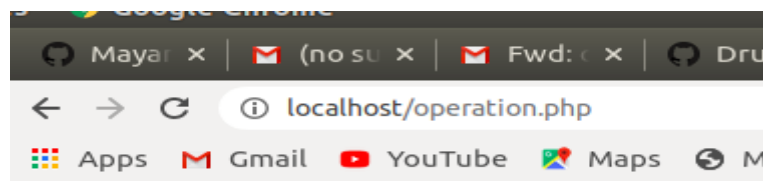Record Inserted Successfully

OK

```
mongo
> db.mongo.find({});
{ "_id" : ObjectId("5e574f2a6ba7936a38203df0"), "name" : "mayank", "age" : 22, "competancy" : "DRUPAL", "POST" : "TRAINEE", "Address" : null,
"Age" : "22" }
{ "_id" : ObjectId("5e576745e833c00e753eea99"), "id" : ObjectId("5e576745e833c00e753eea98"), "name" : "karan Pandey", "age" : "22", "competanc
y" : "Android", "POST" : "Team lead" }
> 
```

2:- Read :-

Name	Age	Competancy	Post
mayank	22	DRUPAL	TRAINEE
karan Pandey	22	Android	Team lead

3:- UPDATE :-
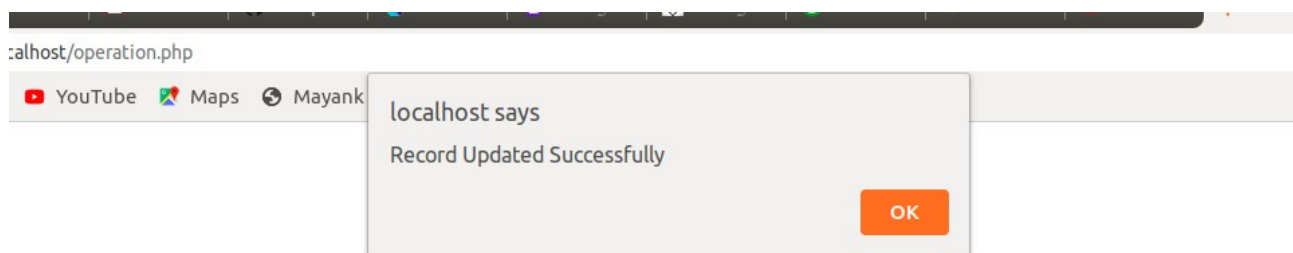
Goyal

NAME   karan Pandey

AGE   23

Competancy IOS

Post   Trainee

[create]   [Read]
[update]   [Delete]

localhost/operation.php

YouTube   Maps   Mayank

localhost says

Record Updated Successfully

OK

← → C   ⓘ localhost/operation.php

Apps   M Gmail   ▶ YouTube   Maps   M

Name	Age	Competancy	Post
mayank	22	DRUPAL	TRAINEE
karan Pandey	23	IOS	Trainee