

Lab Assignment

Course Code: CSE 3104

Course Title: Web Technology

Submitted to:

Rafid Mostafiz

Lecturer, IIT

Noakhali Science and Technology University (NSTU)

Submitted by:

Md Armanur Rashid

ID: ASH1925013M

Bachelor of Science in Software Engineering



Noakhali Science and Technology University (NSTU)

Problem -01(Lab Problem-01):

Consider the following Insurance Database where primary keys are underlined:-

Person (driver-id, name, address)

Car (license, model, year)

Accident (report-number, date, location)

Owns (driver-id, license)

Participated (driver-id, report-number, damage-amount)

- Find the Total number of accidents recorded in Insurance database.
- Find the Total number of accidents in which the car belonging to Mr. Saiful Islam were involved.
- Find the total damage _amount recorded in 2013.
- Update the damage amount for the car with license number “AABB2000” in the accident with report number “AR2197” to \$3000.

Answer:































<div><div><div><div></div><div></div><div></div></div><div>←T→</div></div><div></div></div> <div>report_number</div> <div>accident_date</div> <div>location</div>									
<input type="checkbox"/>		Edit		Copy		Delete	AR2097	2020	Maijdee
<input type="checkbox"/>		Edit		Copy		Delete	AR2187	2019	Biswanath
<input type="checkbox"/>		Edit		Copy		Delete	AR2196	2016	White Hall
<input type="checkbox"/>		Edit		Copy		Delete	AR2197	2013	Maijdee
<input type="checkbox"/>		Edit		Copy		Delete	AR2198	2014	Sonapur
<input type="checkbox"/>		Edit		Copy		Delete	AR3497	2017	Sonapur
<input type="checkbox"/>		Edit		Copy		Delete	CR2197	2017	Chowmuhuni
<input type="checkbox"/>		Edit		Copy		Delete	DB2197	2020	Maijdee
<input type="checkbox"/>		Edit		Copy		Delete	DS2178	2021	Naijdee
<input type="checkbox"/>		Edit		Copy		Delete	SR2197	2022	Town Hall

Figure 1: Database Table(incident)































<div><div>↩</div><div>T</div><div>→</div></div>					<div>▼</div> license	1	model	year	
<input type="checkbox"/>		Edit		Copy		Delete	AABB2000	modelA	2017
<input type="checkbox"/>		Edit		Copy		Delete	AABB2001	modelB	2018
<input type="checkbox"/>		Edit		Copy		Delete	AABB2002	modelC	2020
<input type="checkbox"/>		Edit		Copy		Delete	AABB2003	modelE	2020
<input type="checkbox"/>		Edit		Copy		Delete	AABB2004	modelD	2022
<input type="checkbox"/>		Edit		Copy		Delete	AABB2005	modelA	2013
<input type="checkbox"/>		Edit		Copy		Delete	AABB2006	modelB	2013
<input type="checkbox"/>		Edit		Copy		Delete	AABB2007	modelA	2021
<input type="checkbox"/>		Edit		Copy		Delete	AABB2008	modelD	2022
<input type="checkbox"/>		Edit		Copy		Delete	AABB2009	modelA	2013

Figure 2: Database Table(car)































<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div></div></div>						driver_id	license	
<input type="checkbox"/>		Edit		Copy		Delete	1925001	AABB2000
<input type="checkbox"/>		Edit		Copy		Delete	1925002	AABB2001
<input type="checkbox"/>		Edit		Copy		Delete	1925003	AABB2002
<input type="checkbox"/>		Edit		Copy		Delete	1925004	AABB2003
<input type="checkbox"/>		Edit		Copy		Delete	1925005	AABB2004
<input type="checkbox"/>		Edit		Copy		Delete	1925006	AABB2005
<input type="checkbox"/>		Edit		Copy		Delete	1925007	AABB2006
<input type="checkbox"/>		Edit		Copy		Delete	1925008	AABB2007
<input type="checkbox"/>		Edit		Copy		Delete	1925009	AABB2008
<input type="checkbox"/>		Edit		Copy		Delete	1925010	AABB2009

Figure 3: Database Table(owns)































<div><div><div>←</div><div>T</div><div>→</div></div></div>				▼	driver_id	report_number	damage_amount
<input type="checkbox"/>	 Edit	 Copy	 Delete	1925001	AR2197	3000	
<input type="checkbox"/>	 Edit	 Copy	 Delete	1925002	AR2198	2500	
<input type="checkbox"/>	 Edit	 Copy	 Delete	1925003	CR2197	3400	
<input type="checkbox"/>	 Edit	 Copy	 Delete	1925004	DB2197	1800	
<input type="checkbox"/>	 Edit	 Copy	 Delete	1925005	AR2196	3000	
<input type="checkbox"/>	 Edit	 Copy	 Delete	1925006	AR3497	2000	
<input type="checkbox"/>	 Edit	 Copy	 Delete	1925007	AR2097	5000	
<input type="checkbox"/>	 Edit	 Copy	 Delete	1925008	SR2197	4500	
<input type="checkbox"/>	 Edit	 Copy	 Delete	1925009	AR2187	4400	
<input type="checkbox"/>	 Edit	 Copy	 Delete	1925010	DS2178	3800	

Figure 4: Database Table(participated)

				driver_id	Name	Address
<input type="checkbox"/>	Edit	Copy	Delete	1925001	Raju Biswas	Fakirpur
<input type="checkbox"/>	Edit	Copy	Delete	1925002	Ishrat Rintu	Sheikh Mujib Hall
<input type="checkbox"/>	Edit	Copy	Delete	1925003	Mr. Saiful Islam	White Hall
<input type="checkbox"/>	Edit	Copy	Delete	1925004	Sunaan Sultan	Alipur, Garage
<input type="checkbox"/>	Edit	Copy	Delete	1925005	Prosanto Dev	Fakirpur
<input type="checkbox"/>	Edit	Copy	Delete	1925006	Nadia Islam	Bibi Khadija Hall
<input type="checkbox"/>	Edit	Copy	Delete	1925007	Mr. Saiful Islam	White Hall
<input type="checkbox"/>	Edit	Copy	Delete	1925008	Md Alamin	Ali pur, Garage
<input type="checkbox"/>	Edit	Copy	Delete	1925009	Mr. Saiful Islam	White Hall
<input type="checkbox"/>	Edit	Copy	Delete	1925010	Sultana Marjan	Bibi Khadija Hall

Figure 5: Database Table(person)

```

Database_Connection.php > ...
1  <?php
2  $username = "root";
3  $password = "";
4  $host = "127.0.0.1";
5  $dbname = "lab_assignment";
6  $connector = mysqli_connect($host,$username,$password,$dbname);
7  ?>

```

Figure 6: Database Connection (Database_Connection.php)

Problem 1(a): Find the Total number of accidents recorded in Insurance database.

```

problem1_a.php > ...
1  <?php
2  include_once 'Database_Connection.php'
3  ?>
4
5  <?php
6  $sql = 'SELECT * FROM accident';
7  $result = mysqli_query($connector,$sql);
8  $count = mysqli_num_rows($result);
9  echo "Total number of accident recorded in Insurance database : ",$count;
10 ?>

```

Output:

← → ↻ ⓘ localhost:3000/problem1_a.php

Total number of accident recorded in Insurance database : 10

Problem 1(b): Find the Total number of accidents in which the car belonging to Mr. Saiful Islam were involved.

```
problem1_b.php > ...
1  <?php
2      include_once 'Database_Connection.php'
3  ?>
4  <?php
5      $sql = 'SELECT * FROM participated p, person per WHERE p.driver_id=per.driver_id AND name="Mr. Saiful Islam";';
6      $result = mysqli_query($connector, $sql);
7      $count = mysqli_num_rows($result);
8      echo "Total number of accident in which the car belonging to Mr. Saiful Islam : ", $count;
9  ?>
```

Output:

localhost:3000/problem1_b.php

Total number of accident in which the car belonging to Mr. Saiful Islam : 3

Problem 1(c): Find the total damage _amount recorded in 2013.

```
problem1_c.php > ...
1  <?php
2      include_once 'Database_Connection.php'
3  ?>
4
5  <?php
6      $sql = 'SELECT damage_amount FROM participated JOIN owns ON participated.driver_id=owns.driver_id JOIN car
7              ON owns.license=car.license WHERE car.year="2013";';
8
9      $result = mysqli_query($connector, $sql);
10     $rows = mysqli_fetch_all($result, MYSQLI_NUM);
11
12     $sum = 0;
13     foreach($result as $i => $rows):
14         echo "Damage Amount ".$i+1." = ".$rows['damage_amount'], "<br>";
15         $sum += $rows['damage_amount'];
16     endforeach;
17     echo "Total damage amount recorded in 2013 : ", $sum;
18 ?>
```

Output:

```
localhost:3000/problem1_c.php

Damage Amount 1 = 2000
Damage Amount 2 = 5000
Damage Amount 3 = 3800
Total damage amount recorded in 2013 : 10800
```

Problem 1(d): Update the damage amount for the car with license number “AABB2000” in the accident with report number “AR2197” to \$3000.

```
problem1_d.php > ...
1  <?php
2      include_once 'Database_Connection.php'
3  ?>
4
5  <?php
6      $sql = 'UPDATE accident JOIN participated ON accident.report_number=participated.report_number JOIN owns ON participated.
7      driver_id=owns.driver_id JOIN car ON owns.license=car.license SET damage_amount = "3000" WHERE car.license="AABB2000" AND
8      accident.report_number="AR2197";';
9
10     $result =mysqli_query($connector,$sql);
11
12     if ($result === TRUE) {
13         echo "Record updated successfully";
14         $sql = 'SELECT damage_amount from participated where report_number="AR2197";';
15         $result = mysqli_query($connector,$sql);
16         $row = $result -> fetch_array(MYSQLI_NUM);
17         echo "<br>Updated the damage amount : ", $row[0];
18     }
19     else {
20         echo "Error updating record: ";
21     }
22 ?>
```

Output:

```
localhost:3000/problem1_d.php

Record updated successfully
Updated the damage amount : 3000
```

Problem -02 (Lab Problem-02):

Consider the following employee Database where primary keys are underlined

Employee (person-name, street, city)

Works (person-name, company-name , salary)

Company (company-name, city)

Manages (person-name, manager-name)

-
- Find the names of all employees in this database who live in the same city as the company for which they work.
 - Find all employees in this database who do not work for Sonali Bank Ltd.
 - Find all employees in the database who earn more than every employee of Small Bank Corporation.
 - select emp_name from works where salary > (select avg(a.salary) from works a inner join works b on a.comp_name = b.comp_name);

Answer:

		person_name	street	city
<input type="checkbox"/>	 Edit  Copy  Delete	Abdullah Al Tahmid	College Road	Dhaka
<input type="checkbox"/>	 Edit  Copy  Delete	Anupa Das	Housing State	Noakhali
<input type="checkbox"/>	 Edit  Copy  Delete	Armanur Rashid	Agrabad	Chittagong
<input type="checkbox"/>	 Edit  Copy  Delete	Hasan Mahmud	Dewanhat	Chittagong
<input type="checkbox"/>	 Edit  Copy  Delete	Ikra Chowdhury	Chawkbazar	Chittagong
<input type="checkbox"/>	 Edit  Copy  Delete	Ishrat Rintu	Hospital Road	Laksham
<input type="checkbox"/>	 Edit  Copy  Delete	Md Al-Amin	Elephant Road	Dhaka
<input type="checkbox"/>	 Edit  Copy  Delete	Sanzida Sultana	Hanif Road	Feni

Figure 7: Database Table(employee)

+ Options	
company_name	city
Small Bank Corporation	Chittagong
Sonali Bank Ltd	Dhaka

Figure 8: Database Table(company)

				person_name	company_name	salary
<input type="checkbox"/>				Abdullah Al Tahmid	Small Bank Corporation	45000
<input type="checkbox"/>				Anupa Das	Sonali Bank Ltd	50000
<input type="checkbox"/>				Armanur Rashid	Small Bank Corporation	70000
<input type="checkbox"/>				Hasan Mahmud	Sonali Bank Ltd	55000
<input type="checkbox"/>				Ikra Chowdhury	Small Bank Corporation	68000
<input type="checkbox"/>				Ishrat Rintu	Small Bank Corporation	40000
<input type="checkbox"/>				Md Al-Amin	Sonali Bank Ltd	85000
<input type="checkbox"/>				Sanzida Sultana	Sonali Bank Ltd	65000

Figure 9: Database Table(works)

```

Problem2_Database.php > ...
1  <?php
2  $username = "root";
3  $password = "";
4  $host = "127.0.0.1";
5  $dbname = "lab_assignment2";
6  $connector = mysqli_connect($host,$username,$password,$dbname);
7  ?>

```

Figure 10: Database Connection (Problem2_Database.php)

Problem 2(a): Find the names of all employees in this database who live in the same city as the company for which they work.

```
problem2_a.php > ...
1  <?php
2  |   include_once 'Problem2_Database.php'
3  ?>
4
5  <?php
6  $sql = 'SELECT E.person_name FROM employee as E, works as W, company as C WHERE E.person_name = W.person_name and E.city=C.city
7  and W.company_name = C.company_name';
8
9  $result = mysqli_query($connector,$sql);
10 $rows = mysqli_fetch_all($result, MYSQLI_NUM);
11
12 foreach($result as $i=> $rows):
13     echo "who live in the same city as the company for which they work = ".$rows['person_name']. "<br>";
14 endforeach;
15 ?>
```

Output:

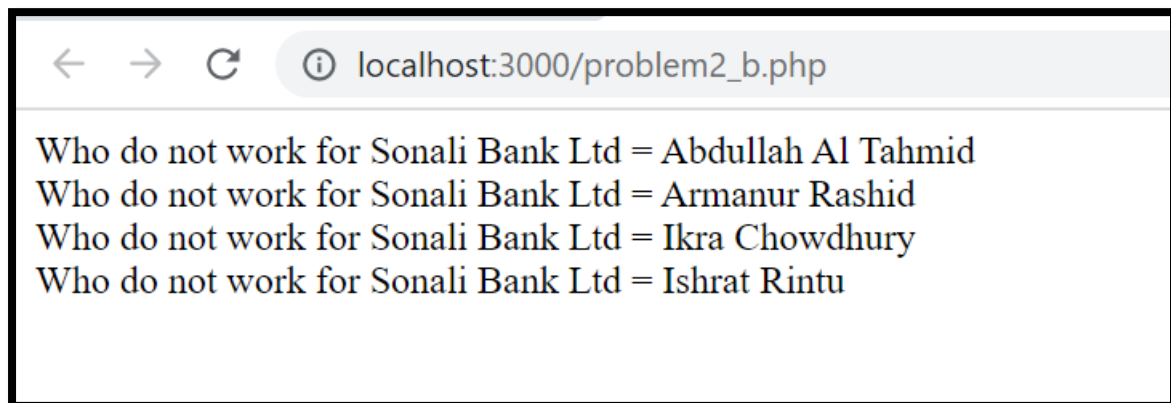
localhost:3000/problem2_a.php

who live in the same city as the company for which they work = Armanur Rashid
who live in the same city as the company for which they work = Ikra Chowdhury
who live in the same city as the company for which they work = Md Al-Amin

Problem 2(b): Find all employees in this database who do not work for Sonali Bank Ltd.

```
problem2_b.php > ...
1  <?php
2  |   include_once 'Problem2_Database.php'
3  ?>
4
5  <?php
6
7  $sql = 'SELECT person_name FROM works WHERE company_name<>"Sonali Bank Ltd"';
8  $result = mysqli_query($connector,$sql);
9  $rows = mysqli_fetch_all($result, MYSQLI_NUM);
10
11 foreach($result as $i=> $rows):
12     echo "Who do not work for Sonali Bank Ltd = ".$rows['person_name']. "<br>";
13 endforeach;
14 ?>
```

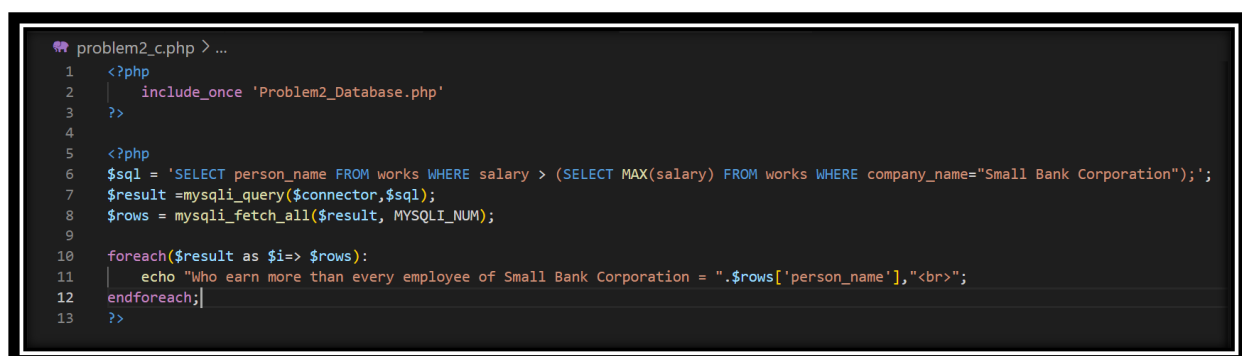
Output:



```
< > ↻ ⓘ localhost:3000/problem2_b.php
```

Who do not work for Sonali Bank Ltd = Abdullah Al Tahmid
Who do not work for Sonali Bank Ltd = Armanur Rashid
Who do not work for Sonali Bank Ltd = Ikra Chowdhury
Who do not work for Sonali Bank Ltd = Ishrat Rintu

Problem 2(c): Find all employees in the database who earn more than every employee of Small Bank Corporation.



```
problem2_c.php > ...
1  <?php
2  |   include_once 'Problem2_Database.php'
3  |
4  |
5  <?php
6  $sql = 'SELECT person_name FROM works WHERE salary > (SELECT MAX(salary) FROM works WHERE company_name="Small Bank Corporation");';
7  $result =mysqli_query($connector,$sql);
8  $rows = mysqli_fetch_all($result, MYSQLI_NUM);
9
10 foreach($result as $i=> $rows):
11 |   echo "Who earn more than every employee of Small Bank Corporation = ".$rows['person_name']. "<br>";
12 | endforeach;
13 ?>
```

Output:



```
< > ↻ ⓘ localhost:3000/problem2_c.php
```

Who earn more than every employee of Small Bank Corporation = Md Al-Amin

Problem 2(d): select emp_name from works where salary > (select avg(a.salary) from works a inner join works b on a.comp_name = b.comp_name);

```
problem2_d.php > ...
1  <?php
2  |   include_once 'Problem2_Database.php'
3  ?>
4  <?php
5  $sql='SELECT person_name from works WHERE company_name="Sonali Bank Ltd" AND salary > (SELECT avg(salary) from works WHERE
   company_name="Sonali Bank Ltd");';
6  $result = mysqli_query($connector,$sql);
7  $rows = mysqli_fetch_all($result, MYSQLI_NUM);
8
9  foreach($result as $i=> $rows):
10 |     echo "Earn more than average salary of Sonali Bank Ltd employee = ".$rows['person_name']."<br>";
11 endforeach;
12 echo "<br>";
13
14 $sql='SELECT person_name from works WHERE company_name="Small Bank Corporation" AND salary > (SELECT avg(salary) from works WHERE
   company_name="Small Bank Corporation");';
15 $result = mysqli_query($connector,$sql);
16 $rows = mysqli_fetch_all($result, MYSQLI_NUM);
17
18 foreach($result as $i=> $rows):
19 |     echo "Earn more than average salary of Small Bank Corporation employee = ".$rows['person_name']."<br>";
20 endforeach;
21
22 ?>
```

Output:

← → ↻ ⓘ localhost:3000/problem2_d.php

Earn more than average salary of Sonali Bank Ltd employee = Md Al-Amin
Earn more than average salary of Sonali Bank Ltd employee = Sanzida Sultana

Earn more than average salary of Small Bank Corporation employee = Armanur Rashid
Earn more than average salary of Small Bank Corporation employee = Ikra Chowdhury