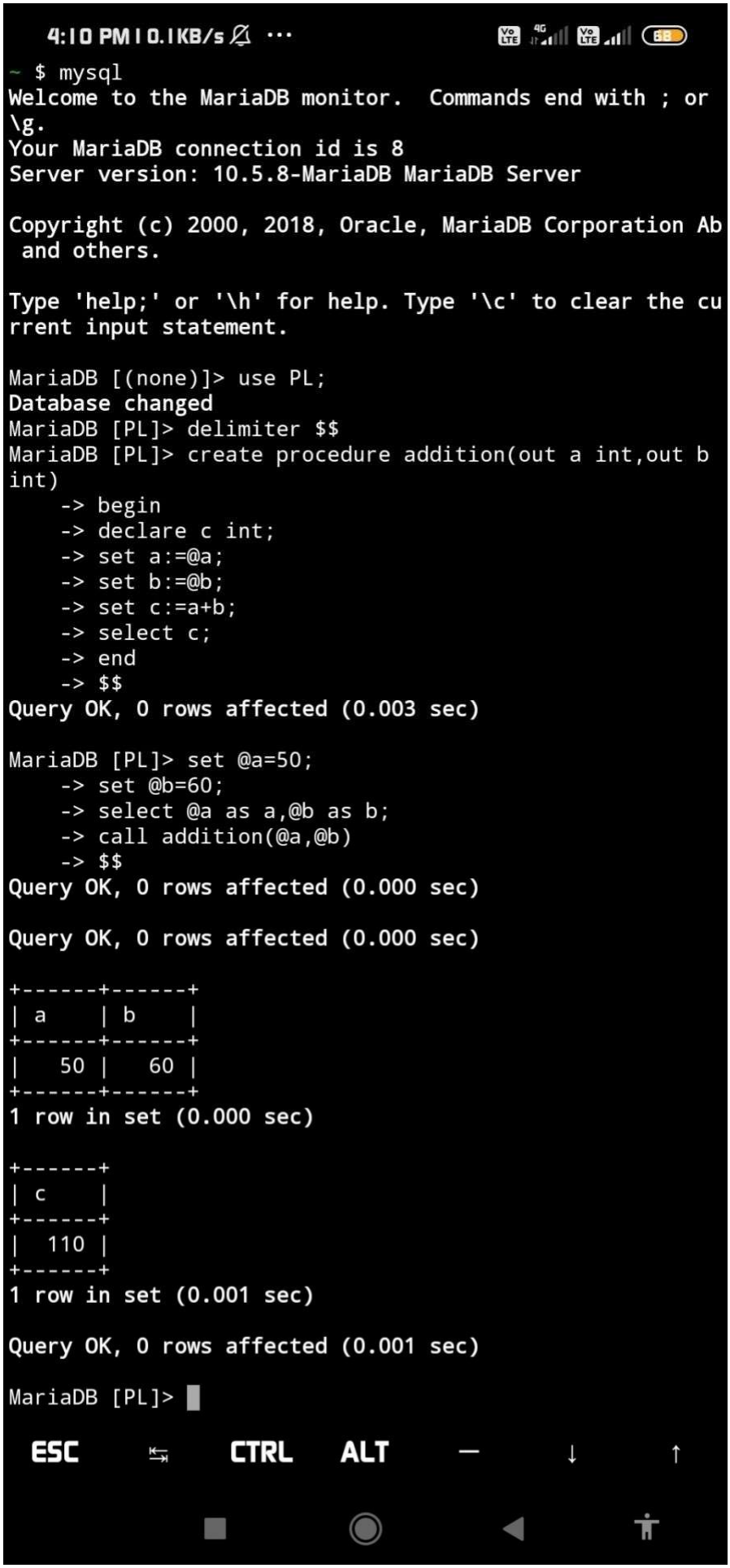
TITLE: PL/SQL COMMANDS

Exercises:

1. Addition of 2 numbers
2. Find greatest number using if
3. Find number greater than or less than 5
4. Sum of first n odd numbers using for loop
5. Sum of first n odd numbers using while loop

1) ADDITION OF 2 NUMBERS

```
delimiter $$
create procedure addition(out a int,out b int)
begin
declare c int;
set a:=@a;
set b:=@b;
set c:=a+b;
select c;
end $$

/*executing procedure*/
set @a=40;
set @b=50;
select @a as a,@b as b;
call addition(@a,@b)
$$
```


4:10 PM | 0.1KB/s
~ $ mysql
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 8
Server version: 10.5.8-MariaDB MariaDB Server
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
MariaDB [(none)]> use PL;
Database changed
MariaDB [PL]> delimiter $$
MariaDB [PL]> create procedure addition(out a int,out b int)
-> begin
-> declare c int;
-> set a:=@a;
-> set b:=@b;
-> set c:=a+b;
-> select c;
-> end
-> $$
Query OK, 0 rows affected (0.003 sec)
MariaDB [PL]> set @a=50;
-> set @b=60;
-> select @a as a,@b as b;
-> call addition(@a,@b)
-> $$
Query OK, 0 rows affected (0.000 sec)
Query OK, 0 rows affected (0.000 sec)
+------+------+
| a | b |
+------+------+
| 50 | 60 |
+------+------+
1 row in set (0.000 sec)
+------+
| c |
+------+
| 110 |
+------+
1 row in set (0.001 sec)
Query OK, 0 rows affected (0.001 sec)
MariaDB [PL]>
ESC
CTRL
ALT

2) GREATEST NUMBER USING IF

```
delimiter $$
create procedure large()
begin
declare b int;
declare c int;
set b:=@b;
set c:=@c;
if(c>b)
then
select c as 'Large is c:';
else
select b as 'Large is b:';
end if;
end $$

/*executing procedure*/

set @b:=10;
set @c:=20;
call large()
$$
```

```
~ $ mysql
Welcome to the MariaDB monitor.  Commands end with ; or
\g.
Your MariaDB connection id is 5
Server version: 10.5.8-MariaDB MariaDB Server

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab
 and others.

Type 'help;' or '\h' for help. Type '\c' to clear the cu
rrent input statement.

MariaDB [(none)]> use PL;
Database changed
MariaDB [PL]> delimiter $$
MariaDB [PL]> create procedure large()
    -> begin
    -> declare b int;
    -> declare c int;
    -> set b:=@b;
    -> set c:=@c;
    -> if(c>b)
    -> then
    -> select c as 'Large is c:';
    -> else
    -> select b as 'Large is b:';
    -> end if;
    -> end
    -> $$
Query OK, 0 rows affected (0.002 sec)

MariaDB [PL]> set @b:=10;
    -> set @c:=20;
    -> call large()
    -> $$
Query OK, 0 rows affected (0.000 sec)

Query OK, 0 rows affected (0.000 sec)

+-------------+
| Large is c: |
+-------------+
|          20 |
+-------------+
1 row in set (0.001 sec)

Query OK, 0 rows affected (0.001 sec)

MariaDB [PL]>
```

3) FIND NUMBER GREATER THAN OR LESS THAN 5

```
delimiter $$
create procedure relation(out n int)
begin
set n:=@a;
select n as 'Entered number is:';
if(n<5)
then
select 'Number is less than 5';
else
select 'Number is greater than 5';
end if;
end $$

/*entering a number less than 5*/
set @a:=3;
call relation(@a);
$$
```

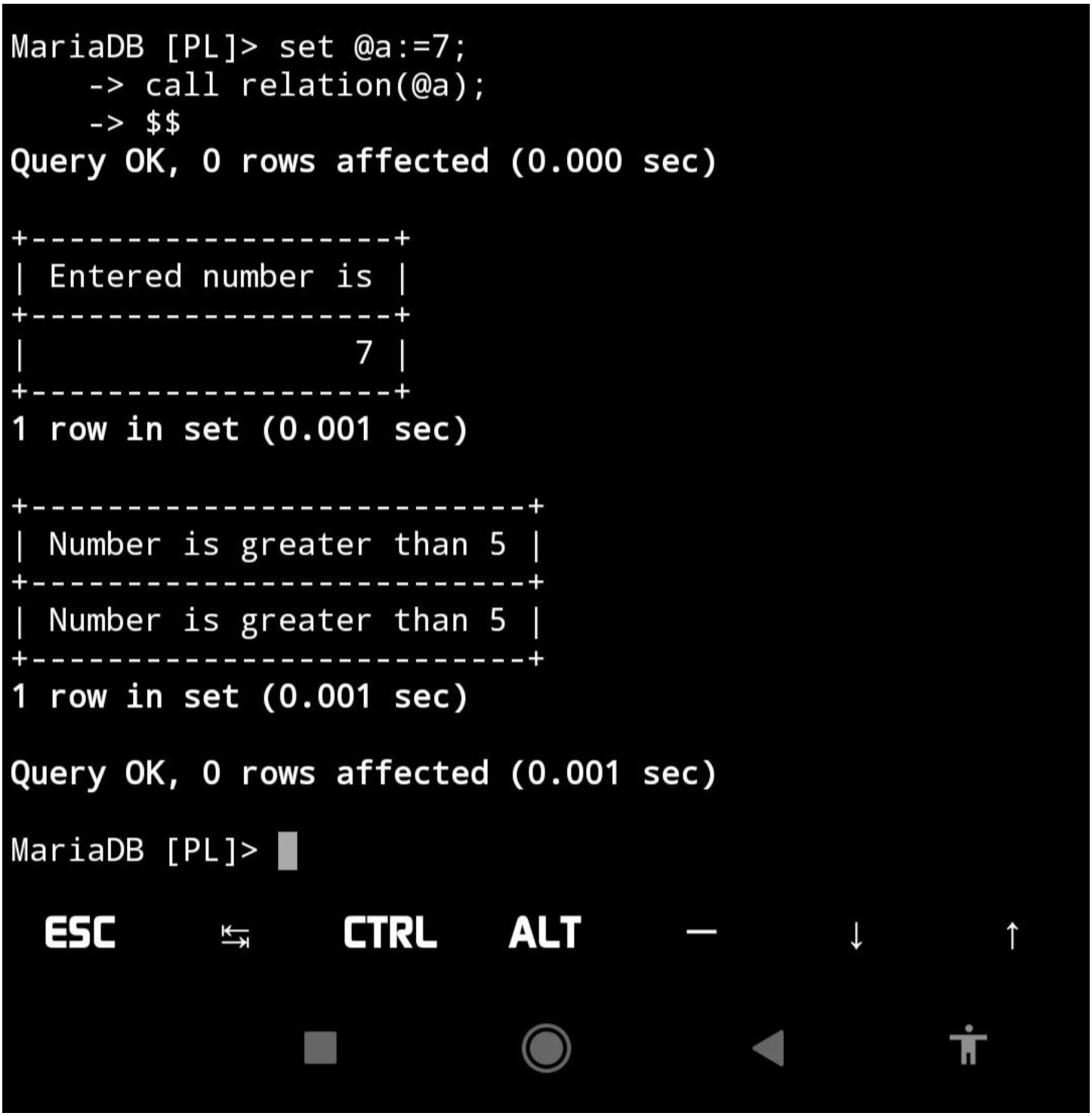
```
~ $ mysql
Welcome to the MariaDB monitor.  Commands end with ; or
\g.
Your MariaDB connection id is 4
Server version: 10.5.8-MariaDB MariaDB Server

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab
 and others.

Type 'help;' or '\h' for help. Type '\c' to clear the cu
rrent input statement.

MariaDB [(none)]> use PL;
Database changed
MariaDB [PL]> delimiter $$
MariaDB [PL]> create procedure relation(out n int)
    -> begin
    -> set n:=@a;
    -> select n as 'Entered number is';
    -> if(n<5)
    -> then
    -> select'Number is less than 5';
    -> else
    -> select 'Number is greater than 5';
    -> end if;
    -> end
    -> $$
Query OK, 0 rows affected (0.010 sec)

MariaDB [PL]> set @a:=3;
    -> call relation(@a);
    -> $$
Query OK, 0 rows affected (0.000 sec)

+-------------------+
| Entered number is |
+-------------------+
|                 3 |
+-------------------+
1 row in set (0.001 sec)

+-----------------------+
| Number is less than 5 |
+-----------------------+
| Number is less than 5 |
+-----------------------+
1 row in set (0.001 sec)

Query OK, 0 rows affected (0.001 sec)

MariaDB [PL]>
```

/*entering a number greater than 5*/

set @a:=7;

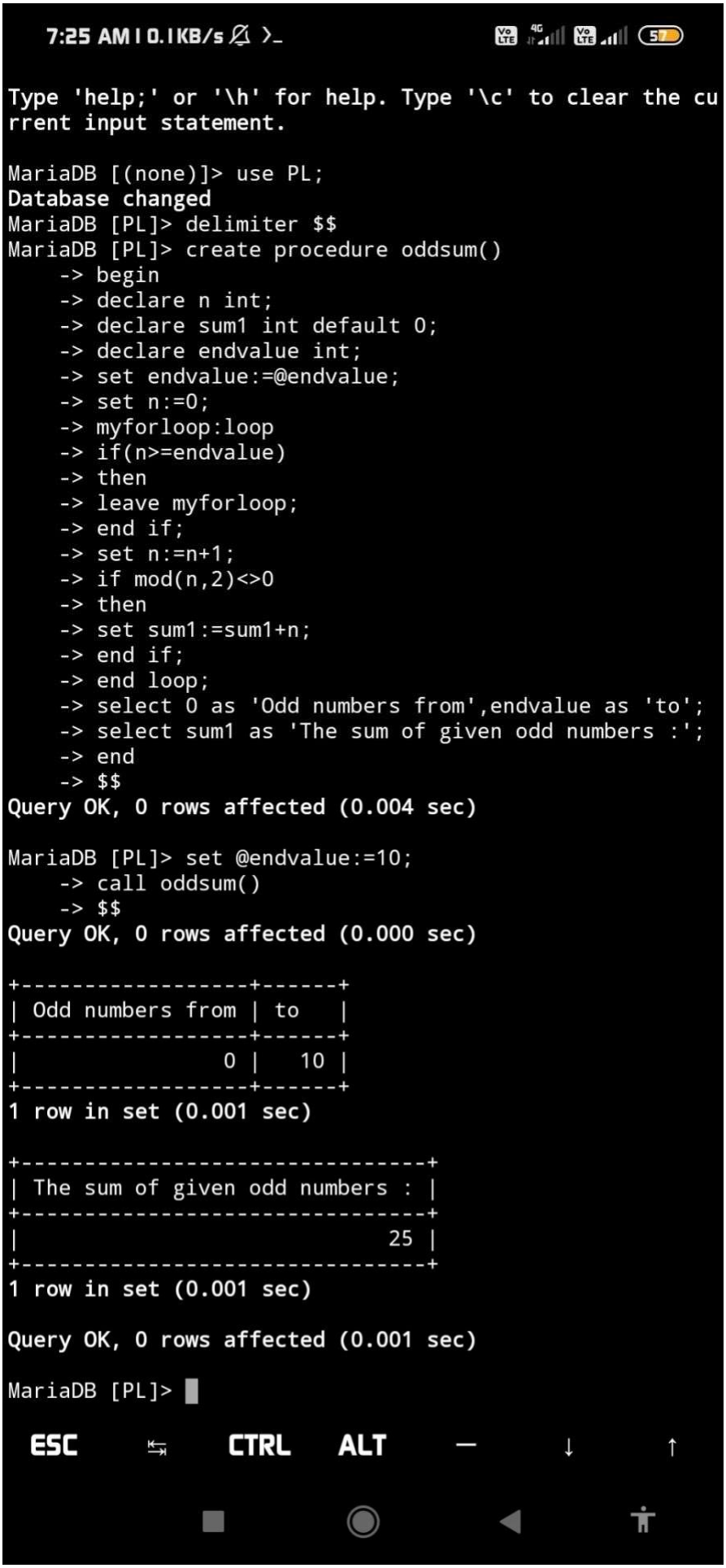
call relation(@a);

$$



4) SUM OF FIRST N ODD NUMBERS USING FOR LOOP

```
delimiter $$
create procedure oddsum()
begin
declare n int;
declare sum1 int default 0;
declare endvalue int;
set endvalue:=@endvalue;
set n:=0;
myforloop:loop
If(n>=endvalue)
then
leave myforloop;
end if;
set n:=n+1;
if mod(n,2)<>0
then  set sum1:=sum1+n;
end if;
end loop;
select 0 as ‘Odd numbers from’,endvalue as ‘to’;
select sum1 as ‘The sum of given odd numbers :’;
end $$

/*executing procedure*/
set @endvalue:=10; call
oddsum()
$$
```


7:25 AM | 0.1KB/s
Type 'help;' or '\h' for help. Type '\c' to clear the cu
rrent input statement.
MariaDB [(none)]> use PL;
Database changed
MariaDB [PL]> delimiter $$
MariaDB [PL]> create procedure oddsum()
-> begin
-> declare n int;
-> declare sum1 int default 0;
-> declare endvalue int;
-> set endvalue:=@endvalue;
-> set n:=0;
-> myforloop:loop
-> if(n>=endvalue)
-> then
-> leave myforloop;
-> end if;
-> set n:=n+1;
-> if mod(n,2)<>0
-> then
-> set sum1:=sum1+n;
-> end if;
-> end loop;
-> select 0 as 'Odd numbers from',endvalue as 'to';
-> select sum1 as 'The sum of given odd numbers :';
-> end
-> $$
Query OK, 0 rows affected (0.004 sec)
MariaDB [PL]> set @endvalue:=10;
-> call oddsum()
-> $$
Query OK, 0 rows affected (0.000 sec)
+------------------+------+
| Odd numbers from | to |
+------------------+------+
| 0 | 10 |
+------------------+------+
1 row in set (0.001 sec)
+-------------------------------+
| The sum of given odd numbers : |
+-------------------------------+
| 25 |
+-------------------------------+
1 row in set (0.001 sec)
Query OK, 0 rows affected (0.001 sec)
MariaDB [PL]>
ESC
CTRL
ALT

5) SUM OF FIRST N ODD NUMBERS USING WHILE LOOP

```
delimiter $$
create procedure oddWhileAdd()
begin
declare n int;
declare sum1 int default 0;
declare endvalue int;
set endvalue:=@endvalue;
set n:=1;
while n<endvalue
do
if mod(n,2)<>0
then
set sum1:=sum1+n;
end if;
set n:=n+1;
end while;
select 0 as 'Odd number from',endvalue as 'to';
select sum1 as 'The sum of given odd numbers:';
end$$

/* calling procedure*/

set @endvalue:=10; call
oddWhileAdd()
$$
```

```
MariaDB [(none)]> use PL;
Database changed
MariaDB [PL]> delimiter $$
MariaDB [PL]> create procedure oddWhileAdd()
    -> begin
    -> declare n int;
    -> declare sum1 int default 0;
    -> declare endvalue int;
    -> set endvalue:=@endvalue;
    -> set n:=1;
    -> while n<endvalue
    -> do
    -> if mod(n,2)<>0
    -> then
    -> set sum1:=sum1+n;
    -> end if;
    -> set n:=n+1;
    -> end while;
    -> select 0 as 'Odd number from',endvalue as 'to';
    -> select sum1 as 'The sum of given odd numbers:';
    -> end
    -> $$
Query OK, 0 rows affected (0.005 sec)

MariaDB [PL]> set @endvalue:=10;
    -> call oddWhileAdd()
    -> $$
Query OK, 0 rows affected (0.000 sec)

+-----------------+------+
| Odd number from | to   |
+-----------------+------+
|               0 |   10 |
+-----------------+------+
1 row in set (0.002 sec)

+-------------------------------+
| The sum of given odd numbers: |
+-------------------------------+
|                            25 |
+-------------------------------+
1 row in set (0.002 sec)

Query OK, 0 rows affected (0.002 sec)

MariaDB [PL]>
```