Assignment: DDL

Task 1: PSU Abington University Database Creation [5 points]
Below is a schema of PSU Abington database. Create the database and all tables using SQL command. Also, insert at least 3 rows in each table using SQL command. In phpMyAdmin, **Name your database as "universitydb"**.

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0002 seconds.)

```
CREATE DATABASE universitydb;
```

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

Shcema:
Department (dept_name, building, budget)

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
create table department ( dept_name varchar(20), building varchar(15), budget
numeric(10,2), Primary key (dept_name));
```

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

3 rows inserted. (Query took 0.0014 seconds.)

```
INSERT INTO department VALUES ("law", "sutherland", 20000.00), ("robotics",
"woodland", 30000.00), ("AI", "woodland", 25000.00);
```

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

Showing rows 0 - 2 (3 total, Query took 0.0003 seconds.)

```
SELECT * FROM department;
```

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

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

Extra options

	dept_name	building	budget
Edit Copy Delete	AI	woodland	25000.00
Edit Copy Delete	law	sutherland	20000.00
Edit Copy Delete	robotics	woodland	30000.00

Course (course_id, title, dept_name, credits)

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0009 seconds.)

```
create table course ( course_id varchar(8), title varchar(50), dept_name varchar(20),
credits numeric(2,0), primary key (course_id), foreign key (dept_name) references
department (dept_name));
```

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

3 rows inserted. (Query took 0.0016 seconds.)

```
INSERT INTO course VALUES ("AI101", "introduction to neural network", "AI", 3),
("US101", "introduction to us laws", "law", 2), ("ASM101", "introduction to assembly",
"robotics", 1);
```

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

Showing rows 0 - 2 (3 total, Query took 0.0004 seconds.)

```
SELECT * FROM course;
```

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

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

Extra options

	course_id	title	dept_name	credits
Edit Copy Delete	AI101	introduction to neural network	AI	3
Edit Copy Delete	ASM101	introduction to assembly	robotics	1
Edit Copy Delete	US101	introduction to us laws	law	2

Instructor (ID, name, dept_name, salary)

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0009 seconds.)

```
CREATE TABLE instructor ( ID varchar(8), name varchar(20), dept_name varchar(20),
salary numeric(10,2), PRIMARY KEY (ID), FOREIGN KEY (dept_name) REFERENCES
department(dept_name) );
```

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

3 rows inserted. (Query took 0.0014 seconds.)

```
INSERT INTO instructor VALUES ("afs124", "Ashmond Sulfer", "robotics", 1000.00),
("jfk454", "John F Kenedy", "law", 1500.00), ("tad777", "Terry A. Davis", "AI",
2000.00);
```

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

Showing rows 0 - 2 (3 total, Query took 0.0004 seconds.)

```
SELECT * FROM instructor;
```

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

Extra options

	ID	name	dept_name	salary
Edit Copy Delete	afs124	Ashmond Sulfer	robotics	1000.00
Edit Copy Delete	jfk454	John F Kenedy	law	1500.00
Edit Copy Delete	tad777	Terry A. Davis	AI	2000.00

Check all With selected: Edit Copy Delete Export

Section (course_id, sec_id, semester, year, building, room_number)

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)

```
CREATE TABLE section ( course_id varchar(8), sec_id varchar(8), semester varchar(8),
year DATE, building varchar(20), room_number numeric(3,0), PRIMARY KEY (course_id,
sec_id, semester, year), FOREIGN KEY (course_id) REFERENCES course (course_id) );
```

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

3 rows inserted. (Query took 0.0016 seconds.)

```
INSERT INTO section VALUES ("AI101", "101", "FALL", "2018-08-11", "woodland", 148), ("US101", "102", "SPRING",
"2019-02-11", "sutherland", 312), ("ASM101", "103", "SUMMER", "2019-05-11", "woodland", 254);
```

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

Showing rows 0 - 2 (3 total, Query took 0.0003 seconds.)

```
SELECT * FROM section;
```

Profiling [Edit inline] [Edit] [Explain SQL] [C

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

Extra options

	course_id	sec_id	semester	year	building	room_number
Edit Copy Delete	AI101	101	FALL	2018-08-11	woodland	148
Edit Copy Delete	ASM101	103	SUMMER	2019-05-11	woodland	254
Edit Copy Delete	US101	102	SPRING	2019-02-11	sutherland	312

Teaches (ID, course_id, sec_id, semester, year)

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0009 seconds.)

```
CREATE TABLE teaches ( ID varchar(8), course_id varchar(8), sec_id varchar(8),
semester varchar(8), year DATE, PRIMARY KEY (ID, course_id, sec_id, semester, year),
FOREIGN KEY (ID) REFERENCES instructor(ID), FOREIGN KEY (course_id) REFERENCES
course(course_id) );
```

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

3 rows inserted. (Query took 0.0065 seconds.)

```
INSERT INTO teaches VALUES ("tad777", "AI101", "101", "FALL", "2018-08-11"), ("jfk454", "US101", "102", "SPRING",
"2019-02-11"), ("afs124", "ASM101", "103", "SUMMER", "2019-05-11");
```

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

Showing rows 0 - 2 (3 total, Query took 0.0006 seconds.)

```
SELECT * FROM teaches;
```

Profiling [Edit inline

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

Extra options

	ID	course_id	sec_id	semester	year
Edit Copy Delete	afs124	ASM101	103	SUMMER	2019-05-11
Edit Copy Delete	jfk454	US101	102	SPRING	2019-02-11
Edit Copy Delete	tad777	AI101	101	FALL	2018-08-11

Check all With selected: Edit Copy Delete Export

Student (ID, name, dept_name, tot_cred)

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0009 seconds.)

```
CREATE TABLE student ( ID varchar(8), name varchar(20), dept_name varchar(8), tot_cred numeric(4, 0), PRIMARY KEY
(ID), FOREIGN KEY (dept_name) REFERENCES department(dept_name) );
```

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

3 rows inserted. (Query took 0.0013 seconds.)

```
INSERT INTO student VALUES ("kqn5278", "Hoang Nguyen", "AI", 21), ("jrm2145", "Jeramy Matador", "law", 54),
("gvn125", "Giorno Giovanna", "robotics", 72);
```

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

Showing rows 0 - 2 (3 total, Query took 0.0007 seconds.)

```
SELECT * FROM student;
```

Profiling [Edit inli

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

Extra options

		ID	name	dept_name	tot_cred
☐	Edit Copy Delete	gvn125	Giorno Giovanna	robotics	72
☐	Edit Copy Delete	jrm2145	Jeramy Matador	law	54
☐	Edit Copy Delete	kqn5278	Hoang Nguyen	AI	21

Check all *With selected:* Edit Copy Delete Export

Note:

- Data type/domain of each attribute should be appropriate.
- You should maintain referential integrity (primary key-foreign key relationship. Below are example codes for creating two tables maintaining referential integrity.

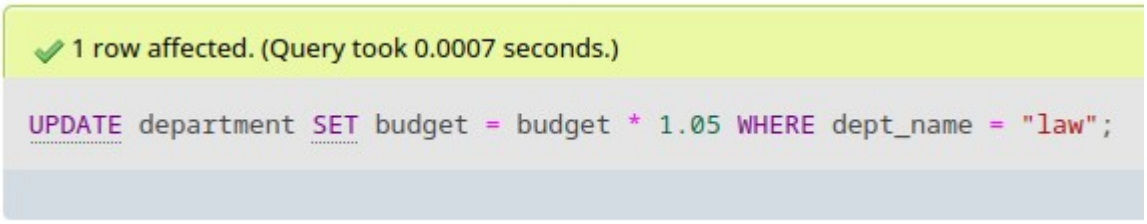
```
create table department (
dept_name varchar(20),
building varchar(15),
budget numeric(10,2),
Primary key (dept_name));

create table course (
course_id varchar(8),
title varchar(50),
dept_name varchar(20),
credits numeric(2,0),
primary key (course_id),
foreign key (dept_name) references department (dept_name));
```

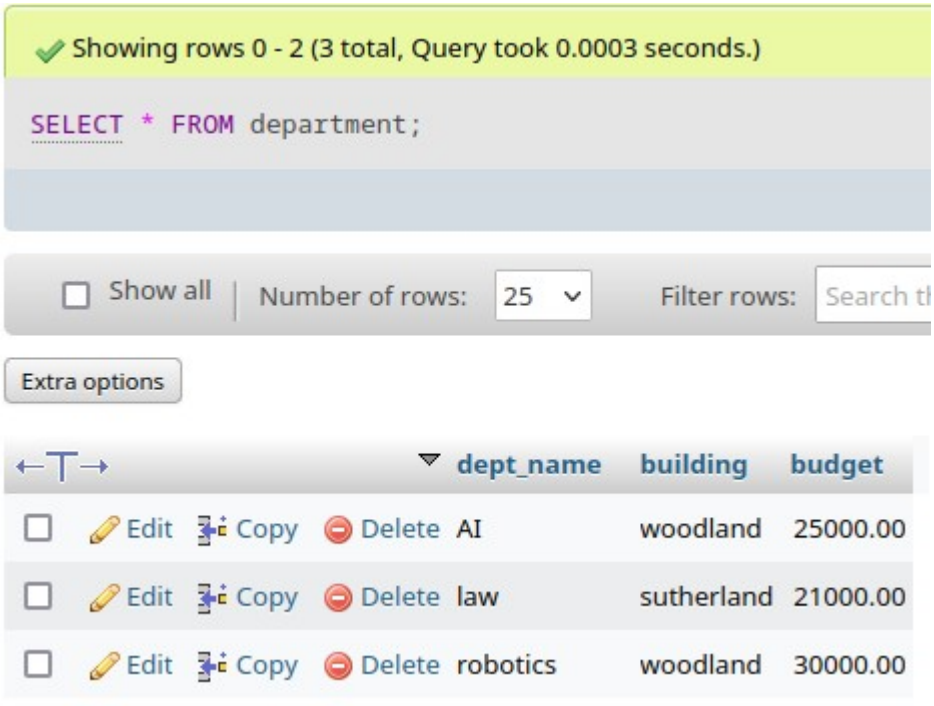
What to submit: Create a report by putting all SQL commands for table creation and data insertion in a word document. In addition, display your table data using SQL commands in phpMyAdmin and put snapshots of all tables with data in your report. Submit the report through Blackboard.

Task 2: Data Manipulation using SQL Command [5 points]

Perform following data manipulation:

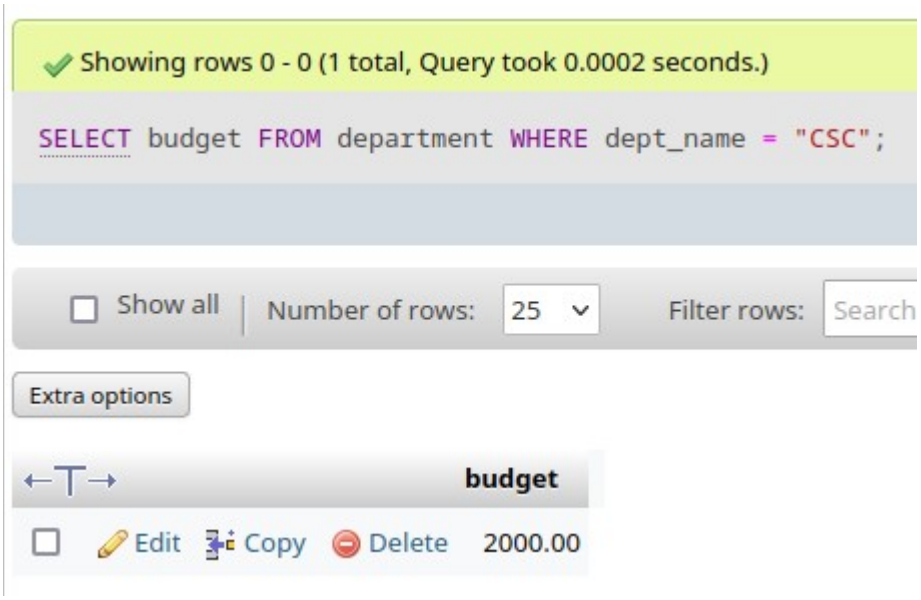
a) Increase the budget of law department by 5 percent.





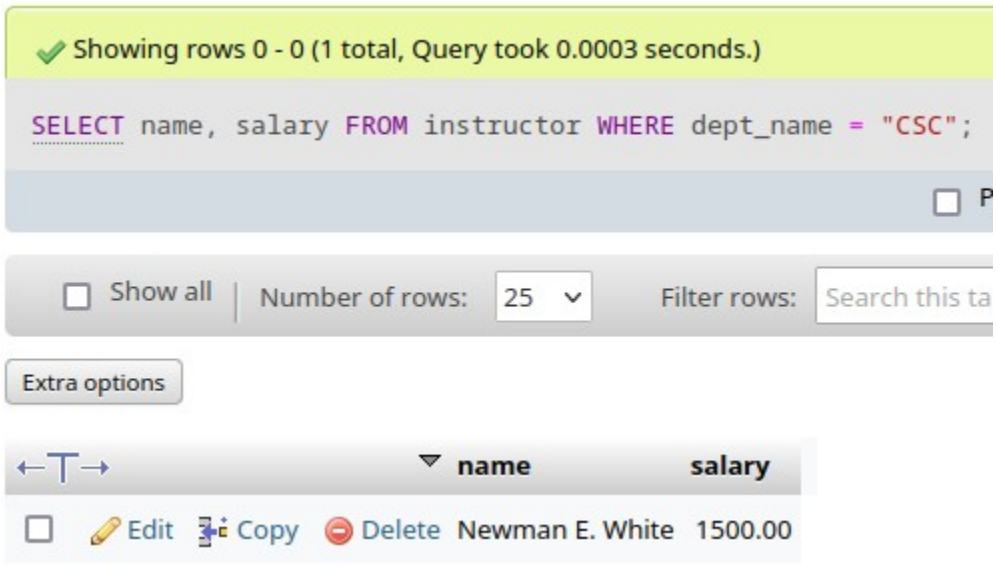
b) Show the budget of CSC department.

I add in a new csc department just for this part

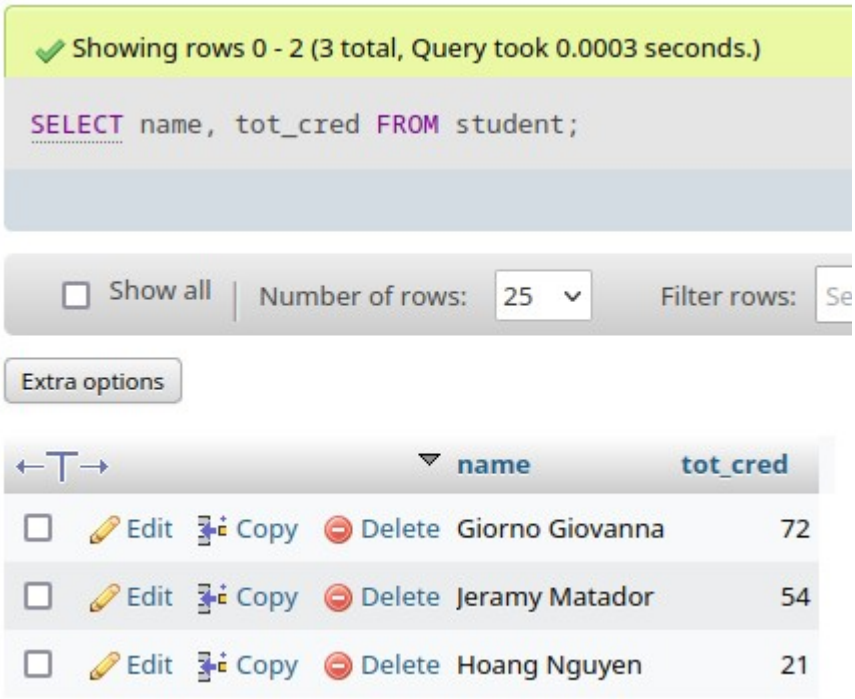


c) List name and salary of all instructors of CSC department.

I also add in new instructor for csc department



d) List name and total credits of all students.



What to submit: Create a report by putting all SQL commands and snapshots of your output from phpMyAdmin in a word document. Submit your report through Blackboard.